EXHIBIT 13

TRA
ENVIRONMENTAL
SCIENCES, Inc.

545 Middlefield Road, Suite 200
Menlo Park, CA 94025-3472
Tel: (650) 327-0429
Fax: (650) 327-4024
www.TRAenviro.com

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John Farrow
M. R. Wolfe & Associates, P.C.
Attorneys-At-Law
49 Geary Street, Suite 200
San Francisco, CA 94108

RE: Comments on the Draft Environmental Impact Report for the 2007 Monterey General Plan

Dear Mr. Farrow:

At your request, TRA Environmental Sciences has reviewed the Draft Environmental Impact Report for the 2007 Monterey General Plan prepared by ICF Jones & Stokes dated September 2008.

As you know, our firm specializes in conducting biological analyses for CEQA and NEPA documents. We have been working in this field, as well as the field of habitat conservation planning and natural community conservation planning, for over twenty-five years. We are familiar with many of the special status species that occur in the greater San Francisco Bay Area including the Santa Cruz and Monterey County coast side. Please refer to our firm qualifications and professional biography, which are attached.

In sum, the DEIR does not adequately evaluate and mitigate impacts to biological resources for the following reasons:

- The DEIR does not provide substantive analysis of impacts to biological resources based on correlating the expected location and intensity of development and the affected resources. Most of the impact analyses consist of recitations of lists of policies from the 2007 General Plan without any meaningful discussion linking those policies to impact avoidance, minimization, or compensation. Many of the policies lack any substantive content, e.g., lack any performance standards or examples of the content of implementing programs. Many of the policies defer the formulation of mitigation without deadlines for completion or interim measures. No reasons are given for these deferrals. Many of the policies lack any enforceable mandate. We have provided detailed comments on most of the policies cited as the basis for the DEIR's impact analyses.

- Mitigation measures that are proposed to supplement the 2007 General Plan policies suffer from the same defects as the policies themselves.

- Substantial new agricultural cultivation, especially vineyard development, is projected in the County, but the DEIR fails to describe this activity accurately. The description of winery corridor is inconsistent and incomplete. Because these activities will have significant effects on biological resources, they must be accurately described.

- Impacts to movement corridors and habitat fragmentation were not adequately evaluated because the DEIR did not develop or consider available empirical information about important conservation areas, movement corridors, and habitat linkages.

- Mitigation of habitat fragmentation and interruption of movement corridors and habitat linkages is inadequate. The mitigation of these landscape-scale impacts must be formulated in a first-tier EIR, not postponed to future project-level CEQA reviews, particularly since much of the development activity that will affect these resources is to be exempted from future CEQA review.

- The DEIR failed to evaluate steelhead impacts from increased diversions from the Salinas River, continued operation of the Nacimiento and San Antonio Dams to support growth, and sedimentation.

- Although the DEIR acknowledges that growth will make a considerable contribution to cumulatively significant impacts, it proposes no mitigation to address this.

1. Policies identified to address impacts to biological resources are not adequate

The DEIR concludes on the basis of a list of policies and three new mitigation measures that impacts to special status species through 2030 will be less than significant. DEIR, pp. 4.9-64 to 4.9-76. Similarly, the DEIR concludes on the basis of reciting these policies and three additional mitigation measures that impacts to natural communities will not be significant through 2030. DEIR, pp. 4.9-79 to 4.9-89. The DEIR again recites these policies and one new mitigation measure as the basis of its conclusion that impacts to movement corridors and nursery sites through 2030 will not be significant. DEIR, pp. 4.9-89 to 4.9-99. And it recites them in support of its conclusion that impacts related to loss of protected trees will be less than significant. DEIR, pp. 4.9-99 to 4.9-102.

The policies recited do not provide a reasonable basis for this conclusion for a number of reasons, as detailed in the table below, including the following repeated deficiencies:

- Many of the policies call for activities, programs, or ordinances to be identified or developed later, but the policies do not contain performance standards or provide

- Many policies calling for action by the County do not identify responsible agencies, ensure that adequate resources will be available, specify schedules for implementation, or provide for alternative measures pending full implementation.

- Many policies are not enforceable because they call for voluntary action or merely call for encouraging and supporting beneficial activities.

Set forth in the table below are detailed comments on the policies identified by the DEIR as the basis of its significance conclusions. (Comments on the proposed additional mitigation measures follow in Sections 2, 3, and 5.) Since CEQA requires the County to adopt all feasible mitigation, these policies must be strengthened, or additional mitigation measures must be proposed, to address the defects identified.

Policies Cited As The Basis of Significance Conclusions Related to Biological Impacts	
LAND USE POLICIES. The DEIR states that "The 2007 General Plan Land Use Element emphasizes compact city-centered growth and discourages the encroachment of urban uses into undeveloped areas. Land Use Element Policies LU-1.1 through LU-1.9 promotes appropriate and orderly growth and development while protecting desirable existing land uses." DEIR, p. 4.9-67. The policies were also cited as the basis of the DEIR's conclusion that impacts to special status species, habitat, and movement corridors would be less than significant. DEIR, pp. 4.9-67, 4.9-80, 4.9-90.	• As noted below, these policies do address conversion of habitat for agricultural use. • Furthermore, the DEIR's claim that 80% of development will be in focused growth areas (DEIR, p. 4.9-75) is irrelevant. The question is how much development will occur where there are biological resources. The DEIR does not provide any real description of the extent and location of rural development. Furthermore, the Policies creating disincentives for growth in focused growth areas (e.g., requirements for plans and infrastructure) actually create incentives for scattered sprawl development on legal lots of record and rural subdivisions. • Policy LU 1.19 is in conflict with promotion of city-centered growth by LU 1.1 to 1.9. Policy LU 1.19 states that growth in designated growth areas is a "priority," but then proposes to permit rural subdivisions in accordance with a "Development Evaluation System" (DES) that has not yet been devised, and for which no standards are identified. The DES is supposed to "provide a systematic, consistent, predictable, and quantitative method" to evaluate rural subdivisions. The policy lists a number of "criteria" including "Site Suitability; Infrastructure; Resource Management; Proximity to a City, Community Area, or Rural Center;Mix/Balance of uses including Affordable Housing consistent with the County Affordable/Workforce Housing Incentive Program adopted pursuant to the Monterey County Housing Element; Environmental Impacts and Potential Mitigation; Proximity to multiple modes of transportation; Jobs-Housing balance within the community and between the community and surrounding areas; Minimum passing score." These "criteria" are actually vague parameters without any stated values. How will site suitability be assessed and quantified? How will environmental impacts and potential mitigation be assess and quantified? How will all of these considerations be weighed against each other? The "criteria" do not provide any performance standards or provide any real basis to determine how much rural development will be permitted, where it will be permitted, and what its effects will be. Under Policy LU 1.19, a DES could be devised that would permit essentially any development as long as some lip service is paid to each parameter. As it is written, Policy LU 1.19 cannot be said to control or limit rural development because the policy has no substantive content. Given this lack of content, it is apparent that the DEIR's conclusion that only 20% of future development will occur outside of focused growth areas (see Table 3-8) cannot have been based on any consideration of LU 1.19. Please explain on what basis the DEIR projected that only 20% of development would occur outside of focused growth

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	areas. Please explain how the undefined DES system can be said to control rural growth, if the DEIR so assumes. Please explain how growth in the focused growth areas will be made a "priority" other than through the to-be-devised DES.
LU-1.1 The type, location, timing, and intensity of growth in the unincorporated area shall be managed.	• This policy has no substantive mandate related to biological resources. • The policy is such a general statement that any action to manage growth would be consistent, even action that permitted substantial rural sprawl. • There is no apparent program to manage growth of the conversion of habitat for agricultural use.
LU-1.2 Premature and scattered development shall be discouraged.	• If the policy is intended to be applied in evaluating individual projects, it is not enforceable because it contains no objective standards. • If the policy is intended to direct some programmatic activity by the County other than permitting activity, it will not be effective because it lacks any standards for or examples of such programs.
LU-1.3 Balanced development of the County shall be assured by designating adequate land for a range of future land uses.	• This policy has no substantive mandate related to biological resources. • No analysis is provided to demonstrate that the land use designations will in fact ensure sufficient habitat. Please provide evidence that land use designations will ensure sufficient habitat for each special status species.
LU-1.4 Growth areas shall be designated only where an adequate level of services and facilities such as water, sewerage, fire and police protection, transportation, and schools exists or can be assured concurrent with growth and development. Phasing of development shall be required as necessary in growth areas in order to provide a basis for long-range services and facilities planning.	• Despite this policy, the DEIR's Table 3-8 projects that 20 percent of future development will occur outside designated growth areas. • Furthermore, the basis of the Table 3-8 projection of future development in each area of the County is not evident. Please explain how this projection was made. • The policy does not address or constrain the conversion of habitat to agricultural uses, which will have substantial consequences for special status species. See discussion below in Sections 4 and 5.
LU-1.5 Land uses shall be designated to achieve compatibility with adjacent uses.	• Please provide evidence that the proposed land use designations in the 2007 General Plan achieve compatibility with adjacent habitat. • Please explain how this policy would ensure that future land use re-designations will achieve compatibility with adjacent habitat. What parameters and values related to habitat protection must be considered in future land use designations, i.e., what are the relevant performance standards to allow a particular land use to be adjacent to habitat?
LU-1.6 Standards and procedures to assure proper levels of review of development siting, design, and landscaping shall be developed.	• This policy does not actually identify the standards and procedures or explain what "proper levels of review" would be. • Please identify the standards and procedures and explain what the proper level of review would be. • Please explain in particular how the absence of

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	discretionary review of routine and ongoing agricultural activity, including cultivation of previously uncultivated land, will ensure that a proper level of review occurs to protect habitat.
LU-1.7 Clustering of residential development to those portions of the property which are most suitable for development and where appropriate infrastructure to support that development exists or can be provided shall be strongly encouraged. Lot line adjustments among four lots or fewer, or the re-subdivision of more than four contiguous lots of record that do not increase the total number of lots may be allowed pursuant to this policy without requirement of a general plan amendment.	• Policies that merely encourage clustering are not enforceable as to any particular development proposal, particularly in the absence of any enforceable, objective standards for identifying portions of the property that are "suitable" for development. Please explain how this policy could be enforced to protect habitat.
LU-1.8 Voluntary reduction or limitation of development potential in the rural and agricultural areas through dedication of scenic or conservation easements, Transfer of Development Rights (TDR), and other appropriate techniques shall be encouraged. The Transfer of Development Credit (TDC) in the Big Sur Land Use Plan is a separate program to address development within the critical viewshed. A TDR Program shall be established to provide a systematic, consistent, predictable, and quantitative method for decision-makers to evaluate receiver sites in areas of the unincorporated County with priority for locations within Community Areas and Rural Centers. The program shall include a mechanism to quantitatively evaluate development in light of the policies of the General Plan and the implementing regulations, resources and infrastructure, and the overall quality of the development. Evaluation criteria shall include but are not limited to: a. Site Suitability b. Infrastructure c. Resource Management d. Proximity to a City, Community Area, or Rural Center. e. Environmental Impacts and Potential Mitigation f. Proximity to multiple modes of transportation g. Avoidance of impacts to productive farmland	• The policy does not create any enforceable mandate because it depends on voluntary measures. • Neither the TDR program nor the "other appropriate techniques" are spelled out. • Please explain how protection of biological resources will be "quantitatively" evaluated and how these values will be weighed against other criteria. Please explain how, in the absence of any details, the DEIR determined that this program will meaningfully contribute to avoidance of impacts to biological resources.
LU-1.9 Infill of vacant non-agricultural lands in existing developed areas and new development within designated urban service areas are a priority. Infill development shall be compatible with surrounding land use and development.	• This policy does not explain how infill will be made a priority. Please explain how this prioritization would work in the context of a decision whether to approve a specific proposed development project that is an infill project. Please also explain how this prioritization would work in the context of a decision whether to approve a specific proposed development project that is *not* an infill project. • Please explain how, in the absence of any details about

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	how prioritization is to work, the DEIR determined that this program will meaningfully contribute to avoidance of impacts to biological resources.
The DEIR states at page 4.9-90 that "development on properties with residential land use designations location within the Toro Area Plan along the Highway 68 corridor, Greater Salinas Area Plan north of the City of Salinas between Williams Road and Highway 101, and the North County Area Plan are limited to the first single family home on a legal lot of record. Creation of new lots in the Carmel Valley Area is capped at 266 new lots."	• Table 3-8 shows for Toro that there are only 251 vacant residential lots, but projects 541 new potential units. Please explain this.
OPEN SPACE POLICIES RELATED TO GOAL OS-1, RETAIN THE CHARACTER AND NATURAL BEAUTY OF MONTEREY COUNTY BY PRESERVING, CONSERVING, AND MAINTAINING UNIQUE PHYSICAL FEATURES, NATURAL RESOURCES, AND AGRICULTURAL OPERATIONS. These policies were identified as one basis for the DEIR's conclusion that impacts to movement corridors and nursery sites would be less than significant through 2030. DEIR, pp. 4.9-90.	• Since the express purpose of these policies is primarily to protect viewsheds rather than biological resources, any benefits to biological resources would be incidental. See specific comments below.
OS-1.3 To preserve the County's scenic qualities, ridgeline development shall not be allowed. An exception to this policy may be made only after publicly noticed hearing and provided the following findings can be made: a. The ridgeline development will not create a substantially adverse visual impact when viewed from a common public viewing area; and, b. That the proposed development better achieves the goals, policies and objectives of the Monterey County General Plan and applicable area plan than other development alternatives; or, c. There is no feasible alternative to the ridgeline development. Pursuant to Policy OS-1.6, in areas subject to specific plans, the ridgeline policies and regulations of the applicable specific plan shall govern.	• This policy is focused on scenic rather than biological resources, including movement corridors. It permits exceptions based primarily on whether there are adverse impacts to scenic resources. • The other criteria for exceptions are not enforceable because there are no objectives specified for identifying the relevant "development alternatives." Please explain how development alternatives would be identified for a project whose proponent seeks to develop a particular ridgeline parcel with a particular use. How will the County use this policy to ban any development of a ridgeline parcel in view of other development alternatives if the proponent does not own or wish to develop alternative parcels or does not wish to consider alternative uses for a ridgeline parcel. • Furthermore, there are no objective standards for determining whether "development alternatives" will "better achieves the goals, policies and objectives of the Monterey County General Plan and applicable area plan." As written, any such determination will be an exercise in standardless discretion and cannot be said to protect biological resources, including movement corridors. • Please explain how "feasible alternatives" to ridgeline development would be determined. Would feasibility be determined with reference to a particular development proponent's economic situation? If so, how can the policy prevent ridgeline development by a proponent who simply seeks the highest return from his land?

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OS-1.4 Criteria shall be developed to guide the design and construction of ridgeline development where such development has been proposed pursuant to Policy OS-1.3.	• Since the criteria have not been developed, there are no enforceable standards on the basis of which the DEIR can conclude that this policy would protect biological resources, including movement corridors.
OS-1.5 New subdivisions shall avoid lot configurations which create building sites that will constitute ridgeline development. Siting of new development visible from private viewing areas may be taken into consideration during the subdivision process.	• This policy is focused on scenic rather than biological resources, including movement corridors.
OS-1.6 In areas subject to specific plans, the ridgeline policies and regulations of the applicable specific plan shall govern. Each specific plan shall address viewshed issues, including ridgeline development as part of the plan, including but not limited to provisions for setbacks, landscaping, height limits, or open space buffers.	• This policy is focused on scenic rather than biological resources, including movement corridors. • The policy contains no performance standards.
OS-1.7 A voluntary, transfer of development rights program to direct development away from areas with unique visual or natural features, critical habitat, or prime agricultural soils shall be established.	• Since the program has not been developed or specified in any detail whatsoever, there are no enforceable standards on the basis of which the DEIR can conclude that this policy would protect biological resources, including movement corridors. • A voluntary program will not create an enforceable mandate to protect any particular resource.
OS-1.8 Programs to encourage clustering development in rural and agricultural areas to maximize access to infrastructure, protect prime agricultural land, and reduce impacts to designated visually sensitive and critical habitat areas shall be established.	• Since the programs have not been developed or specified in any detail whatsoever, there are no enforceable standards on the basis of which the DEIR can conclude that this policy would protect biological resources, including movement corridors or critical habitat. • Programs that merely encourage clustering will not create an enforceable mandate to protect any particular resource. • Please explain how the unspecified programs would operate to bar development projects that impair movement corridors, giving examples of programs that may be developed. Please explain why the example programs should not be adopted as mitigation measures for the 2007 General Plan.
OPEN SPACE POLICIES RELATED TO GOAL OS 3, PREVENT SOIL EROSION TO CONSERVE SOILS AND ENHANCE WATER QUALITY. These policies are identified as one basis for concluding that impacts to special status species (OS 3.5) and habitat (OS 3.1 to 3.9) would be less than significant.	• Please see comments from M.R. Wolfe and Associates regarding erosion and sedimentation policies. Policies OS 3.1 to 3.9 lack enforceable performance standards and examples of measures that would be imposed on particular development projects. Some of the policies are not enforceable because they call for voluntary measures or merely for supporting, encouraging, or cooperating with unspecified programs and activities. • Policy OS 3.9 postpones any action to address cumulative sediment impacts until a study is conducted and some unspecified program is developed. Please explain how the DEIR can conclude on the basis of this deferred program that cumulative sedimentation impacts will be

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	avoided.
Policies Related to Goal OS 4, PROTECT AND CONSERVE THE QUALITY OF COASTAL, MARINE, AND RIVER ENVIRONMENTS, AS APPLIED IN AREAS NOT IN THE COASTAL ZONE. These policies were identified as one basis for the DEIR's conclusion that impacts to special status species (OS 4.1 to 4.3), habitat (OS 4.2 and 4.3) and movement corridors and nursery sites (OS 4.3) would be less than significant through 2030.	• As noted below, these policies do not actually require the County or development proponents to comply with any regulations that would not otherwise be applicable.
OS-4.1 Federal and State designated native marine and fresh water species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant shall be protected. Species designated in Area Plans shall also be protected.	• No programs, specific activities, or permitting constraints are identified that would protect designated species. • Please explain what programs, specific activities, or permitting constraints would be required of the County or development proponents by this policy. Please give examples of programs, specific activities, or permitting constraints.
OS-4.2 Direct and indirect discharges of harmful substances into marine waters, rivers or streams shall not exceed state or federal standards.	• This policy simply affirms the existence of other regulatory programs over which the County itself is unlikely to have any jurisdiction. Please explain what action this policy requires the County to take. Please explain in particular how this policy would be applied with respect to activities that do not require permits, including routine and ongoing agricultural activity and development in the winery corridor.
OS-4.3 Estuaries, salt and fresh water marshes, tide pools, wetlands, sloughs, river and stream mouth areas, plus all waterways that drain and have impact on State designated Areas of Special Biological Significance (ASBS) shall be protected, maintained, and preserved in accordance with state and federal water quality regulations.	• This policy simply affirms the existence of other regulatory programs over which the County itself is unlikely to have any jurisdiction. Please explain what action this policy requires the County to take. Please explain in particular how this policy would be applied with respect to activities that do not require permits, including routine and ongoing agricultural activity and development in the winery corridor.
Policies related to Goal OS-5, CONSERVE DESIGNATED CRITICAL HABITATS FOR LISTED PLANT AND ANIMAL SPECIES DESIGNATED AS FEDERAL OR STATE THREATENED OR ENDANGERED SPECIES AND CRITICAL HABITATS DESIGNATED IN AREA PLANS. These policies were identified as one basis for the DEIR's conclusion that impacts to special status species (OS 5.1 to 5.18), habitat (OS 5.5, 5.6, 5.11 to 5.15) and movement corridors and nursery sites (OS 5.11, 5.13, 5.17) would be less than significant through 2030.	
OS-5.1 The extent and acreages of the designated critical habitat of Federal and State listed threatened or endangered plants or wildlife species shall be inventoried to the extent feasible and mapped in GIS. Conservation of these threatened and	• No explanation is provided as to how the mapped information will be used. Please explain. • Please explain why critical habitat designation mapping has not already been undertaken in connection with the development of land use designations in the 2007 General

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endangered plants shall be promoted.	Plan. In the absence of a systematic review of this information, please explain how the land use designations can avoid authorizing development in areas that will result in impacts to special status species, loss of habitat, and impacts to movement corridors. • Please explain what specific activities, programs, or permitting constraints would be required in order to "promote" conservation of threatened and endangered plants. • Please explain why the policy does not require the promotion of the conservation of threatened and endangered *wildlife* species (as opposed to plants).
OS-5.2 The extent and acreages of the potentially suitable habitat for special status plant and wildlife species shall be inventoried to the extent feasible and mapped in GIS. Conservation of special status species shall be promoted as provided in the Area Plans.	• No explanation is provided as to how the mapped information will be used. Please explain. • Please explain why suitable habitat designation mapping has not already been undertaken in connection with the development of land use designations in the 2007 General Plan. In the absence of a systematic review of this information, please explain how the land use designations can avoid authorizing development in areas that will result in impacts to special status species, loss of habitat, and impacts to movement corridors. • Please explain what specific activities, programs, or permitting constraints would be required in order to "promote" conservation of threatened and endangered plants.
OS-5.3 Development shall be carefully planned to provide for the conservation and maintenance of designated critical habitat of plant and animal species listed by federal agencies as threatened or endangered.	• Please explain whether and how the land use designations in the 2007 General Plan were developed in response to designated critical habitat. What specific mapping was conducted to ensure that land use designations did not conflict with critical habitat? If critical habitat designation was not considered and/or mapping was not conducted, why not? If critical habitat designations were not considered in developing land use designations, please explain in light of Policy OS 5.4 (calling for avoidance of development in critical habitat areas) how the County determined that sufficient land would be available for development in appropriate places. • Please explain how this policy would be implemented in future development permitting. • Please explain how this policy would affect, if at all, future development activities that do not require discretionary permits or any permits at all, including development in the winery corridor and conversion of habitat to agriculture.
OS-5.4 Development shall avoid impacts to State and federally listed plant and animal species and designated critical habitat for federally listed species. Measures may include but are not limited to: a. clustering lots for development to avoid designated critical habitat areas,	• Please explain what measures may be taken when an entire development project is within a critical habitat area and clustering and conservation easements are not available measures. • Please explain what measures this policy would require other than those required by regulations over which the

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b. dedications of permanent conservation easements; or c. other appropriate means. Where new development cannot avoid critical habitat, consultation with United States Fish and Wildlife Services (USFWS) may be required and impacts may be mitigated by expanding the resource elsewhere on-site or within close proximity off-site. Final mitigation requirements would be determined by USFWS.	County has no jurisdiction. What, if anything, does this policy add to the existing regulatory regime?
OS-5.5 Landowners and developers shall be encouraged to preserve the integrity of existing terrain and native vegetation in visually sensitive areas such as hillsides, ridges, and watersheds. Routine and On-going Agriculture shall be exempt from this policy.	• Policies that encourage action do not create enforceable mandates. Please explain what activities, programs, or development limitations would be undertaken in response to this policy, giving examples.
OS-5.6 Native and native compatible species, especially drought resistant species, shall be utilized in fulfilling landscaping requirements.	• Please identify the source of the "landscaping requirements" to which this policy refers. Does the policy require use of native and native compatible species, especially drought resistant species, for all landscaping for residential development or commercial development projects? • Please explain how landscaping requirements would lead to protection of special status species, habitat, or movement corridors, giving examples.
OS-5.7 Proposals for harvesting commercially valuable timber or as a part of a Timberland Conversion Project (as defined by the California Department of Forestry) shall: a. include filing of a Timber Harvest Plan that provides for selective, sustained yield harvesting and reforestation, and erosion control; b. consider opportunities for concurrent and subsequent use of publicly owned timber land for public recreation; c. require approval by the California Department of Forestry; e. complete environmental review by the County and other appropriate agencies; and f. comply with the resource protection goals and policies of this General Plan	• Please explain what measures this policy would require other than those required by regulations over which the County has no jurisdiction. What, if anything, does this policy add to the existing regulatory regime? • Please identify the "resource protection goals and policies of this General Plan" with which timber harvesting proposals would have to comply. How does this provision add anything to those policies?
OS-5.8 Small-scale milling operations may be allowed subject to compatibility with resource protection policies and the peace of adjacent residences.	• Please identify the "resource protection policies" with which milling operations would have to comply and explain what constitutes "compatibility." How does this provision add anything to those policies?
OS-5.9 Tree removal that requires a permit shall be established by Area Plans.	• Please identify any area plans that do not already contain a tree removal permitting requirement. • Why have tree removal permitting policies not been established for all area plans as part of the 2007 General

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	Plan? • What performance standards, if any, will tree removal policies have to meet? • How will this policy be coordinated with Mitigation Measure BIO 2.2, calling for an Oak Woodlands Mitigation Program? • In light of the absence of performance standards, on what basis does the DEIR identify this policy as a basis for concluding that impacts will be less than significant?
OS-5.10 Regulations for tree removal, including Timberland Conversion, shall be established and maintained by ordinance implementing Area Plan policies that address the following: a. Criteria when a permit is required including: 1. number of trees, 2. minimum size of tree, 3. Post Timberland conversion land-use b. How size is measured for each protected species of tree, and what constitutes a landmark tree depending on the rate of growth for that species. c. Hazardous trees d. Pest and disease abatement e. Replacement criteria. f. Ensure minimal removal	• What performance standards, if any, will tree removal ordinances have to meet? (Note that the "criteria" listed in this policy are not in fact standards, but merely the identification of parameters without any value ranges specified. A parameter without values does not constitute a performance standard. It would be possible to devise regulations consistent with this policy that permit removal of every tree in the area.) • How will this policy be coordinated with Mitigation Measure BIO 2.2, calling for an Oak Woodlands Mitigation Program? • In light of the absence of performance standards, on what basis does the DEIR identify this policy as a basis for concluding that impacts will be less than significant?
OS-5.11 Conservation of large, continuous expanses of native trees and vegetation shall be promoted as the most suitable habitat for maintaining abundant and diverse wildlife.	• Please explain what specific activities, programs, or development constraints would be required in order to "promote" conservation under this policy. • Please identify the objective standards for determining whether an expanse of native trees and vegetation is sufficiently large and continuous to require that its conservation be promoted. • Please explain whether and how this policy would be implemented to constrain or bar a particular development proposal. • How will this policy be coordinated with Mitigation Measure BIO 2.2, calling for an Oak Woodlands Mitigation Program? • In light of the lack of mandatory language or objective standards, please explain how this policy supports the DEIR's conclusion that impacts will be less than significant.
OS-5.12 The California Department of Fish and Game shall be consulted and appropriate measures shall be taken to protect Areas of Special Biological Significance (ASBS) for State and federally listed species.	• Please explain who will be required to initiate consultation and in what context. • Please provide examples and standards for "appropriate measures." • In light of the lack of examples or objective standards, please explain how this policy supports the DEIR's conclusion that impacts will be less than significant.
OS-5.13 Efforts to obtain and preserve natural areas of particular biologic, scientific, or educational	• Policies that merely encourage efforts do not create enforceable mandates.

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interest and restrict incompatible uses from encroaching upon them shall be encouraged.	• Please explain how "natural areas of particular biologic, scientific, or educational interest" will be identified, by whom, and in what context. Who will bear responsibility for implementing this policy? What resources will be devoted to it?
OS-5.14 Policies and procedures that encourage exclusion and control or eradication of invasive exotic plants and pests shall be established. Sale of such items within Monterey County shall be discouraged.	• Who will establish policies and procedures? When will this occur? What steps will be taken in the interim? • Please identify examples of and standards for policies and procedures that would encourage exclusion and control or eradication of invasive exotic plants and pests. • Please explain how sale of such items would be discouraged.
OS-5.15 A fee waiver program for environmental restoration projects shall be established.	• According to what objective standard will fees be waived? • To what extent will fee waivers actually result in environmental restoration projects that would not otherwise have occurred? • Who is responsible to develop the fee waiver program and on what deadline?
OS-5.16 Any development project that could potentially disturb a special status species or its critical habitat identified by the County requiring analysis or identified for protection under an adopted Area Plan shall be required to conduct a biological survey of the site. Based on the findings of this report, additional focused surveys for certain species may be required. This report, and any mitigation measures recommended in the report, shall be used as a basis for CEQA documentation for the project except if the County, in the exercise of its independent judgment, requires additional analysis. If sensitive biological resources are found on the site, the project biologist shall recommend measures necessary to reduce impacts to a less than significant level. All feasible measures shall be incorporated as conditions of approval in any permit issued. An ordinance establishing minimum standards for a biological report shall be enacted.	• Except for the proposed ordinance setting minimum standards for biological reports, this policy does not appear to require anything other than what is already mandated by CEQA for review of development projects. Please explain what measures this policy would require other than those already required by CEQA. What, if anything, does this policy add to the existing regulatory regime? • CEQA considers mitigation proposals that call for compliance with recommendations in a report that has yet to be undertaken and for which standards have not been specified to be improperly deferred. In view of the deferral of the only potentially substantive portion of the policy, the proposed standards for adequate biological studies, how does this policy support the DEIR's conclusion that impacts will be mitigated?
OS-5.17 The County shall prepare, adopt, and implement a program that allows projects to mitigate the loss of critical habitat. The program may include ratios, payment of fees, or some other mechanisms in consultation with responsible state and/or federal regulatory agencies. Until such time as the program has been established, projects shall mitigate the loss of critical habitat on an individual basis in consultation with responsible state and/or federal regulatory agencies. A Community Plan or Rural Center Plan that includes a mitigation program shall not be subject to this policy.	• This policy does not appear to require any action that is not already required by the ESA or the CESA. Please explain what additional requirements this policy would impose, if any. • This policy does not propose and performance standards for habitat loss mitigation. At most, it identifies parameters that might be part of such a program, but without specifying values for those parameters. Without values, parameters are not standards. In view of the lack of any performance standards, how does this policy support the DEIR's conclusion that impacts will be mitigated?

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	• Please identify the performance standards that must be met by mitigation program for a Community Plan or Rural Center Plan. If there are no such standards, how does this policy support the DEIR's conclusion that impacts related to critical habitat loss from Community Plan or Rural Center Plan will be mitigated?
OS-5.18 Prior to disturbing any federal or state jurisdictional areas, all applicable federal and state permitting requirements shall be met, including all mitigation measures for development of jurisdictional areas and associated riparian habitats.	• This policy does not appear to require any action that is not already required by regulations over which the County has no jurisdiction. Please explain what additional requirements this policy would impose, if any.
Policies related to Goal PS 11, MAINTAIN AND ENHANCE THE COUNTY'S PARKS AND TRAILS SYSTEM IN ORDER TO PROVIDE RECREATIONAL OPPORTUNITIES, PRESERVE NATURAL SCENIC RESOURCES AND SIGNIFICANT WILDLIFE HABITATS, AND GOOD STEWARDSHIP OF OPEN SPACE RESOURCES. These policies were identified as one basis for the DEIR's conclusion that impacts to special status species (PS 1.11, 11.12) and habitat (PS 11.11, 11.12) would be less than significant through 2030.	
PS-11.11 Management plans for all County park and recreational areas and facilities, emphasizing protection of environmental resources and best management practices for open space on these lands, shall be prepared and adopted.	• Please identify examples of and standards for management plan elements. • Who will prepare management plans and on what timetable? What measures will be taken in the interim to ensure that Goal PS 11 will be met? • In light of the lack of examples or objective standards, please explain how this policy supports the DEIR's conclusion that impacts will be less than significant.
PS-11.12 Parks for more active uses shall be distinguished from parks and open space areas rich in biological resources suitable for more passive enjoyment of those resources. Management Plans shall reflect these differences and specify appropriate management for each use.	• Please explain what standards will be used to distinguish active and passive use parks. • Please identify examples of and standards for management plan elements that would be appropriate for active parks and passive parks. • In light of the lack of examples or objective standards, please explain how this policy supports the DEIR's conclusion that impacts will be less than significant.
Policies related to Goal PS 2, ASSURE AN ADEQUATE AND SAFE WATER SUPPLY TO MEET THE COUNTY'S CURRENT AND LONG-TERM NEEDS. This policy was identified as one basis for the DEIR's conclusion that impacts to habitat (PS 2.8) would be less than significant through 2030.	
PS-2.8 The County shall require that all projects be designed to maintain or increase the site's pre-	• Please explain how this policy is related to the "runoff performance standards" that are to be developed under

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development absorption of rainfall (minimize runoff), and to recharge groundwater where appropriate. Implementation would include standards that could regulate impervious surfaces, vary by project type, land use, soils and area characteristics, and provide for water impoundments (retention/detention structures), protecting and planting vegetation, use of permeable paving materials, bioswales, water gardens, and cisterns, and other measures to increase runoff retention, protect water quality, and enhance groundwater recharge.	Policy S 3.5. Will the runoff performance standards to be developed under Policy S 3.5 permit runoff to be increased despite this policy? • Please identify the standards that could regulate impervious surfaces, vary by project type, land use, soils and area characteristics, and provide for water impoundments (retention/detention structures). • Please explain how this policy supports the DEIR's conclusion that habitat impacts will be less than significant, particularly given the uncertainty as to the runoff performance standards.
Policies related to Goal AG 5, ENSURE COMPATIBILITY BETWEEN THE COUNTY'S AGRICULTURAL USES AND ENVIRONMENTAL RESOURCES. This policy was identified as one basis for the DEIR's conclusion that impacts to habitat (AG 5.1, 5.2) would be less than significant through 2030.	
AG–5.1 Programs that reduce soil erosion and increase soil productivity shall be supported.	• The policy does not identify or mandate any particular program. • Policies that "support," "promote," or "encourage" activities and programs do not create any enforceable constraints on development projects. • Please identify performance standards or and examples of programs to reduce soil erosion. • In light of the absence of standards, examples, and mandatory action, please explain how this policy supports the DEIR's conclusion that habitat impacts will be less than significant.
AG–5.2 Policies and programs to protect and enhance surface water and groundwater resources shall be promoted, but shall not be inconsistent with State and federal regulations.	• The policy does not identify or mandate any particular program. • Policies that "support," "promote," or "encourage" activities and programs do not create any enforceable constraints on development projects. • Please identify performance standards or and examples of programs to protect and enhance surface water and groundwater resources. • In light of the absence of standards, examples, and mandatory action, please explain how this policy supports the DEIR's conclusion that habitat impacts will be less than significant.
Policies related to Goal AG 4, SUPPORT THE DEVELOPMENT OF A FULLY INTEGRATED WINE INDUSTRY. This policy was identified as one basis for the DEIR's conclusion that impacts to movement corridors (AG 4.3) would be less than significant through 2030.	
AG-4.3 Develop and maintain an Agricultural and	• Please identify the guidelines and standards to encourage

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Winery Corridor Plan (AWCP) that establishes guidelines and standards to encourage development of the wine industry within the designated corridor.	development of the wine industry within the designated corridor. • Please explain whether and how the guidelines and standards to be developed under this policy will regulate conversion of habitat to vineyards or whether the policy will be directed only at winery and visitor serving development. • Please explain whether and how the DEIR determined that encouraging the wine industry to develop within the designated corridor would beneficially affect movement corridors, particularly in light of the fact that the winery corridor interrupts the east-west movement corridor across the Salinas Valley. • In light of the absence of standards, examples, and mandatory action, please explain how this policy supports the DEIR's conclusion that habitat impacts will be less than significant • Please explain how this policy will actually have any significant effect of confining winery development within ay particular area in view of Policy AG 4.4, which provides that "these policies do not limit the development of wineries within or outside of the designated winery corridor."
Policies related to Goal S 2, REDUCE THE AMOUNT OF NEW DEVELOPMENT IN FLOODPLAINS, AND FOR ANY DEVELOPMENT THAT DOES OCCUR, MINIMIZE THE RISK FROM FLOODING AND EROSION. This policy was identified as one basis for the DEIR's conclusion that impacts to movement corridors (S 2.1 to 2.8) would be less than significant through 2030.	
S-2.1 Land use planning to avoid incompatible structural development in flood prone areas shall be the primary means of minimizing risk from flood hazards.	• Please explain how a policy designed to avoid structural development but that still permits agricultural use will act to preserve movement corridors.
S-2.2 Uses such as agriculture, passive to low intensity recreation, and open space/conservation are the most acceptable land uses in the 100-year floodplain to lessen the potential for loss of life, injury, property damage, and economic and social dislocations to the maximum extent feasible.	• This policy does not appear to authorize any activities, programs, or development constraints. Please explain how it would be implemented. For example, would this policy *bar* structural development in the flood-plain? If not, why not? • How, and in what context (e.g., development review?), will the County determine whether proposed uses lessen the potential for loss of life, injury, property damage, and economic and social dislocations to the maximum extent feasible. How will feasibility be determined, technically or economically?
S-2.3 All new development, including filling, grading, and construction, within designated 100-year floodplain areas shall conform to the guidelines	• Please identify the referenced ordinances established by the County Board of Supervisors. If they have not been established, please explain what these ordinances will

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of FEMA and the National Flood Insurance Program and ordinances established by the County Board of Supervisors. With the exception of the construction of structures, Routine and On-going Agricultural activities shall be exempt from this policy.	provide. • Please identify the specific provisions of the guidelines of FEMA and the National Flood Insurance Program and ordinances established by the County Board of Supervisors from which Routine and On-going Agricultural activities shall be exempt. • Please explain how the exemption of Routine and On-going Agricultural activities will affect movement corridors.
S-2.4 Monterey County shall strive to improve its National Flood Insurance Program Community Rating System classification.	• Please explain how this policy will affect movement corridors.
S-2.5 In Community Areas, the suitability of new development in the FEMA defined 100-year floodplain shall be addressed through the Community Plan process in consultation with the Monterey County Water Resources Agency. The County shall prioritize, support, encourage, and participate to the greatest extent feasible in collaborative efforts to address flooding in or around Community Areas in order to facilitate development identified in the Community planning process.	• Please identify standards for and examples of County activities to prioritize, support, encourage, and participate to the greatest extent feasible in collaborative efforts to address flooding in or around Community Areas in order to facilitate development identified in the Community planning process • Please explain how this policy will affect movement corridors, particularly in view of the probability that movement corridors will not include Community Areas.
S-2.6 Drainage and flood control improvements needed to mitigate flood hazard impacts associated with potential development in the 100-year floodplain shall be determined prior to approval of new development and shall be constructed concurrently with the development.	• Will this policy apply to agriculture? If not, why not? • How will this policy affect movement corridors?
S-2.7 Outside Community Areas, subdivisions that create lots where the only developable sites for new structures are within the 100-year floodplain shall be discouraged.	• Policies that merely 'discourage" activities do not create an enforceable mandate. Please explain whether and how this policy could be used to deny a development permit.
S-2.8 Alternative project designs and densities to minimize development in the floodplain shall be considered and evaluated.	• The policy does not specify who is responsible to implement it. Please explain what constraints, if any, this policy would impose on the development review process. • Please explain whether this policy would be applied to projects fro which no discretionary permit is required, including wineries and conversion of habitat for agriculture. • Please explain how the County or a development proponent would formulate the objectives to be satisfied by the "alternative" project designs and densities that are to be considered. If the County does not formulate these objectives, please explain how the County would avoid findings that there is no alternative to narrowly designed objectives.

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Polices from the CACHAGUA AREA PLAN. These policies were identified as one basis for the DEIR's conclusion that impacts to special status species, habitat, and movement corridors would be less than significant through 2030.	
CACH-1.4 New development adjacent to the Ventana Wilderness shall not impact the purpose of the wilderness areas.	• Please identify standards and examples of allowable development. • In light of the absence of standards and examples for allowable development, please explain how the policy supports the DEIR's conclusion that impact will be less than significant.
CACH-3.3 Alteration of hillsides and natural landforms caused by cutting, filling, grading or vegetation removal shall be minimized through sensitive siting and design of all improvements and maximum feasible restoration. Where cut and fill is unavoidable on steep slopes, disturbed areas shall be re-vegetated.	• Please identify objective standards for "sensitive siting and design of all improvements and maximum feasible restoration" • The policy does not create an enforceable mandate because there are no standards to define "unavoidable" cut and fill (relative to what objectives?) and "maximum feasible restoration" (feasible within what constraints?) • Please explain how this policy supports a finding of less than significant impacts in view of the lack of objective standards and enforceable mandates.
CACH-3.5 Mining or commercial timber, or other resource production operations that include methods to screen areas, vehicle access, impacts on roadways, noise impacts, measures to control on site and off site drainage and reclamation plans for mined or quarried areas may be considered in the Planning Area. Impacts on watersheds, local roads, flora and fauna shall be mitigated.	• Please explain what is meant by "methods to screen areas, vehicle access, impacts on roadways, noise impacts, measures to control on site and off site drainage and reclamation plans for mined or quarried areas." The sentence is not clear. • What particular impacts are referred to in stating that "impacts on watersheds, local roads, flora and fauna shall be mitigated?" • How will those impacts be mitigated? Please identify objective standards and examples of possible mitigation methods. • Please explain how the policy supports a finding of less than significant impacts in view of the lack of standards and examples for mitigation.
CACH-3.6 In cooperation with the United States Forest Service and private property owners, work to ensure that Santa Lucia fir are protected due to their significance to the natural history of the Planning Area.	• No responsibility is assigned to implement this policy and no resources are identified. Please explain. • No development constraints are identified. Please explain if this policy would constrain development at all. • In view of the lack of any enforceable mandate, any assignment of responsibility, and any constraints on development, please explain how this policy supports a finding of less than significant impacts.
CACH-3.7 New development shall be sited to protect riparian vegetation and threatened fish species, minimize erosion, and preserve the visual aspects of the Carmel and Arroyo Seco Rivers. Private property owners are encouraged to preserve the Carmel River in its natural state, to prevent erosion and protect fishery habitat. Fishery habitats located above the Los Padres and San Clemente	• The term "minimize erosion" is not defined. Please specify the standards for acceptable levels of erosion. • Policies that "support," "promote," or "encourage" activities and programs do not create enforceable constraints on development projects. • No responsibility is assigned for ensuring that fishery habitats are maintained in a productive state accessible to fish populations, especially steelhead.

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Dams shall be maintained in a productive state accessible to fish populations, especially steelhead.	• In view of the lack of any standards for erosion, any assignment of responsibility, and any constraints on development, please explain how this policy supports a finding of less than significant impacts.
Polices from the CARMEL VALLEY MASTER PLAN. These policies were identified as one basis for the DEIR's conclusion that impacts to special status species, habitat, and movement corridors would be less than significant through 2030.	
CV-3.4 Alteration of hillsides and natural landforms caused by cutting, filling, grading or vegetation removal shall be minimized through sensitive siting and design of all improvements and maximum feasible restoration including botanically appropriate landscaping. Where cut and fill is unavoidable on steep slopes, disturbed areas shall be revegetated.	• Please identify objective standards for "sensitive siting and design of all improvements and maximum feasible restoration" • The policy does not create an enforceable mandate because there are no standards to define "unavoidable" cut and fill (relative to what objectives?) and "maximum feasible restoration" (feasible within what constraints?) • Please explain how this policy supports a finding of less than significant impacts in view of the lack of objective standards and enforceable mandates.
CV-3.7 Areas of biological significance shall be identified and preserved as open space. These include, but are not limited to: a. The redwood community of Robinson Canyon; b. The riparian community and redwood community of Garzas Creek; c. All wetlands, including marshes, seeps and springs (restricted occurrence, sensitivity, outstanding wildlife value). d. Native bunchgrass stands and natural meadows (restricted occurrence and sensitivity). e. Cliffs, rock outcrops and unusual geologic substrates (restricted occurrence). f. Ridgelines and wildlife migration routes (wildlife value). When a parcel cannot be developed because of this policy, a low-density, clustered development (but no subdivision) may be approved on those portions of the land not biologically significant or on a portion of the land adjoining existing development so that the development will not diminish the visual quality of such parcels or upset the natural functioning of the ecosystem in which the parcel is located.	• Please identify objective criteria for determining areas of biological significance. • Please identify the boundaries of the areas identified in subsections a through f of the policy. If boundaries cannot be identified, please explain the criteria by which the areas will be designated. • Please explain what is meant by the phrases in parentheses in subsections a through f, including restricted occurrence, sensitivity, and outstanding wildlife value. • Please explain when the designation will occur and what agency will make the designation. Please explain what rights will be afforded to landowners in the designation process. • Please explain what interim measures will be put in place to implement this policy pending designation of areas of biological significance. • Please identify the basis on which it will be determined if a development will upset the natural functioning of the ecosystem. • In view of the lack of standards and procedures to implement this policy, please explain how it supports a finding of less than significant impacts.
CV-3.8 Development shall be sited to protect riparian vegetation, minimize erosion, and preserve the visual aspects of the Carmel River. In places where the riparian vegetation no longer exists, it should be planted to a width of 150 feet from the river bank, or the face of adjacent bluffs, whichever is less. Density may be transferred from this area to other areas within a lot.	• Please identify the objective standards for siting development to protect riparian vegetation, minimize erosion, and preserve the visual aspects of the Carmel River. • Please explain under what circumstances this policy would be implemented to bar any development of a parcel.

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	• Please explain why a similar policy is not proposed for all other riparian corridors in the County.
CV-3.9 Willow cover along the banks and bed of the Carmel River shall be maintained in a natural state for erosion control. Constructing levees, altering the course of the river, or dredging the river shall only be allowed by permit from the Monterey Peninsula Water Management District or Monterey County.	• Please explain under what circumstances this policy would be implemented to bar any development of a parcel. • What standards will be used by the Monterey Peninsula Water Management District or Monterey County in determining whether to issue a permit? • Please explain why a similar policy is not proposed for all other riparian corridors in the County.
CV-3.10 Predominant landscaping and erosion control material shall consist of plants native to the valley that are similar in habitat, form, and water requirements. The following guidelines shall apply for landscape and erosion control plans: a. Existing native vegetation should be maintained as much as possible throughout the valley. b. Valley oaks should be incorporated on floodplain terraces. c. Weedy species such as pampas grass and genista shall not be planted in the Valley. d. Eradication plans for weedy species shall be incorporated. e. The chaparral community shall be maintained in its natural state to the maximum extent feasible in order to preserve soil stability and wildlife habitat and also be consistent with fire safety standards.	• Please explain why a similar policy is not proposed for all other areas in the County. • Please explain what portion of landscaping and erosion control material will constitute the "predominant" portion. Please explain the basis for this determination. For example, why does the policy not require that all of landscaping and erosion control material comply? • Please explain whether this policy will apply to residential development. If not why not. • Please explain whether this policy will apply to developments for which no discretionary permit is required. If so, how will it be implemented. If not, why not? • Please explain how "as much as possible" and "the maximum extent feasible" will be determined and whether feasibility and possibility will be determined technically or economically.
CV-3.11 Removal of healthy, native oak, madrone and redwood trees in the Carmel Valley Master Plan Area shall be discouraged. A permit shall be required for the removal of any of these trees with a trunk diameter in excess of 6-inches (6") diameter breast height (d.b.h). Where feasible, trees removed will be replaced at a 1:1 ratio using nursery-grown trees of the same species that are a minimum of 1-gallon in size. Removal without a permit shall result in a minimum fine, equivalent to the retail value of the wood removed plus replacement of 1-gallon, nursery-grown trees at a 2:1 ratio. Exemptions to the above permit requirement shall include: a. tree removal by public utilities, as specified in the California Public Utility Commission's *General Order 95*, and by governmental agencies. b. emergencies caused by the hazardous or dangerous condition of a tree and requiring immediate action for the safety of life or property, provided the County is notified of the action within ten (10) working days.	• Please explain why a similar policy is not proposed for all other areas in the County. • Please explain how the policy will be implemented to "discourage" tree removal. • What standards will be used to determine whether to issue a permit to remove trees? What conditions will be imposed on such permits? • Please explain how it will be determined whether replacement is feasible and whether feasibility will be determined technically or economically. • How will this policy be coordinated with Mitigation Measure BIO 2.2, calling for an Oak Woodlands Mitigation Program?
CV-3.12 Open space areas should include a diversity of habitats with special protection given to areas where one habitat grades into another (these ecotones are ecologically important zones) and	• Please explain how, when, and by whom this policy will be implemented. • Will this policy require re-designation of the land use

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areas used by wildlife for access routes to water or feeding grounds.	classifications proposed in the 2007 General Plan? If not, how will this policy operate to constrain development and preserve open space? • What standards will be used to determine which areas should be preserved in open space? • In view of the lack of standards and plans for implementation, please explain how this policy supports a finding that impacts would be less than significant.
CV-4.1 In order to reduce potential erosion or rapid runoff: a. The amount of land cleared at any one time shall be limited to the area that can be developed during one construction season. b. Motorized vehicles shall be prohibited on the banks or in the bed of the Carmel River, except by permit from the Water Management District or Monterey County. c. Native vegetative cover must be maintained on areas that have the following combination of soils and slope: 1. Santa Lucia shaly clay loam, 30-50% slope (SfF) 2. Santa Lucia-Reliz Association, 30-75% slope (Sg) 3. Cieneba fine gravelly sandy loam, 30-70% slope (CcG) 4. San Andreas fine sandy loam, 30-75% slope (ScG) 5. Sheridan coarse sandy loam, 30-75% slope (SoG) 6. Junipero-Sur complex, 50-85% slope (Jc)	• Please explain why sections "a" and "b" of this policy are not required County-wide. • Please explain why native vegetative cover should not be maintained on slopes over 25% or on slopes below 25%. • Please explain why requirements for maintenance of native vegetative cover are not proposed for all other areas of the County.
CV-5.3 Development shall incorporate designs with water reclamation, conservation, and new source production in order to: a. maintain the ecological and economic environment; b. maintain the rural character; and c. create additional water for the area where possible including, but not limited to, on-site stormwater retention and infiltration basins.	• Please identify standards for designs that will meet the objectives in subsections a through c. • Please identify standards for determining whether the objectives in subsections a through c are met. • Please explain how, in view of the lack of identified standards, the policy supports a finding that impacts are less than significant.
CV-6.2 Gardens, orchards, row crops, grazing animals, farm equipment, and farm buildings are part of the heritage and the character of Carmel Valley. This rural agricultural nature should be encouraged, except on slopes of 25-percent (25%) or greater or where it would require the conversion or extensive removal of existing native vegetation.	• Please explain why slope development for agriculture will not cause erosion and sedimentation impacts on slopes *less than* 25%. • Please explain why the 25% slope limitation is encouraged in Carmel Valley but not County-wide. • The policy does not create an enforceable mandate because it merely states that conversion and extensive vegetation removal on slopes over 25% should not be encouraged. Nothing in the policy actually bars such slope development.
Polices from the CENTRAL SALINAS VALLEY AREA PLAN. These policies were identified as	

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one basis for the DEIR's conclusion that impacts to special status species, habitat, and movement corridors would be less than significant through 2030.	
CSV-5.1 Development shall be designed to maintain groundwater recharge capabilities on the property. To protect and maintain areas for groundwater recharge, preservation of riparian habitats, and flood flow capacity, the main channels of the Arroyo Seco River and the Salinas River shall not be encroached on by development.	• Please identify the geographic extent protected areas in the "main channels." • Recharge areas, riparian habitat, and flood flows occur outside of the main channels of the rivers. The riparian habitat and flood flow areas are *primarily* outside the main channels. Please explain how barring development only from the main channels will be sufficient to meet the stated objectives of protecting and maintaining areas for groundwater recharge, preservation of riparian habitats, and flood flow capacity. • Please explain why a similar policy is not proposed County-wide.
CSV-5.2 Recreation and visitor-serving commercial uses shall only be allowed if it can be proven that: a. areas identified by the Water Resources Agency as prime-groundwater recharge areas can be preserved and protected from sources of pollution as determined by the Director of Environmental Health and the Water Resources Agency; b. proposed development can be phased to ensure that existing groundwater supplies are not committed beyond their safe, long-term yields where such yields can be determined. c. floodways associated with the main channels of either the Arroyo Seco River or the Salinas River will not be encroached on by development because of the necessity to protect and maintain these areas for groundwater recharge, preservation of riparian habitats, and flood flow capacity as determined by the Water Resources Agency. d. the proposed development meets both water quality and quantity standards expressed in Title 22 of the California Code of Regulations and *Title 15.04* of the Monterey County Code as determined by the Director of Environmental Health; e. the proposed development meets the minimum standards of the Regional Water Quality Control Basin Plan when septic systems are proposed and also will not adversely affect groundwater quality, as determined by the Director of Environmental Health; and f. the proposed development will not generate levels of runoff which will either cause erosion or adversely affect surface water resources as determined by the Water Resources Agency.	• Please explain why this policy is limited to recreation and visitor-serving commercial uses. Why is it not applied to all uses, including agriculture? • Please identify the prime-groundwater recharge areas and the standards by which it will be determined that these areas can be preserved and protected. • Please explain how and when safe-yields will be determined. Please explain under what circumstances it will be concluded that safe, long-term yields cannot be determined. • Please identify the geographic extent of the floodways to be protected from development. If the geographic extent is not identified, please explain whether floodways will be determined with reference to 10-year floods, 100-year floods, or on some other basis. • Please identify the standards to be used to determine runoff levels that will not cause erosion or adversely effect surface water resources. • Please explain why a similar policy is not proposed County-wide.
Polices from the FORT ORD MASTER PLAN. These policies were identified as one basis for the	

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DEIR's conclusion that impacts to special status species, habitat, and movement corridors would be less than significant through 2030.	
Recreation Policy C-1: *Monterey County shall establish an oak tree protection program to ensure conservation of existing coastal live oak woodlands in large corridors within a comprehensive open space system. Locate local and regional trails within this system.*	• Please identify performance standards for the program, including standards for identification of trees to be protected and for identification of "large corridors within a comprehensive open space system." • How will this policy be coordinated with Mitigation Measure BIO 2.2, calling for an Oak Woodlands Mitigation Program?
Recreation Policy C-2: *All proposed recreational use should be reviewed for compatibility with an adopted Habitat Conservation Plan to insure long-term protection of sensitive resources. Recreational use shall be prohibited if the FORA Board finds that such use could compromise the ability to maintain and preserve an environmentally sensitive resource.*	• Please identify standards for determining "sensitive resources." • Please identify the performance standards on the basis of which the FOR A Board will determine if recreational uses compromise the ability to maintain and preserve an environmentally sensitive resource.
Biological Resource Policies A-1 through A-9 together with implementing programs establishes a Habitat Management Plan for Fort Ord.	• Please explain why habitat management plans are not established or proposed with the same level of specificity and programmatic detail to protect other areas and resources within the County. See comments on the proposed Mitigation Measure BIO 1.5.
Biological Resources Policies B-1 through B3 address preservation of sensitive species and habitats not included in the HCP; preservation of identified oak woodlands; and preservation of vernal ponds, riparian corridors, and wetland areas.	• Please explain why similar policies and programs are not proposed to protect sensitive species and habitats throughout the County. For example, please explain why the General Plan does not identify specific oak woodland corridors for protection and require specific mitigation ratios for wetlands and riparian forests in areas other than Fort Ord.
Biological Resources Policy C-1 through C-3	
Biological Resources Policy C-1: *The County of Monterey shall encourage grading for projects to be designed to complement surrounding topography and to minimize habitat disturbance.* ***Program C-1.1:*** *The County shall encourage the use of landform grading techniques for 1) projects involving major changes to the existing topography, 2) large projects with several alternative lot and roadway design possibilities, 3) projects with known geological problems areas, or 4) projects with potential drainage problems requiring diverters, dissipaters, debris, basins, etc.*	• Programs that merely encourage activities do not create enforceable mandates. Please explain why the policy does not require certain grading techniques.
Biological Resources Policy C-2: *The County shall encourage the preservation and enhancement of native oak woodland elements in the natural and built environments. Refer to Fort Ord Reuse Plan Figure 4.4-1 for general location of oak woodlands of the former Fort Ord.* ***Program C-2.1:*** *The County shall encourage clustering of development wherever possible so that contiguous stands of oak trees can be maintained in*	• Programs that merely encourage activities do not create enforceable mandates. Please explain why the policy does not *require* preservation and enhancement of native oak woodlands through mandatory clustering. • Please explain whether the requirement to use oaks and other native plant species will apply to all development projects and whether it will extend to all of a project's landscaping. If not, please explain to which projects this will apply and to what extent.

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the non-developed natural land areas. ***Program C-2.2:*** *The County shall apply certain restriction for the preservation of oak and other protected trees in accordance with Chapter 16.60 of Title 16 of the Monterey County Code (ordinance 3420).* ***Program C-2.3:*** *The County shall require the use of oaks and other native plant species for project landscaping. To that end, the County shall recommend collection and propagation of acorns and other plant materials from the former Fort Ord oak woodlands to be used for restoration or as landscape material.* ***Program C-2.4:*** *The County shall provide the following standards for plantings that may occur under oak trees; 1) planting may occur within the drip line of mature trees, but only at a distance of five feet from the trunk and 2) plantings under and around oaks should be selected from the list of approved species compiled by the California Oak Foundation (see Compatible Plants Under and Around Oaks).* ***Program C-2.5:*** *The County shall require that paving within the drip line of preserved oak trees be avoided wherever possible. To minimize paving impacts, the surfaces around tree trunks should be mulched, paving materials should be used that are permeable to water, aeration vents should be installed in impervious pavement, and root zone excavation should be avoided.*	• How will this policy be coordinated with Mitigation Measure BIO 2.2, calling for an Oak Woodlands Mitigation Program?
Biological Resources Policy C-3: *Lighting of outdoor areas shall be minimized and carefully controlled to maintain habitat quality for wildlife in undeveloped natural lands. Street lighting shall be as unobtrusive as practicable and shall be consistent in intensity throughout development areas adjacent to undeveloped natural lands.* ***Program C-3.1:*** *The County shall review lighting and landscape plans for all development applications to ensure consistency with Policy C-3.*	• Please explain why this policy is not applied throughout the County.
Biological Resources Policy D-1: *The County shall require project applicants to implement a contractor education program that instructs construction workers on the sensitivity of biological resources in the vicinity and provides specifics for certain species that may be recovered and relocated from particular development areas.* ***Program D-1.1:*** *The County shall participate in the preparation of a contractor education program with other Fort Ord land use jurisdictions. The education program should describe the sensitivity of*	• Please explain why these policies are not applied throughout the County.

Policies Cited As The Basis of Significance Conclusions Related to Biological Impacts	
biological resources, provide guidelines for protection of special status biological resources during ground disturbing activities at the former Fort Ord, and outline penalties and enforcement actions for take of listed species under Section 9 of the Endangered Species Act. ***Program D-1.2:*** *The County shall provide project applicants with specific information on the protocol for recovery and relocation of particular species that may be encountered during construction activities.* ***Biological Resources Policy D-2:*** *The County shall encourage and participate in the preparation of educational materials through various media sources that describe the biological resources on the former Fort Ord, discuss the importance of the HMP, and emphasize the need to maintain and manage the biological resources to maintain the uniqueness and biodiversity of the former Fort Ord.* ***Program D-2.1:*** *The County shall develop interpretive signs for placement in habitat management areas. These signs describe resources present, how they are important to the former Fort Ord, and ways in which these resources are or can be protected.* ***Program D-2.2:*** *The County shall coordinate production of educational materials through the CRMP process.* ***Program D-2.3:*** *Where development will be adjacent to habitat management areas, corridors, oak woodlands, or other reserve open space, the County shall require project applicants to prepare a Homeowner's Brochure which describes the importance of the adjacent land areas and provides recommendations for landscaping, and wildfire protection, as well as measures for protecting wildlife and vegetation in the adjacent habitat areas. (i.e., access controls, pet controls, use of natives in the landscape, etc.).*	
Biological Resources Policy E-1: *The County shall develop a plan describing how it intends to address the interim management of natural land areas for which the County is designated as the responsible party.* ***Program E-1.1:*** *The County shall submit to the USFWS and CDFG, through the Coordinated Resource Management Planning (CRMP) program, a plan for implementation of short-term habitat management for all natural lands, including consideration of funding sources, legal mechanisms and a timetable to provide for prompt implementation of the following actions to prevent*	• Please explain why these policies are not applied throughout the County.

Policies Cited As The Basis of Significance Conclusions Related to Biological Impacts	
degradation of habitat: *• Control off-road vehicle use in all undeveloped natural land areas.* *• Prevent any unauthorized disturbance in all undeveloped natural land areas, but especially in designated conservation areas and habitat corridors.* *• Prevent the spread of non-native, invasive species that may displace native habitat.* ***Program E-1.2:*** *For natural land areas under County responsibility with partial or no HMP resource conservation or management requirement, but which remain undeveloped, the County shall annually provide the BLM evidence of successful implementation of interim habitat protection measures as specified in Program E-1.1.* ***Biological Resources Policy E-2:*** *The County shall monitor activities that affect all undeveloped natural lands, including, but not limited to conservation areas and habitat corridors as specified and assigned in the HMP.* ***Program E-2.1:*** *The County shall conduct Land Use Status Monitoring in accordance with the methods prescribed in the Implementing Agreement for all former Fort Ord land under County responsibility that contains any natural lands identified by the baseline studies. This monitoring will provide data on the amount (in acres) and location of natural land (by habitat type) remaining undeveloped and the amount (in acres) and location of natural land (by habitat type) disturbed by development since the date of land transfer for as long as the Implementing Agreement is in effect.*	
Polices from the GREATER MONTEREY PENINSULA AREA PLAN. These policies were identified as one basis for the DEIR's conclusion that impacts to special status species, habitat, and movement corridors would be less than significant through 2030.	
GMP-3.4 Plant materials shall be used to integrate manmade and natural environments, to screen or soften the visual impact of new development, and to provide diversity in developed areas.	• Please explain how this policy supports the conclusion that impacts to species, habitat, and movement corridors will be less than significant. • Please explain why this policy does not require the use of native plants.
GMP-3.5 Development in the Greater Monterey Peninsula area shall be designed to prevent, to the maximum extent feasible, the destruction of native oak, pine, and redwood forest habitat and wetlands in the Greater Monterey Peninsula Area Plan area.	• Please explain how the maximum extent feasible will be determined in practice. How would this policy be implemented to bar or substantially alter a proposed development project? • Will feasibility be determined with reference to economic or technical constraints or both?

Policies Cited As The Basis of Significance Conclusions Related to Biological Impacts	
GMP-3.6 A 100-foot setback from all wetlands, as identified by a County-approved biologist, shall be provided and maintained in open space use. No new development shall be allowed in this setback area. No landscape alterations will be allowed in this setback area unless accomplished in conjunction with a restoration and enhancement plan prepared by a County-approved biologist and approved by the California Department of Fish and Game.	• Please explain how this policy would be coordinated with Mitigation Measure BIO 2.1, Stream Setback Ordinance. Which requirements would govern? • Please explain how the 100-foot requirement was determined.
GMP-3.7 The County shall encourage other local agencies to take appropriate measures for the protection of wetlands under their jurisdiction.	• Policies that merely encourage do not create enforceable mandates. • Please identify the local agencies and the appropriate measures that would be encouraged and give examples of specific actions the County would take to encourage these agencies to act.
GMP-3.8 Open space areas should include a diversity of habitats with special protection given to ecologically important zones such as areas where one habitat grades into another and areas used by wildlife for access routes to water or feeding grounds.	• Please explain how, when, and by whom this policy will be implemented. • Will this policy require re-designation of the land use classifications proposed in the 2007 General Plan? If not, how will this policy operate to constrain development and preserve open space? • What standards will be used to determine which areas should be preserved in open space? • In view of the lack of standards and plans for implementation, please explain how this policy supports a finding that impacts would be less than significant.
GMP-3.9 Critical habitat areas should be preserved as open space. When an entire parcel cannot be developed because of this policy a low intensity, clustered development may be approved. However, the development should be located on those portions of the land least biologically significant so that the development will not upset the natural function of the surrounding ecosystem.	• Please identify the basis on which it will be determined if a development will upset the natural functioning of the ecosystem. • Please explain what measures may be taken when an entire development project is within a critical habitat area and it is determined that even a cluster development will upset the natural functioning of the ecosystem. • The policy states that a low intensity, clustered development *may* be approved when an entire parcel cannot be developed because of this policy. *Must* a development project be approved under those circumstances? Even if any development will upset the natural functioning of the ecosystem? Will this policy be implemented to bar a proposed development project or to limit its scope?
GMP-3.10 Work with appropriate state and federal agencies to ensure that oil transport activities near the Monterey County coast include adequate procedures to protect marine bird and mammal (particularly sea otter) populations and to clean up oil spills.	• This policy is unrelated to the inland areas for which the 2007 General Plan ahs been prepared.

Policies Cited As The Basis of Significance Conclusions Related to Biological Impacts	
GMP-4.1 Redwood, pine, and oak forest and chaparral habitat on land exceeding 25 percent slope should remain undisturbed due to potential erosion impacts and loss of visual amenities.	• Please explain how this policy would be coordinated with Policy OS 3.5. Doe this policy ban all development on land exceeding 25% slope containing redwood, pine, and oak forest and chaparral habitat? • Please explain why this policy is not required County-wide.
Polices from the GREATER SALINAS AREA PLAN. These policies were identified as one basis for the DEIR's conclusion that impacts to special status species, habitat, and movement corridors would be less than significant through 2030.	
GS-1.1 Special Treatment Area: Butterfly Village - Approximately 671 acres located north of San Juan Grade Road and east of Harrison Road shall be designated as a "Special Treatment Area" to permit a planned development in substantial conformance with the Butterfly Village Land Use Plan (*Figure LU7*) including: a. Approximately 345 acres of neighborhood and community parks and open space uses such as hiking trails, recreation, public parking, storm water detention ponds and lakes for drainage control and water recharge as well as areas preserved for sensitive habitat. b. 71 hospitality units. c. A 20,000 square foot Community Health and Wellness Center that offers a variety of health, fitness and nutrition uses. d. Public facilities, including a fire station, sheriff substation, maintenance yard, independent wastewater treatment facility, 200 square foot library, and a 10-acre site for a potential elementary school site with athletic fields. e. Neighborhood Commercial (approximately 90,000 sq. ft.) including mixed use development, to help provide jobs within the project. f. Development on slopes exceeding 25% and ridgeline development. g. Up to 1,147 residential units for various income levels ranging from 0.9 units/acre to 20 units/acre. h. A minimum of 32% inclusionary/workforce levels including but not limited to senior living facilities. i. Agriculture buffers ranging form 30 feet to 100 feet. j. Vehicular access from the west via Harrison Road and from the east via San Juan Grade Road. k. A dedicated easement to accommodate the realignment of the Highway 101 future Prunedale Bypass. A Community Plan is not required for	• Please explain how this policy supports a finding that impacts will be less than significant.

Policies Cited As The Basis of Significance Conclusions Related to Biological Impacts	
development of the Butterfly Village STA. The Butterfly Village STA shall be entitled to the exemptions in the General Plan provided for Community Areas and for areas for which a community Plan or Specific Plan has been adopted. However, the areas adjoining the Butterfly Village STA shall not be entitled to rely upon *LU-2.12(d) and OS-9.2*. Except as provided for in this General Plan, development shall be guided by the principles and standards contained in Chapters 3-8 of the document entitled "Rancho San Juan Specific Plan" dated November 7, 2005, which are otherwise consistent with the Butterfly Village STA and the Butterfly Village Land Use Plan (*Figure LU7*). (APNs: 113-271-014-000, 113-212-043-000, 113-212-044-000, 113-212-004-000, 113-212-003-000, 113-212-055-000, 113-212-056-000, 113-212-057-000 and 113-212-058-000)	
GS-1.5 Development of commercial land uses designated near Highway 68 and the Salinas River shall be allowed only if such uses: a. Are planned general commercial rather than neighborhood serving; b. Will protect and, where feasible, enhance the riparian habitat along the Salinas River; c. Will not further deteriorate water quality in the Salinas River; d. Are adequately screened from viewpoints along Highway 68, Spreckels Lane, and Spreckels Boulevard by minimizing tree removal and by landscaping frontage areas. Because of the proximity to agricultural lands, commercial uses which support farm activities shall be encouraged.	• Please explain how it will be determined whether it is feasible for a project to enhance the riparian habitat along the Salinas River. Please explain what measures would be taken to enhance this habitat. • Please explain how it will be determined whether proposed development will further deteriorate water quality in the Salinas River. • Please explain why these conditions apply only to development of commercial land uses designated near Highway 68 and the Salinas River and not to other types of development, including agricultural uses.
GS-1.8 The land near the town of Spreckels designated as industrial may also be developed partially or wholly as agriculturally related commercial uses provided said agriculturally-related development complies with the following conditions: a. A comprehensive development plan as a planned general commercial project shall be prepared. b. Development shall be designed to protect and, where feasible, enhance the riparian corridor along the Salinas River. c. Proposed development would not deteriorate water quality in the Salinas River or area ground water.	• Please explain how it will be determined whether it is feasible for a project to enhance the riparian habitat along the Salinas River. Please explain what measures would be taken to enhance this habitat. • Please explain how it will be determined whether proposed development will further deteriorate water quality in the Salinas River. • Please explain why these conditions apply only to development as agriculturally related commercial uses and not to other forms of development.

Policies Cited As The Basis of Significance Conclusions Related to Biological Impacts	
d. Walnut trees along Spreckels Boulevard shall be preserved. e. Development will be compatible with the agricultural activities on the adjoining parcel.	
GS-3.1 All vegetation on land exceeding 25 percent slope, particularly chaparral and broad leaf evergreen, should remain undisturbed to minimize erosion and retain important visual amenities.	• Please explain how this policy will be coordinated with Policy OS 3.5. Will any development be allowed on slopes over 25% in the Greater Salinas Area? • Please explain why this policy is not applied County-wide.
GS-3.2 Native plant materials should be used to integrate the man-made environment with the natural environment and to screen or soften the visual impact of new development.	• This policy appears to be focused on visual impacts rather than biological impacts. Please explain how it supports a finding that impacts to biological resources will be less than significant. • Does this policy apply to residential landscaping? If not , why not? • What portion of landscaping must consist of native plants? • How will this policy be implemented? In particular, how will it be implemented for projects that do not require discretionary review?
GS-5.1 Portions of Gabilan Creek shall be evaluated for a linear park as defined by the County's Parkland Classification System at such time when the County can support another regional park. Until such time, Gabilan Creek shall be: a. Maintained in a natural riparian state; b. Kept in a free-flow state devoid of dams; c. Allowed its natural flood capacity through required setbacks conforming to the 100 year flood plain; and d. Kept free from urban encroachment by residential development through required dedication of land in the floodplain corridor.	• Please explain why this policy is not applied to other streams in the County.
Polices from the NORTH COUNTY AREA PLAN. These policies were identified as one basis for the DEIR's conclusion that impacts to special status species would be less than significant through 2030.	
NC-3.3 Conservation of North County's native vegetation shall be given high priority to: a. Retain the viability of threatened or limited vegetative communities and animal habitats, b. Promote the area's natural scenic qualities, and c. Preserve rare, endangered and endemic plants for scientific study. Property owners shall be encouraged to cooperate with the County in establishing conservation easements over areas of native vegetation.	• Policies that merely encourage activities do not create an enforceable mandate. • Please explain how areas of native vegetation for preservation will be identified and what County agency will be charged with contacting property owners regarding easements.

Policies Cited As The Basis of Significance Conclusions Related to Biological Impacts	
NC-3.4 Removal of healthy, native oak and madrone trees in the North Monterey County Area shall be discouraged. A permit shall be required for the removal of any of these trees with a trunk diameter in excess of six inches diameter breast height (d.b.h). Where feasible, trees removed will be replaced at a 1:1 ratio using nursery-grown trees of the same species that are a minimum of one gallon in size. Removal without a permit shall result in a minimum fine, equivalent to the retail value of the wood removed plus replacement of one gallon, nursery-grown trees at a 2:1 ratio. Exemptions to the above permit requirement shall include: a. tree removal by public utilities, as specified in the California Public Utility Commission's General Order 95, and by governmental agencies. b. emergencies caused by the hazardous or dangerous condition of a tree and requiring immediate action for the safety of life or property, provided the County is notified of the action within ten working days.	• Please explain why a similar policy is not proposed for all other areas in the County. • Please explain how the policy will be implemented to "discourage" tree removal. • What standards will be used to determine whether to issue a permit to remove trees? What conditions will be imposed on such permits? • Please explain how it will be determined whether replacement is feasible and whether feasibility will be determined technically or economically. • How will this policy be coordinated with Mitigation Measure BIO 2.2, calling for an Oak Woodlands Mitigation Program?
NC-3.5 Critical habitat areas should be preserved as open space. When an entire parcel cannot be developed because of this policy a low intensity, clustered development may be approved. However, the development should be located on those portions of the land least biologically significant so that the development will not upset the natural function of the surrounding ecosystem.	• Please identify the basis on which it will be determined if a development will upset the natural functioning of the ecosystem. • Please explain what measures may be taken when an entire development project is within a critical habitat area and it is determined that even a cluster development will upset the natural functioning of the ecosystem. • The policy states that a low intensity, clustered development *may* be approved when an entire parcel cannot be developed because of this policy. *Must* a development project be approved under those circumstances? Even if any development will upset the natural functioning of the ecosystem? Will this policy be implemented to bar a proposed development project or to limit its scope?
Polices from the SOUTH COUNTY AREA PLAN. These policies were identified as one basis for the DEIR's conclusion that impacts to special status species, habitat, and movement corridors would be less than significant through 2030.	
SC-1.2 Clustered development shall be encouraged in all areas where development is permitted in order to make the most efficient use of land and to preserve agricultural land and open space.	• Policies that merely encourage actions do not create an enforceable mandate. • Please explain how in practice clustered development will be encouraged. What specific actions will be taken by what County agency to encourage this?
SC-5.2 Cooperative soil conservation, water quality protection, and resource restoration programs within watershed basins shared with neighboring counties	• Please explain what agency will be responsible for pursuing these programs • Please identify resources that would make pursuing these

Policies Cited As The Basis of Significance Conclusions Related to Biological Impacts	
shall be pursued.	programs feasible. • Please explain what cooperative soil conservation, water quality protection, and resource restoration programs would entail and give examples of such programs.
SC-5.3 New development may not encroach on the main channels and associated floodways of the Nacimiento, San Antonio, and Salinas Rivers in order to conserve groundwater recharge, preserve riparian habitats, and protect flood flow capacity.	• Please identify the geographic extent of the protected areas in the "main channels and associated floodways." Will floodways be determined with reference to 10-year floods, 100-year floods, or on some other basis. • Please explain why a similar policy is not proposed County-wide.
Polices from the TOTO AREA PLAN. These policies were identified as one basis for the DEIR's conclusion that impacts to special status species and habitat would be less than significant through 2030.	
T-3.7 The preservation of oak trees within Toro Area Plan shall be promoted by discouraging removal of healthy trees with diameters in excess of 6-inches d.b.h.	• Policies that merely discourage do not create enforceable mandates. • Please explain in what context and by what agency tree removal will be discouraged. Will this policy pertain to development and agricultural activity that does not require discretionary permits? • How will this policy be coordinated with Mitigation Measure BIO 2.2, calling for an Oak Woodlands Mitigation Program?
T-4.1 Land uses and practices that may contribute to significant increases of siltation, erosion, and flooding in the Toro area shall be prohibited.	• Please identify performance standards for "significant increases of siltation, erosion, and flooding." Without such standards this policy will not be enforceable. • Please explain how cumulative impacts from sedimentation would be addressed under this policy, if at all.
The DEIR references provisions in the Wine Corridor plan in support of the conclusion that impacts to species and movement corridors will not be significant: "Section 3 of the Wine Corridor Plan provides limits on the number of wineries in each segment. Section 3.4 (Permitted Uses) and 3.5 (Development Standards) is intended to reduce the footprint of a winery complex. Section 4 of the Agricultural Element includes policies that support the development of a fully integrated wine industry and encourage development along the designated corridor. Policy AG-4.2 designates segments of the corridor to achieve a balance between wine grape production and wine processing capacity." DEIR, p. 4.9-72. "AG-4.3 addresses the development of a Winery	• Please see discussion below related to the DEIR's failure to adequately describe new vineyard development and new agricultural cultivation that is already occurring and which will be accelerated in response to increased winery capacity. Reduced footprints of wineries does not reduce footprints of vineyards. Encouragement of additional vineyards will directly cause habitat conversion in sensitive sloped lands at the edges of the Valley. • It is not clear that wineries will in fact be confined to the winery corridor. Policy AG 4.4 provides that Policies AG 4.1 through 4.3 "do not limit the development of wineries within or outside of the designated winery corridor. Wineries outside of the designated winery corridors and additional wineries within the corridors beyond those specifically listed are allowed, subject to conformance with all regulations of the underlying zoning district." Large wineries subject to discretionary permitting will not enjoy any permit streamlining by locating in the winery corridor area.

Policies Cited As The Basis of Significance Conclusions Related to Biological Impacts	
Corridor Plan to encourage development of the wine industry within the designated corridor. The Corridor Plan establishes limits on the facilities that could be permitted under the Plan along with development criteria." DEIR, p. 4.9-91.	• In view of the fact that the winery corridor interrupts the key east-west movement corridor, a policy of concentrating development in this area will cause adverse effects on wildlife movement. Please explain how the winery corridor policies support the conclusion that impacts to movement corridors and species will be less than significant.

2. Proposed mitigation measures for special status species are not adequate

BIO 1.1: Special status species (SSS) are defined more broadly under CEQA than they are in the 2007 General Plan. Thus, General Plan policies that are specifically targeted to protection of federal and state endangered and threatened species will not serve to mitigate all impacts to SSS. This shortcoming is acknowledged by the DEIR and is proposed to be addressed by Mitigation Measures BIO 1.1 and BIO 1.3.

BIO 1.1 calls for expanding the inventory of species and habitats required under Policies OS 5.1 and 5.2, which call for mapping species and habitat and promoting conservation, to include habitat for CEQA-defined SSS. However, as discussed in the table above, neither Policy OS 5.1 nor OS 5.2 constitute an adequate foundation for the conclusion that impacts to affected species and habitat will be less than significant. Simply expanding the numbers of species and types of habitat covered by these inadequate policies will not ensure protection of the additional species or habitats.

In particular, neither Policy OS 5.1 nor OS 5.2 explains how the mapped information will be used. It is difficult to understand why critical habitat designation mapping has not already been undertaken in connection with the development of land use designations in the 2007 General Plan. In the absence of a systematic review of habitat information, there is no basis for concluding that the land use designations have avoided authorizing development in areas that will result in impacts to special status species, loss of habitat, and impacts to movement corridors. We ask again that the EIR explain why mapping has not already been conducted and the results used to develop land use designations.

Furthermore, neither Policy OS 5.1 nor OS 5.2 explains what specific activities, programs, or permitting constraints would be required in order to "promote" conservation of threatened and endangered plants. Without more information about specific activities, development constraints, responsible agencies, and resources to be committed, there is no basis to conclude that a policy vaguely requiring the County to "promote" conservation will be effective.

Finally, Policy OS 5.1 unaccountable fails to include the promotion of the conservation of threatened and endangered *wildlife* species (as opposed to plants). This is no doubt a drafting error, but it is symptomatic of a carelessly framed set of policies with no real substantive content.

BIO 1.3: The proposed additional mitigation measure BIO 1.3 calls for project-level surveys and mitigation for impacts to CEQA-defined SSS and sensitive natural communities. This additional measure will not suffice.

First, BIO-1.3 fails to provide any performance standards or examples of the mitigation that is to be required or any standards for the biological surveys that are to be required (which are to be developed later). BIO-1.3 amounts to a requirement that future projects obtain a report and follow its recommendations, which is precisely the kind of deferred mitigation that CEQA does not countenance. *Endangered Habitats League, Inc. v. County of Orange* (2005) 131 Cal.App.4th 777, 794 ("an agency goes too far when it simply requires a project applicant to obtain a biological report and then comply with any recommendations that may be made in the report.").

Second, the project-level surveys and mitigation for impacts to CEQA-defined SSS and sensitive natural communities called for by BIO-1.3 are to be applied only to discretionary permit projects, large scale wineries, and development in focused areas. This list does not include conversion of previously uncultivated land for agriculture, *e.g*., viticulture, despite DEIR's acknowledgement that these conversions may be source of significant impacts:

> "The installation of new vineyards, row crops, and other actively managed agricultural uses (including routine and ongoing agriculture), mining extraction, and other activities could also result in the elimination of essential habitat for CEQA-defined special-status species. Even if the sensitive habitat is deliberately avoided at the project level, new development and intensively managed land practices would result in fragmentation of the existing habitat and leave the CEQA-defined special-status species population at risk of extirpation (local extinction). The exact amount of habitat conversion due to agricultural expansion onto uncultivated lands is not known." DEIR. P. 4.9-65.

The DEIR's subsequent claims that habitat conversions for agriculture would not cause impacts are inconsistent with this statement and not otherwise adequately founded. DEIR, pp. 4.9-76 and 4.9-95. As discussed in Sections 4 and 5 below, the DEIR underestimates both the extent and concentration of habitat conversions for agriculture because it dilutes the recent trends in conversion with out-of-date information and because it fails to observe that the winery corridor plan will concentrate conversions in sensitive habitat areas on sloped land at the edge of the Salinas Valley and along a north-south axis that will impede movement corridors.

Nor will BIO-1.3 be applied to any other projects that do not require discretionary permits, but which nonetheless have the potential to impact special status species and habitat. These include small-scale wineries and associated visitor-serving uses, development of residential units on lots of record, and development on slopes (which are particularly likely to contain valuable habitat) under the proposed but currently undefined "ministerial" permit conditions. Because no provisions for protection of biological

resources for development in these areas have actually been spelled out, there is no basis to conclude that these developments will not have impacts.

BIO 1.2: Mitigation measure BIO 1.2 calls for development of a kit fox conservation plan within four years. The focus area of the plan is to be the Salinas Valley area south of Chualar. DEIR, p. 4.9-75. This area contains extensive intact natural vegetation suitable for kit fox habitat, but, also suitable for agricultural cultivation. See TNC, Intact Natural Vegetation Designated for Agriculture in Southern Monterey County, 2009, Exhibit A.[1] As discussed below, this land is now, and will continue to be, subject to pressure for new cultivation. Conversion to row crops or viticulture will significantly impact its value as kit fox habitat.

Thus, the postponement of that plan for four years with no interim measures will permit unmitigated impacts in the interim. It will also create incentives to accelerate development in the interim to avoid the cost of mitigation.

BIO 1.2 contains no provision that would apply to projects in the event that the County fails to complete the conservation plan within 4 years. It also fails to identify the area affected with any specificity or to demonstrate that there will in fact be sufficient development to fund a plan through mitigation fees. Because only discretionary development projects would be included, it is entirely possible that development in the area such as vineyard or other agricultural conversions, or residential development on lots of record, would proceed without any contribution to the mitigation fees, causing unmitigated cumulative impacts.

BIO 1.4 and 1.5: The DEIR acknowledges the potential for impacts to special status species to be significant enough to warrant additional mitigation beyond 2030, but does not explain why impact will not occur sooner. The DEIR should explain how it can be determined with such precision that an NCCP and a revision to the General Plan would be necessary by 2030, but not before.

The DEIR proposes to mitigate impacts to special status species through buildout in part through BIO 1.4, calling for an update to the General Plan by 2030 to identify expansion of focused growth areas to accommodate at least 80% of future growth. This Board of Supervisors may believe that a new general plan should be created in 2030, but it cannot bind a future board to that opinion. Thus, this mitigation measure is not enforceable.

The DEIR also proposes that the County complete an NCCP "for all incorporated [sic, unincorporated] areas in Monterey County" by 2030 to address impacts to special status species. As discussed below in Section 5, an NCCP *is* needed to address landscape level

[1] The Nature Conservancy prepared this analysis using GIS shape files of the 2007 General Plan land use designations for each Planning Area provided by the County of Monterey. Slope data was based on the 30m Digital Elevation Model from the National Elevation Dataset (NED), which was derived from USGS 24k contour lines. Vegetation data was based the CalVeg2000 dataset. Linkage data was based on the sources cited in the map legend.

impacts, but the time to develop it is now. The DEIR states that the General Plan's planning horizon is 20 years. DEIR, p. 3-8. As proposed, BIO 1.5 permits unmitigated impacts for the duration of the General Plan's planning horizon.

3. Proposed mitigation measures for impacts to natural communities are not adequate

The DEIR correctly concludes that the 2007 General Plan does not provide a systematic approach to protection of all sensitive natural communities or guide implementation of development so as to avoid, minimize, or compensate for those impacts. DEIR, p. 4.9-85. Accordingly the DEIR proposes three additional mitigation measures. None of the three are adequate.

BIO 2.1: BIO 2.1 calls for future development and adoption of a stream-setback ordinance:

> "**Mitigation Measure BIO-2.1: Stream Setback Ordinance**
> The county shall develop and adopt a county-wide Stream Setback Ordinance to establish minimum standards for the avoidance and setbacks for new development relative to streams. The ordinance shall identify standardized inventory methodologies and mapping requirements. A stream classification system shall be identified to distinguish between different stream types (based on hydrology, vegetation, and slope, etc.) and thus allow application of standard setbacks to different stream types. The ordinance shall identify specific setbacks relative to the following rivers and creeks so they can be implemented in the Area Plans: Salinas, Carmel River, Arroyo Seco, Pajaro River, Nacimiento, San Antonio, Gabilan Creek, and Toro Creek. The ordinance may identify specific setbacks for other creeks or may apply generic setbacks based on the stream classification developed for the ordinance. The purpose of the ordinance will be to preserve riparian habitat and reduce sediment and other water quality impacts of new development.
> The Stream Setback Ordinance shall apply to all discretionary development within the County and to conversion of previously uncultivated agricultural land (as defined in the General Policy Glossary) on normal soil slopes over 15% or on highly erodible soils on slopes over 10%." DEIR, p. 4.9-86.

Formulation of the content of this mitigation measure is deferred to some unspecified time in the future. No performance standards are identified – because the very purpose of the ordinance is to establish those "minimum standards." Thus, the mitigation has been improperly deferred.

The DEIR does not contain any substantive information about the actual conditions on the ground that this ordinance will seek to regulate, including soil types, streams affected, likely development patterns, hydrological conditions, or any other factors affecting

sedimentation and water quality impacts. The DEIR does not even try to evaluate the impacts of development with and without the proposed ordinance.

Agricultural cultivation and residential construction on steeply sloped land is a major source of erosion and sedimentation. Policy OS 3.5 is intended to require a new permitting system for such development, but the policy lacks any substantive content because it defers the future slope development rules without any performance standards. The policy would remove the current ban on development on slopes greater than 25%. Although the policy states that development would not be allowed on slopes over 30%, it permits exceptions that could be granted without any meaningful constraints. Based on mapping data attached as Exhibit B, we note that the change in the current slope development rules would open up 113,678 acres of land County-wide to agricultural cultivation, a figure that represents the number of acres of intact natural vegetation with slopes between 25% and 30% that is designated to permit agricultural use. See TNC, Analysis of Slope and Vegetation by Planning Area for Land Permitting Agriculture Under the 2007 Monterey County General Plan, Exhibit B.[2] Since the exceptions to the bar on development of slopes over 30% are so widely drawn, the change in policy effectively opens up areas with slopes over 30%, which total 382,753. While it is not likely that all 496,432 acres of intact vegetation sloped over 25% will be cultivated, as discussed below, there will be substantial pressure for new cultivation of agricultural land, and the data demonstrate that there is an abundance of steeply sloped land that will be subject to this new cultivation. Dramatic increases in erosion and sedimentation may result from this activity.

Unless the mitigation measure is revised to identify objective performance standards, it cannot reasonably be said to support a conclusion that impacts will be less than significant. Note also that key terms are undefined, including "normal soil" and "highly erodible soil."[3]

No deadline for completion of the ordinance is specified and there is no provision for ensuring adequate setbacks in the interim.

It is unclear how development of this ordinance will be coordinated with Policy OS 3.9, which calls for a future program to address potential cumulative hydrologic impacts of the conversion of hillside rangeland to cultivated croplands. Like the proposed development of a stream setback ordinance, the program to address cumulative impacts from converting habitat to croplands is improperly deferred without any performance standards.

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[2] The Nature Conservancy prepared this analysis using GIS shape files of the 2007 General Plan land use designations for each Planning Area provided by the County of Monterey. Slope data was based on the 30m Digital Elevation Model from the National Elevation Dataset (NED), which was derived from USGS 24k contour lines. Vegetation data was based on the CalVeg2000 dataset

[3] The DEIR Glossary defines "erodible soil" but does not define "highly erodible soil."

It is unclear whether the County intends to conduct CEQA review of any future ordinance. If it does not conduct CEQA review, the County will have implemented a key program that will bar development of some areas, but permit it in others without any substantive CEQA review. If the County does intend to conduct CEQA review, it should do so now.

BIO 2.2: BIO 2.2 calls for future preparation of a program to mitigate loss of oak woodlands.

> **Mitigation Measure BIO-2.2: Oak Woodlands Mitigation Program.** The County shall prepare, adopt and implement a program that allows project to mitigate the loss of oak woodlands. The program would include ratios for replacement, payment of fees to mitigate the loss or direct replacement for the loss of oak woodlands and monitoring for compliance. The program would identify criteria for suitable donor sites. Mitigation for the loss of oak tree woodlands may be either on-site or off-site. The program would allow payment to either a local fund established by the County. Until such time as the County program is implemented, payment of a fee may be made to the State Oak Woodlands Conservation Program. Replacement of oak woodlands shall be on a minimum 1:1 ratio.

Again, the County has deferred the development of this program without providing meaningful performance specifications. It is unclear whether the minimum 1:1 ratio is intended to apply to the program to be developed or only to apply to interim mitigation. In any event, a 1:1 replacement ratio will not ensure adequate mitigation. Meaningful performance standards require that the replacement oaks be equivalent in ecological function, including provision of habitat and carbon sequestration. A 1:1 ratio will not even ensure adequate replacement since it has no allowance for disease and mortality. Note that Public Resources Code Section 21083.4(b)(2)(A) requires that mitigation via replacement planting include a requirement for maintaining plantings and replacing dead or diseased trees.

At a minimum, an oak woodland habitat conservation ordinance should follow the model identified by the California Oak Foundation:

> ***Ordinance Intent and Objectives***
> *The intent of this ordinance is to perpetuate oak habitat continuity over time. Objectives of the ordinance are:*
>
> - *Maintain the maximum amount possible of oak woodland habitat in conjunction with the development process;*
> - *Achieve habitat-level protection by recognizing oak woodland as a complex community of diverse vegetation, wildlife and associated biotic resources;*
> - *Maintain oak species distribution and age diversity;*
> - *Minimize activities that may result in oak woodland fragmentation; and*

- *Acknowledge that oak trees have an economic value in addition to their ecological, historical and aesthetic values.*

Ordinance Definitions
"Biologically functional oak woodland" means the ecological relationships between both the oak woodland habitat components and needs of wildlife species which allows for all of the normal life cycle including, migration corridors, genetic pathways, food availability, temperature protection, moisture retention, nutrient cycling, denning, spawning, nesting, and other functions necessary to complete a life cycle. The habitat components must be in sufficient quantities and arrangement to support the diverse assemblage of wildlife species that are normally found on or use oak woodland.

"Ecologically sensitive oak woodland" means oak woodland containing the following habitat elements: (1) multiple or single layered canopy; (2) riparian zones; (3) burrows, caves and cliffs; (4) snags; (5) downed woody debris; and (6) wetlands. The greater the number of these habitat components present, the greater the oak woodland ecological sensitivity.

Oak woodland" means a tree habitat with over ten (10) percent oak canopy cover.

Ordinance Thresholds of Significance
A project's disturbance of oak woodland habitat or dependent species would be considered significant if any of the following occur:

- *Reduce or eliminate species diversity or abundance;*
- *Reduce or eliminate quantity or quality of nesting areas;*
- *Fragment, eliminate or otherwise disrupt foraging areas or access to food sources;*
- *Limit or fragment range or movement of species; or*
- *Result in a loss of 25 percent or more of the existing tree canopy cover on the project site. For example, if a project site had 32 percent existing canopy cover the removal of more than 8 percent of the canopy cover would be considered significant.*

Ordinance Habitat Mitigation Measures
Avoidance of significant oak woodland habitat impacts is the preferred method of mitigation. The general requirement for habitat mitigation is the preservation and replacement of oak woodland habitat. Replacement habitat will be at a minimum 3:1 area ratio. In cases of the most ecologically sensitively oak woodland habitat the replacement ratio may be greater. As necessary, habitat mitigation measures shall include the following actions individually or in combination:

(a) Dedicate in perpetuity for preservation in a natural condition contiguous and biologically functional oak woodlands on-site.

(b) Procurement of off-site oak woodland habitat, preferably in close proximity to the

project site, and dedicate it in perpetuity for preservation in a natural condition. Procurement includes either off-site land purchases or acquisition of conservation easements. Off-site oak woodland dedications shall be equivalent to the on-site oak woodland acreage and biological values impacted.

(c) In lieu fee payment to a natural resource agency or nonprofit organization for the purchase of local oak woodland habitat. Not more than five percent of in lieu fees collected by a natural resource agency or nonprofit organization for mitigation purposes shall be used for administrative costs.

The in lieu fee payment shall be equivalent to the total oak tree economic value. The economic value of oak trees shall be calculated by the applicant and approved by the local planning department in accordance with the most current edition of the International Society of Arboriculture's "Guide to Establishing Values for Trees and Shrubs." The total oak tree economic value shall be the sum of the ISA values for all oak trees impacted by development.

The DEIR fails to address the provisions of Public Resources Code Section 21083.4 governing oak woodlands mitigation programs. One critical question is whether the County intends to require mitigation for conversion of oak woodlands for agricultural land. Although this is not required by Public Resources Code Section 21083.4(d)(3), it is clear that this must be required by any mitigation program given the extent of the conversion activity projected to occur. Unless it is made clear that agricultural conversions must mitigate loss of oak woodlands, the County cannot reasonably find that the impact will be less than significant.

The DEIR does not explain how the to-be-developed oak woodlands mitigation program will be coordinated with other policies, including Policies OS 5.9, 5.10, and 5.11, CV 3.11, FO Recreation C-1 and C-2, NC 3.4, and T 3.7. This must be discussed and clarified. For example, CV 3.11 and NC 3.4 call for replacement of trees only when "feasible," whereas the proposed mitigation may be read to require replacement whenever trees are removed. Which provision would control?

BIO 2.3: Public Services Policies PS 3.3 and 3.4 call for developing "specific criteria" for proof of a long term sustainable water supply for new development and for evaluation and approval of new wells. BIO 2.3 calls for adding additional "considerations" to the Policies PS 3.3 and 3.4 related to riparian habitat and stream flows:

> **"Mitigation Measure BIO-2.3: Add Considerations Regarding Riparian Habitat and Stream Flows to Criteria for Long-Term Water Supply and Well Assessment.**
> Public Services Policies PS-3.3 and PS-3.4 establish the criteria for proof of a long-term water supply and for evaluation and approval of new wells. The following criteria shall be added to these policies:
>
> - Policy PS-3.3.i—Effects on instream flows necessary to support

riparian vegetation, wetlands, fish, and other aquatic life including migration potential for steelhead.

- Policy PS-3.4.g—Effects on instream flows necessary to support riparian vegetation, wetlands, fish, and other aquatic life including migration potential for steelhead." DEIR, p. 4.9-87.

Once again, the formulation of the ultimate mitigation is deferred without any performance standards.

Policies PS 3.3 and 3.4 themselves call for deferral of the formulation of specific criteria for various parameters related to water supply and well development, including water quality, production capability, effects on wells, and unspecified cumulative impacts. The listing of these parameters in PS 3.3 and 3.4 without specifying acceptable values for them does *not* provide performance standards. BIO 2.3 simply adds another empty parameter to the list – "effects on instream flows necessary to support riparian vegetation, wetlands, fish, and other aquatic life including migration potential for steelhead." Without specifying values for the parameters, neither PS 3.3 or 3.4 or Mitigation Measure BIO 2.3 actually provide substantive performance standards or criteria.

For example, nothing in BIO 2.3 would require that instream flows be maintained at a level *sufficient* to support *existing* riparian vegetation, wetlands, fish, and other aquatic life including migration potential for steelhead. Nothing in BIO 2.3 would require that instream flows be *increased* where necessary to support a recovery plan, e.g., for steelhead.

Telling the public that the County will eventually come up with a system to evaluate water supply sufficiency and that that system will *consider* effects on instream flows necessary for habitat is not an adequate disclosure under CEQA. Nor is it an adequate basis for concluding that effects will not be significant.

4. The DEIR does not adequately describe new vineyard development, new agricultural cultivation, or the winery corridor itself

CEQA requires an EIR to contain a description of the whole project, which is essential to accurately determine impacts. However, the Winery Corridor (AWCP) program is not adequately described because there is no estimate of the extent and location of new vineyard development that is likely to occur in response to the increase in winery demand for grapes. The fact that grapes are currently exported from the County does not logically mean that this export business will all be diverted to local wineries. Common sense suggests that if shipping grapes out of the County is profitable now, it will remain so, and new grape production will occur in response to new winery demand in the County.

Table 4.9-6 in the DEIR shows that habitat conversion, especially for vineyard development, has accelerated in recent years. Since 1996, habitat-to-agriculture conversions have proceeded at the rate of 820 acres per year, with 40% of that conversion

attributable to vineyards. See DEIR, pp. 4.9-63 and 4.9-46. The DEIR offers no reason to suppose that this trend will not continue and increase in response to increased winery demand. The DEIR's conclusion that habitat conversion will only proceed at the rate that occurred over a much longer period during which winery demand had not materialized ignores recent trend data and the likely effect of increasing winery demand for vineyard development.

Habitat conversions will also occur because there will be pressure to replace the 2,571 acres of important farm land that will be re-designated for non-agricultural use (DEIR, p. 4.2-12) and because there will be future pressure to convert agricultural land to urban uses (DEIR, pp. 4.2-25 to 4.2-28).

The conversion of previously uncultivated land will not occur at random, as the DEIR suggests. The DEIR admits that the vineyard development has occurred in locations that are particularly sensitive biologically, both with respect to habitat value and with respect to movement corridors:

> "Spatial analysis of the vineyard development indicated that most of the recent vineyard expansion is at the valley edges and upslope. As shown in Exhibits 4.9.6, 4.9.7, and 4.9.8, while there are scattered conversions of habitat to agriculture east and west of Prunedale and along the Salinas River north of Fort Ord, the dominant locales of recent conversions are along the eastern and western slope of the Salinas Valley. It is expected that these slopes of the Salinas Valley along with the slopes of tributary valleys to the Salinas Valley will be the likely focus of future conversions of habitat to agriculture." DEIR, p. 4.9-63.

This is consistent with Exhibits 4.9-6 through 4.9-9, which show that conversions have been occurring in these areas. Based on this evidence, it appears that 820 acres or more of habitat will be lost annually to agriculture and that this lost habitat will be particularly sensitive lands located on slopes on the edge of the Salinas Valley and especially around the winery corridor.

The DEIR's claim that agricultural conversions will not result in impacts because the pattern of conversions has been dispersed in the past (DEIR. pp. 4.9-76 and 95) is clearly inconsistent with the DEIR's finding that future conversions will be focused on slopes of the Valley. The claim is also suspect because it fails to recognize the recent acceleration of viticulture conversions and the fact that the winery corridor policies deliberately create incentives for vineyard development proximate to the winery corridor. There will now be a substantial incentive to focus development of vineyards in a long north-south strip that will affect movement corridors, particularly in southern Monterey County around the winery corridor.

The Nature Conservancy identifies expansion of wine grapes into grasslands, oak woodlands, and associated habitats as a key threat to conservation and biodiversity in Monterey County in particular. TNC 2006, p. 30. Vineyard development is identified as

major threat to key conservation targets including Toro Creek Flats, the Carmel River Watershed, the Arroyo Seco Uplands, the Salinas River Uplands, and Peachtree Valley. TNC 2006, App. J. The California Wilderness Coalition identifies agriculture, especially vineyards, as second only to urbanization in terms of threats to habitat connectivity in the Central Coast region. CWC 2001, p. 43.

The four Planning Areas in southern Monterey County contain 1,041,138 acres of land with intact natural vegetation that is designated to permit agricultural cultivation under the 2007 General Plan. TNC, Analysis of Slope and Vegetation by Planning Area for Land Permitting Agriculture Under the 2007 Monterey County General Plan, Exhibit B. This area is displayed in the attached map of intact vegetation subject to agricultural conversion in the southern portion of the County. See TNC, Intact Natural Vegetation Designated for Agriculture in Southern Monterey County, 2009, Exhibit A. As discussed below, this intact vegetation is valuable habitat and contains critical movement corridors, but it will be subject to concentrated pressure for new agricultural cultivation. The DEIR must accurately disclose the extent and location of this future agricultural conversion activity. Without this information, the EIR cannot evaluate the impacts to biological resources.

Neither the DEIR nor the Draft 2007 General Plan provides a consistent description of the location or extent of the winery corridor itself. Section 2.2 of the AWCP, "Winery Corridor Description," references a map of the Monterey County American Viticulture Areas (Figure AWCP-2, AVA map) and states that the "portion of the Monterey AVA [American Viticulture Areas] located south of Highway 68 plus the other seven AVAs *shall be used for defining the boundary of the Agriculture and Winery Corridor*." 2007 GP, p. AWCP-4, emphasis added. Section 2.2. goes on to state that the AWCP would consist of three segments shown on Figure AWCP-3 that extend through the Toro, CSV, and South County Planning Areas. However, the AVA regions depicted on Figure AWCP-2 are much larger than the area depicted on Figure AWCP-3. The AVA map includes appellations that are not included in segments depicted in Figure AWCP-3, e.g., San Antonio Valley, Santa Lucia Highlands, Chalone, Carmel Valley, and the appellation Monterey itself which consists of most of the Salinas Valley not otherwise designated. The AVA map also shows that the appellations that are partially included in the three segments depicted in Figure AWCP-3 are actually much more extensive in area than depicted, e.g., San Lucas, San Bernabe, and Arroyo Seco. Since the AWCP is not defined textually by metes and bounds, and since the two figures purporting to define it are inconsistent, the public has no clear idea where the AWCP development policies will in fact be applied. Based on the text of the 2007 General Plan itself, developers will be free to argue that the AWCP policies should be applied wherever the AVA appellations apply – essentially anywhere in the Salinas, Carmel, Haynes, or San Antonio Valleys.

Complicating this failure to produce consistent maps are Exhibits 4.9-2, 4.9-3, and 4.9-4 which purport to show the habitat in the winery corridor areas. These three exhibits depict a much smaller area than either Figures AWCP-2 or AWCP-3. These maps suggest that the DEIR has failed to consider the extent of the habitat that will in fact be placed at risk by the winery corridor.

The DEIR must accurately disclose the extent and location of the winery corridor. Without this information, the EIR cannot evaluate the impacts to biological resources.

5. Movement corridor and habitat fragmentation impacts will remain significant because analysis and mitigation of these impacts is deferred to project-level CEQA reviews and will not be effective

No systematic analysis of movement corridors and habitat fragmentation

The identification and establishment of adequate wildlife movement corridors should be considered at the onset of the general plan process. According to Ron Rempel, a former biologist for the California Department of Fish and Game, "animals need large blocks of habitat to sustain a robust population; if they lose access to adequate habitat, their populations can be wiped out."

Birds, plants, and other terrestrial life also suffer from habitat fragmentation. Wildlife deprived of an adequate gene pool become in-bred and lose genetic diversity, which gradually weakens and diminishes the ability of their species to adapt and survive. Reducing even a single species' population may upset the balance of biodiversity. If coyote habitat is fragmented, for instance, fewer will be left to control populations of skunk, possum, raccoon, and smaller animals they feed upon. Populations of their prey will increase, upsetting nature's balance all the way down the food chain. Corridors should be large enough so that deer and mountain lion can travel for miles and even cross highways to seek food, mates, and shelter from predators. Isolation of the species, a result of development, disrupts biodiversity and causes long-term consequences for survival of the species. Many birds will not fly to habitat they cannot see, and snakes, tortoises, and other slower-moving creatures cannot maneuver successfully in trafficked areas. Plants isolated from access to cross-pollination by insects also lose genetic diversity.

We agree with the conclusion in the DEIR that the General Plan does not provide a systematic approach to address impacts of development to key wildlife movement linkages. We further agree that the impact is significant because development under the 2007 General Plan could result in a reduction of linkage between wildlife species populations and reduction in migration of fish and other species along river corridors. However, the DEIR does not present any systematic, empirical analysis of the impacts that will be caused by development under the 2007 General Plan, including habitat fragmentation and interruption of movement corridors. Such an analysis must be performed before the County permits further development, while flexibility still remains to alter or condition that development.

For example, habitat lost to agricultural conversions will fragment habitat and interrupt movement corridors, particularly the east-west corridor across the Salinas Valley. However, the DEIR did not evaluate these impacts with reference to any actual data regarding particular habitat values, movement corridors, or proposed development

patterns. Also contributing to these impacts will be the development of the winery corridor, associated visitor serving uses, and other induced growth. A study conducted by Kim Nicolas Cahill of Stanford University for the Nature Conservancy found that "vineyards may be an impediment to the movement of some large mammalian species, based on observed low levels of use and lack of some native species. Significantly more native mammalian predators were detected in wide corridors than in narrow or denuded corridors, and species richness was significantly higher in wide corridors." Again, the DEIR did not evaluate the effects of the winery corridor on actual habitat and movement corridors.[4]

According to The Nature Conservancy's 2006 report, California Central Coast Ecoregional Plan Update, over the last few decades the natural systems of the Central Coast ecoregion have been dramatically impacted by significant changes in land use. TNC, 2006. Most notable are: suburban and rural-residential (exurban) sprawl associated with nearly every city and town; conversion of thousands of acres of historic rangeland and other natural lands to vineyards; expansion of services such as transportation corridors, groundwater pumping, water diversions and commercial developments; spread of invasive, non-native species and global warming. These trends threaten the integrity of the regional landscape and its unique, heterogeneous biodiversity patterns.

These threats were also confirmed by the California Wilderness Coalitions 2001 report, Missing Linkages: Restoring Connectivity to the California Landscape, which was referenced but not discussed by the DEIR. CWC identified the following threats to habitat connectivity within the Central Coast ecoregion: urbanization, agriculture and roads, vineyard development, spread of invasive species, water diversions and changes in water flow regimes, and military activities. Vineyard development alone jeopardized 30% of the identified critical linkages.

The 2006 TNC study and the 2001 CWC study are examples of the kind of empirical analysis that the DEIR should have undertaken and/or relied upon to evaluate potential impacts. Although the DEIR references the 2001 CWC study and may have used it to prepare a list of six movement corridors, it contains no discussion of the study other than noting that future development could affect the listed corridors.

FRAGMENTATION OF CRITICAL CONSERVATION AREAS: For example, the 2006 TNC report identifies critical conservation areas within the central coast region of California on the basis of their potential to sustain biodiversity and habitat connectivity. Piecemeal development of these areas would substantially compromise these goals and would be a significant impact. By way of example, we list a few of the conservation areas that could be significantly impacted by General Plan growth and policies:

[4] We note again that DEIR Exhibits 4.9-2, 4.9-3, and 4.9-4 purporting to show habitat in the winery corridor areas are inconsistent with 2007 General Plan Figures AWCP-2 or AWCP-3, which show a much larger area for the winery corridor.

Arroyo Seco Uplands. (Area ID: 99[5]). This area contains the extremely unique Arroyo Seco stream system as well as adjacent uplands supporting oak woodlands, lowland grasslands, wildflower fields and critical wildlife linkages. The Arroyo Seco supports one of few sycamore alluvial riparian woodlands in the ecoregion as well as very high quality alluvial sage scrub. The stream is the primary tributary in the Salinas River system that still sustains federally threatened steelhead and California red-legged frog. It also supports speckled dace and resident stickleback. According to TNC, the Arroyo Seco Uplands are threatened by reduced water flow resulting from surface diversions and groundwater pumping; gravel mining which removes unique sycamore riparian forest habitat and fundamentally alters the river channel; and vineyard development along the alluvial terraces that destroys key uplands and impedes wildlife passage to nearby habitat areas.

Carmel River Watershed - Sierra de Salinas (Area ID: 24). This conservation area includes the Carmel River as well as target-rich public and private lands within the watershed. The upper part of the watershed supports some of the most extensive valley oak savannahs remaining in the ecoregion, along with scattered vernal pools and wetlands located along the Tularcitos Fault. California fairy shrimp (Linderiella occidentalis) have been found in the vernal pools near the University of California Hastings Reservation. There are scattered small stands of maritime chaparral dominated by endemic Arctostaphylos and Ceanothus in the eastern portion of the site—the Sierra de Salinas. The eastern edge of the site in the Sierra de Salinas range is important as a regional ecological linkage between the Santa Lucia Range and the Salinas River. Major lands use threats are ranching and vineyards on private lands.

Salinas River Uplands (Area ID: 97). The Salinas River Valley once consisted of extensive annual grasslands, utilized as cattle rangeland. Rangelands on the valley floor have been converted to vineyards at a massive scale over the last decade. This small site encompasses the last major remnant of grassland habitat remaining along the Salinas River and is important to wildlife species associated with grasslands. It is extremely vulnerable to conversion. The conservation areas supports the federally threatened San Joaquin kit fox and steelhead. Major lands use threats are ranching and agricultural conversion, including vast areas of vineyards on private lands.

The DEIR should be revised and recirculated to evaluate the effects of permitted development on the specific resource areas identified by TNC. Alternatively, the County should undertake its own science-based, empirical identification of key conservation areas and evaluate the effects of the 2007 General Plan on those areas.

[5] The areas are discussed in Appendix J and the areas are mapped by ID numbers on Figures 19 and 20 of the TNC report. TNC, 2006.

IMPACTS TO MOVEMENT CORRIDORS: TNC designed the Central Coast ecoregional portfolio to maximize connectivity between portfolio conservation areas, and, in some of these connections are embedded within conservation area site boundaries. However, TNC determined that, where significant gaps exist between areas within the portfolio, linkage corridors need to be maintained so that the full spectrum of native species will be able to move between natural areas in the regional landscape.

Exhibit A, TNC, Intact Natural Vegetation Designated for Agriculture in Southern Monterey County, 2009 includes the linkages identified in the 2006 TNC report as well as linkages identified from other sources, including the California Wilderness Coalitions 2001 report. CWC, 2001. Exhibit C, TNC, Linkage Summary for the Central Coast, is a spreadsheet describing the linkages shown in Exhibit A. Although the linkage locations and boundaries are approximate and are not intended to be exhaustive, the map and linkage descriptions are based on the best available science. The County should undertake a thorough inventory of movement corridors that may be affected by development in a revised DEIR. At a minimum, the corridors identified by TNC should be evaluated. We note that the linkages in Exhibit A represent a substantial refinement and update the CWC 2001 data, which was apparently the sole basis of the DEIR's listing of potentially affected movement corridors. DEIR, p. 4.9-89 to 90.

Development of all kinds permitted under the 2007 General Plan, including residential, agricultural, and commercial projects, has the potential to interrupt these linkages. The DEIR must be revised to discuss these specific linkage impacts in relation to permitted development. Formulation of meaningful, substantive mitigation must be based on such an analysis in this first-tier CEQA document because, as discussed below, project-level analysis and mitigation will not be sufficient.

Development of wineries and vineyards in the Salinas Valley in particular will affect the critical linkages identified by TNC and the CWC. For example, Linkage 339 on Exhibit A connects TNC Conservation Area 24 (Carmel River Watershed – Sierra de Salinas) with TNC Conservation Area 57 (Southern Gabilan Range). Linkage 339 is needed to maintain permeability through agricultural lands so wildlife can move between valley floodplain and adjacent foothills (see Exhibit C).

Other examples of linkages that may be interrupted by agricultural conversions and wineries are Linkage 307 (Santa Lucia - Gabilan, Ventana Wilderness), Linkage 357 (Arroyo Seco-Salinas River), and Linkage 378 (Salinas River, Pinnacles National Monument), all of which provide critical connectivity between TNC Conservation Area 57 (Southern Gabilan Range) and TNC Conservation Area 99 (Arroyo Seco Uplands). See Exhibits A and C.

> Linkage 307 is considered a choke point to east/west movement. The area contains grassland, scrub and oak woodlands. Highway 101 is a major impediment as are gaps in habitat cover, sand/gravel operations, agricultural, and residential development.

> Linkage 357 is a key steelhead corridor as well as an important wildlife corridor between Salinas River and Santa Lucia Range. The linage needs native habitat restoration across the valley floor.
>
> Linkage 378 includes the area along Salinas River where river floodplain has unobstructed connections to foothills of southern Gabilan Range. This linkage provides regional connectivity across the Salinas Valley floor.
>
> Linkage 353 is one of few areas in this ecoregion where wildlife can move through natural habitat between the Salinas River and southern Sierra de Salinas.

These are just a few examples. There are additional linkages shown in Exhibit A and described in Exhibit C that require detailed analysis of the effects from agricultural conversion and the winery corridor in the DEIR, e.g., 316, 339, 354, 343, and 308. In particular the impact analysis must address the following:

- the type and land area of habitat that will be directly lost to development and agricultural conversion
- how and where the habitat will be fragmented,
- loss of connectivity between important natural open space,
- effects of increased human presence including more vehicles, increased levels of noise, trash, predatory pets (dogs and cats), and invasive plant species, and
- reduced water quality and increased sedimentation.

In order to establish and ultimately protect wildlife corridors the County must identify and evaluate each corridor area in a first-tier EIR *before* further piecemeal development is permitted. The development that is permitted must accommodate the wildlife corridors and linkages.

PROTECTION OF MOVEMENT CORRIDORS: There are a number of general principles for designing and monitoring the effectiveness of wildlife corridors. The following are taken from Bond (2003):

> *Six Step Corridor Evaluation*
>
> *Step 1*: Identify the habitat areas the corridor is designed to connect.
> *Step 2*: Select several target species for the design of the corridor (i.e., select "umbrella species").
> *Step 3*: Evaluate the relevant needs of each target species.
> *Step 4*: For each potential corridor, evaluate how the area will accommodate movement by each target species.
> *Step 5*: Draw the corridor on a map.
> *Step 6*: Design a monitoring program.

Evaluating how the potential corridor will accommodate movement by each species (*Step 4*) is a critical step in the process. The evaluation should include the consideration of how likely the animal will encounter the entrance to the corridor, actually enter the corridor, and follow it to the end. Additionally, it is important to consider whether there is sufficient concealing cover, food, and water within the corridor for the animal to reach the full length of the corridor, or whether such elements need to be created and maintained. Finally, specific impediments to movement within the potential corridor must be assessed, including topography, roads and type of road crossing, fences, outdoor lighting, domestic pets, noise from vehicle traffic or nearby buildings, and other human impacts.

For Monterey County at a minimum wildlife corridors must be determined in advance of siting development for larger more adventurous animal like deer, bobcats, mountain lions, fox, kit fox as well as for smaller more restricted species such as the California red-legged frog (CRLF), California tiger salamander (CTS), steelhead, and San Joaquin kit fox (SJKF). Both the CRLF and CTS require breeding habitat, upland retreat habitat, and dispersal corridors that connect suitable breeding habitats. In order to determine appropriate wildlife corridors for these species, as well as other species, a County-wide assessment should be conducted of potential breeding, foraging, and cover habitats for these species. Then, a slope, terrain, land use, and vegetation assessment should be conducted to determine how the species would disperse to nearby habitats. Dispersal between breeding, foraging and cover habitats is critical to these species as it provides for genetic mixing between populations and helps maintain viable populations. Roads and other high risk land uses should be considered when conducting dispersal modeling.

For the steelhead, a study must be conducted that assesses current use of creeks and rivers for spawning and rearing, and that identifies barriers to movement upstream to spawning grounds. Things such as down logs, fallen rip rap or discarded trash, heavy siltation, pollutants, mud slides, beaver dams, water diversions, etc. should be included in the assessment. Without knowing the existing conditions of steelhead spawning creeks and rivers, it is impossible to establish workable movement corridors for this species.

For the San Joaquin kit fox, the DEIR defers the preparation of a habitat conservation plan as follows:

> *"The County shall, in concert with the USFWS, CDFG, cities in the Salinas Valley, and stakeholders develop a conservation plan for the Salinas Valley to provide for the preservation of adequate habitat to sustain the San Joaquin kit fox population. The general focus area of the plan shall be the Salinas Valley south of the community of Chualar. The Conservation Plan, at a minimum, shall be adopted by Monterey County and shall be applied to all discretionary approvals (and their associated CEQA documents) with potential to affect the San Joaquin kit fox within the conservation plan area. The County shall complete the conservation plan within 4 years of General Plan adoption."*

We have been involved with the preparation of HCP's since the mid 1980's. We are currently working on a combined HCP/NCCP for Placer County. That effort has already taken more than six years, and is probably another two years from completion. That is double the four years identified for completion of a Monterey County Kit Fox HCP. In the meantime, scattered development could occur that forecloses the establishment of habitat corridors for the kit fox, especially in the wine corridor. Again, in accordance with principles of conservation biology, a regional study is needed to determine core kit fox habitat (including denning and foraging areas, areas of dispersal, and areas of risk (such as roads, fenced agricultural lands, areas with high red fox or coyote populations).

Mitigation is inadequate

The DEIR admits that the policies that it cites as partial mitigation will not systematically address impacts to movement corridors. DEIR, 4.9-93, 4.9-94. For example, policies that call for compact development apply to urban uses and do not constrain agricultural conversion and visitor serving uses in the winery corridor, which are encouraged. Thus, development in the winery corridor will result in habitat fragmentation and will constitute a significant block to the east-west movement corridor that the DEIR acknowledges to exist (DEIR, p. 4.9-93 to 94). As noted above, the DEIR admits that agricultural conversions and winery expansions could destroy and fragment habitat, which would interfere with movement corridors:

> "The installation of new vineyards, row crops, and other actively managed agricultural uses (including routine and ongoing agriculture), mining extraction, and other activities could also result in the elimination of essential habitat for CEQA-defined special-status species. Even if the sensitive habitat is deliberately avoided at the project level, new development and intensively managed land practices would result in fragmentation of the existing habitat and leave the CEQA-defined special-status species population at risk of extirpation (local extinction). The exact amount of habitat conversion due to agricultural expansion onto uncultivated lands is not known." DEIR. P. 4.9-65.

The proposed mitigation, BIO-3.1, is to require discretionary permits at the *project*-level to consider wildlife movement:

> **"Mitigation Measure BIO-3.1: Project-Level Wildlife Movement Considerations.**
> The County shall require discretionary projects to retain movement corridors of adequate size and habitat quality to allow for continued wildlife use based on the needs of the species occupying the habitat. The County shall consider the need for wildlife movement in designing and expanding major roadways and public infrastructure projects to provide movement opportunities for terrestrial wildlife and to ensure that existing stream channels and riparian corridors continue to provide for wildlife movement and access." DEIR, p. 4.9-94.

This mitigation is inadequate to address impacts to wildlife movement and nursery sites for two reasons.

First, the assessment of impacts related to habitat fragmentation and movement corridors should be undertaken at the landscape level in a first-tier CEQA analysis, not deferred to later project-level reviews. The proposed mitigation measure admits that because the General Plan policies do not systematically address these issues, their analysis and mitigation will be postponed to later project-level reviews. However, it is against the principles of conservation biology to evaluate impacts to wildlife movement corridors on a project-by-project basis. That type of analysis forecloses the ability of the County to preserve and protect natural communities and corridors on a regional scale. The proposed project-level review of cumulative regional impacts violates the most basic tenets of conservation biology include the following:

- Species that are well-distributed across their native ranges are less susceptible to extinction than are species confined to small portions of their ranges. Maintaining appropriate habitat for these species within the context of broader ecological goals (e.g., improve or maintain desirable vegetation structure and hydrological regimes, eliminate invasive exotics) is the most important conservation action.

- Large conservation areas containing large populations of the special status species are superior to small conservation areas containing small populations. While the persistence of all populations is subject to the effects of normal random environmental events (environmental stochasticity) and catastrophes such as wildfires and severe drought, the persistence of small populations is additionally threatened by random variations in birth or death events (demographic stochasticity) and random changes in genetic composition (genetic stochasticity). Large areas with high quality habitat for species tend to mitigate the combined effects of these factors. Thus, for example, acquisition of conservation areas should preferentially add to existing protected areas.

- An arrangement of conservation areas that facilitates dispersal of individuals among these areas is necessary to encourage demographic rescue effects (whereby dwindling populations are supplemented by migrants), and continued genetic interchange. All else being equal, conservation areas that are close together are more likely to support sensitive species for longer time periods than will isolated areas; thus, if it is not possible to acquire new conservation areas that add to existing ones, acquisitions should be made in proximity of protected areas.

- Interpopulation dispersal is important for regional species persistence. Before allowing fragmentation of natural communities, it is critical to identify areas that can provide connections between communities to increase the likelihood of successful dispersal. Such dispersal not only enhances the persistence probabilities of sensitive species (Wiens et al. 1993), but it also helps maintain the overall diversity of plants and animals within a given area (Hansen and Urban

1992) and allows the entire regional habitat network to function as a healthy ecological community.

- Habitat for a particular species within a conservation area that occurs in less fragmented, contiguous blocks is preferable to habitat that is fragmented. Conservation areas should minimize internal fragmentation and barriers to species movement. Viable populations of many species require large blocks of habitat where the presence of disruptive edge-dwelling species, such as cowbirds and house cats, is minimized. Habitat highly fragmented by disturbed or developed lands has relatively little conservation value for species that exhibit high habitat specificity.

- Efforts should be directed toward maximizing heterogeneity in conservation areas. Areas that have diverse topography, soils, and vegetation tend to capture a variety of different habitat types and thus support a richer biota than more homogeneous areas.

Large scale planning is critical because it is the only way to ensure protection of large blocks of contiguous habitat and linkages. Studies have consistently shown that the number of native species decreases as habitat area decreases. TNC 2006, p. 46.

The General Plan will determine the location and intensity of development at a regional scale. Accordingly, this EIR represents the County's final opportunity to develop mitigation or consider alternatives that would address impacts at a regional scale. Identification of affected habitats and species is critical early in the planning effort because many natural communities are restricted to one or a few ecoregions, *e.g.*, the valley, blue, and coast live oak woodlands of the foothills. TNC 2006, p. 24. For example, it may be appropriate to limit development in certain areas in order to minimize habitat fragmentation and preserve or even expand movement corridors. This can be done by increasing the width of riparian corridors, eliminating development next to existing open space, and preserving important topographic features including vegetated swales, plateaus, and ridgetops. The opportunity to do this will be lost if regional scale impacts are not considered now.

Second, most of the proposed development in the winery corridor and most habitat conversions for agriculture will not require discretionary permits, so this activity will not even be subject to further CEQA review. For example, conversion of previously uncultivated land to agricultural use is considered "Routine and Ongoing Agricultural Activity," and will be allowed without discretionary permits, unless it involves slopes in excess of 25%. DEIR, p. 3-47. If an agricultural conversion does involve slopes over 25%, it *may* require a discretionary permit, or it may not. DEIR, p. 3-47; GP, p. C/OS-8, Policy OS-3.5. Policy OS-3.5, addressing slope development, provides for a ministerial permit for conversion of previously uncultivated land on slopes over 25%, except for conversions meeting "criteria when a discretionary permit is required." Because these criteria are currently unspecified and are to be developed later, it is impossible to

determine whether these conversions will be subject to CEQA review. Policy OS-3.5 calls for a ministerial permit for all other conversions on slopes over 25%, which would therefore also not be subject to CEQA review. The ministerial permit is to require compliance with conditions for resource areas including water quality, biological resources, and erosion control; however, these conditions have not been identified and there can be no assurance that they will address regional scale impacts.

Indeed, in its cursory discussion of cumulative impacts, the DEIR admits that "non-discretionary activities, such as the conversion of grassland to intensive agriculture, will also contribute to the larger impact on these [biological] resources." DEIR, p. 6-22. The DEIR concludes that there will in fact be considerable contributions to cumulatively significant impacts due to this activity. The DEIR must explain why the conversion of grassland should be treated as a non-discretionary activity through a policy related to routine and ongoing agriculture. Mitigation for impacts related to conversion is obviously available: those conversions can be regulated through land use restrictions, discretionary permitting, or, alternatively, through development of a Natural Communities Conservation Plan (NCCP). The NCCP program sets out to create regional conservation and development plans that protect entire communities of native plants and animals while streamlining the process for compatible economic development in other areas. The NCCP program was established by the California Department of Fish and Game (CDFG). In order to preserve large intact natural communities, rather than piece meal habitats related to a single listed species, CDFG, through funding and staff support, assists land use agencies with the preparation of a program to acquire and set aside natural communities that support multiple species. A NCCP has helped San Diego and Riverside Counties set aside large tracts of coastal sage scrub and other important natural habitats.

In short, most agricultural conversions will not be subject to future CEQA review. Furthermore, the criteria that will determine when discretionary review is required or what conditions will be included in a ministerial permit for conversion have not been developed. There can be no assurance that unspecified conditions on ministerial permits and uncertain future CEQA reviews will mitigate impacts involving habitat fragmentation and interruption of movement corridors.

And most of the winery related uses in the winery corridor will require only a ministerial permit and will thus be exempted from CEQA, including 40 artisan wineries, tasting rooms, winery-related food-facilities, winery events, unspecified "visitor serving uses," and up to 4 residences per winery. DEIR, p. 3-41, Table 3-16; 2007 General Plan, pp. AWCP-10 to AWCP-12. Only the 10 full-scale wineries, restaurants, lodging, and business clusters will require a permit subject to CEQA. Indeed, a key objective of the winery corridor plan is to streamline the review and permitting process. 2007 General Plan, pp. AWCP-1 and 2. The winery corridor plan states that this streamlining is to be achieved by providing "for the assessment of cumulative impacts early in the planning process." However, the proposed mitigation essentially puts off any consideration of quintessentially cumulative impacts – the impacts to movement corridors and nursery

sites – to subsequent project-level CEQA reviews that will not actually apply to most of the proposed uses. 2007 General Plan, p. AWCP-2.

The AWCP section of the 2007 General Plan calls for an unspecified "monitoring program" to be "conducted at five-year intervals in conjunction with the Monterey County Vintners and Growers Association or its successor. This program will assess if the impacts were correctly anticipated and mitigated in the environmental analysis conducted for this Plan, and, if not, what additional measures shall be taken." 2007 General Plan, pp. AWCP-18 to AWCP-19. This deferral of the analysis of actual impacts is no substitute for an adequate current analysis. The County will no longer have the discretion to condition the permitted development, even if the subsequent analysis demonstrates that it should have done so. And the involvement of the regulated community in this post hoc review is not likely to sharpen its focus, since that community will have little incentive to find problems or take action to address them.

The DEIR cannot reasonably conclude that Mitigation Measure BIO 3.1 will mitigate impacts involving habitat fragmentation and interruption of movement corridors. Additional feasible mitigation should be proposed, including the requirement that a county-wide wildlife corridor study using, at a minimum, the wildlife conservation principles contained in Bond (2003) or alternatively a combined HCP/NCCP be development and implemented, *before* any ministerial permit are allowed in the winery corridor and *before* any agricultural conversions are permitted on land in sensitive areas.

6. The DEIR does not evaluate steelhead impacts from increased diversions from the Salinas River to prevent salt water intrusion and overdrafting and these impacts will be significant

The DEIR assumes that diversions from the Salinas River through the Salinas Valley Water Project (SVWP) will be increased from 9,700 AFY to 18,300 AFY in order to prevent salt water intrusion and over-drafting. Although this proposal is outlined conceptually as the "Expanded Distribution System" in the SVWP Draft EIS/EIR (MCWRA (2002)), that document does not evaluate the impacts from this increased level of diversions, particularly the impacts to steelhead. Therefore, the DEIR's statement at p. 4.3-143 that "the impacts of the SVWP have been disclosed and mitigated with the adoption of the EIR/EIS prepared for that project" is not correct.

NOAA's 2007 Final Biological Opinion for the SVWP assumes that only 9,700 AFY will be diverted and requires reinitiation of consultation if diversion is increased beyond this limit. NOAA (2007), pp. 8, 66. The flow prescription based on 9,700 AFY was intended to minimize project impacts and benefit steelhead. Increasing diversions to support the Expanded Distribution System would require that NOAA approve substantial changes to the river flow. This is not disclosed by the DEIR.

An extensive status review and biological assessment of South Central California Coast (SCCC) steelhead was performed as part of NOAA's Biological Opinion for the SVWP. The opinion found that:

1. The steelhead populations of the Salinas basin are significant in the survival of the SCCC steelhead distinct population segment (DPS) because: a.) They represent a large portion of the DPS's range, approx. 48% of both acreage and stream miles; b.) They inhabit an "inland" habitat which, along with the habitat of the Pajaro, is considered ecologically distinct within the DPS; and c.) They exhibit unique life history traits (page 36).
2. Most of the Salinas River is designated Critical Habitat for SCCC steelhead including: the Salinas River from the mouth to 7.5 miles below Santa Margarita Lake, Arroyo Seco River, Nacimiento and San Antonio Rivers (below the dam), and a number of upper Salinas tributaries (page 57).
3. Most of the critical habitat within the watershed is of diminished quality due to: inadequate flows, increased water temperature, degraded habitat, lack of access to suitable habitat and degraded lagoon rearing habitat. This degradation is believed responsible for the decline in steelhead abundance and viability (pages 57 and 58).
4. Steelhead breeding and rearing habitats in the Salinas River watershed include: Arroyo Seco, the downstream portions of Nacimiento and San Antonio River Dams, and portions of the upper watershed, with Arroyo Seco having the only population that is considered moderately or somewhat "viable" (population viability is defined by McElhany et al. (2000) as having the potential to persist into the future 100 years) (pages 25-26). These occupied spawning and/or rearing habitats comprise 19 percent of the DPS in term of miles, making the Salinas River the most occupied habitat in the DPS (page 37).
5. The primary threats to the Arroyo Seco steelhead population, in order of importance, are flow-related passage, barriers, and summer base flow (page 29).
6. The Arroyo Seco's risk of extinction is "fairly high" (page 64).

Given the importance of the Salinas River system to the overall ecological health of the SCCC steelhead DPS, and the relative importance of the Arroyo Seco habitat, increased diversions have the potential to significantly impact steelhead populations. The significance of the impact varies primarily by the location, timing, and volume of a diversion, and how the character of a given water year impacts that timing and volume.

Assuming additional diversions are taken from the present location of the inflatable rubber dam near Highway 1, timing and volume and how they vary by water year are the primary concern. Under the current diversion plan stipulated by the SVWP and the Section 7 Incidental Take Statement, winter flows are somewhat reduced because of increased storage at Nacimiento Dam while spring and summer flows are increased. Any plans to store additional winter volume, particularly in December and January, for spring/summer release would likely have a significant impact on adult migration to suitable breeding habitat.

Currently, the SVWP release plan permitted by NOAA calls for increased spring and summer flows. As large portions of the Salinas typically dry up during this time, increased flows present an opportunity for an expanded smolt emigration period. Smolt emigration (generally occurring between March and July) often limits steelhead

production in "inland" systems, like the Salinas, that have hot, dry summers and dams that store any water that would typically trickle down from the upper watershed. Any change to the current dam flow rates during spring and summer would negate any improvements made to smolt outmigration and would be a significant impact.

7. The DEIR does not evaluate steelhead impacts from continued operation of Nacimiento and San Antonio Dams and these impacts will be significant

As noted, the DEIR assumes that groundwater will remain available in the Salinas Valley basin to support planned growth and states that groundwater pumping will not cause significant impacts from salt water intrusion or overdrafting. The DEIR relies on MCWRA's continued operation of the Nacimiento Dam and San Antonio Dam to maximize groundwater recharge in that basin. DEIR, pp. 4.3-5 to 4.3-6. However the DEIR does not evaluate the impacts to steelhead from the continued operation of these dams or reference any previous analysis of this.

We are aware of no such previous analysis of impacts from the continued operation of the two dams, *e.g.*, a Biological Opinion from a consultation under the ESA. The NOAA Biological Opinion for the SVWP expressly disclaims any analysis of what it characterizes as the baseline operations of these dams. NOAA (2007), p. 2. If there is such an analysis or opinion, the DEIR should disclose this, summarize its findings, and explain whether it was based on assumptions consistent with the 2007 General Plan. If there has not been any form of analysis or compliance with the ESA's requirement that continued operations of these dams are subject to the requirement to obtain an Incidental Take Permit or Statement, then the DEIR should disclose this. In any event, the DEIR must provide an analysis of the effects of continuing operations.

We believe that continued operation of these dams will significantly impact steelhead migration and reproduction. Beyond the permanent loss of spawning and rearing habitat that dams create, the greatest impact of dam operations to steelhead is the lack of water for migration and emigration. The storage of flood flows during the winter months not only reduces the volume, and therefore the flow of water, but also the geomorphology of the habitat downstream of the dam.

By muting flood flows, dams minimize migration "signals" to adults awaiting migration at the river/ocean interface. Reduced flows exacerbate anthropogenic barriers to adult migration and to a lesser extent juvenile emigration by lowering the volume of water provided to overcome a barrier. Dam storage limits aquifer recharge during winter months, leading to an increase in dry stream days that can trap and isolate migrating adults, especially in the beginning of the rainy season when rain may entice fish to migrate but not produce enough water to maintain refuge habitat. By maximizing dam release for aquifer recharge throughout the summer and fall, large portions of streams often become dry before the smolt emigration season (typically March to July) ends, leading to the stranding of fish. In many cases, successive years of dry stream reaches caused by dam operations will lead to the formation of a resident population. Resident

populations, although under the law are protected as naturally spawning steelhead, do not contribute to the overall genetic variability of a system.

By limiting flood flows, dams slowly and irrevocably change channel and substrate configuration. The muting of the highest peak flows creates smaller channels as vegetation once eroded by floods now flourishes. The number and size of boulders, cobbles, gravels and large woody debris is reduced. Channels become more shallow from the loss of erosive power that accompanies peak flood stage events, but also from the deposition of fine sediments that dams trap and release. Fine sediments also change the natural composition of river sediments, slowly displacing gravels and cobbles with sand and clay. Loss of complex stream habitat results in a loss of summer and winter steelhead refugia. Fine sediments clog interstitial spaces between gravels and cobbles, limiting oxygenation of steelhead egg and fry, but also severely altering the abundance and diversity of the invertebrate community, the juveniles steelheads main prey item.

8. The DEIR does not disclose the effects of sedimentation on steelhead and these impacts will be significant

As discussed above, the DEIR projects continued expansion in the cultivation of previously uncultivated land for agriculture, particularly for vineyard expansion. Most of this expansion will occur on sloped land at the edges of the Salinas Valley. The DEIR does not describe activities permitted by the 2007 General Plan that will cause erosion and sedimentation with any specificity, does not project actual erosion and sedimentation impacts, and does not propose any meaningfully substantive mitigation.

We believe that cumulative increases in sedimentation appear to be likely based on planned expansion of cultivation of previously uncultivated land and the absence of any substantive proposal for mitigation. For example, the DEIR postpones the evaluation and mitigation of cumulative sedimentation impacts, simply referencing Policy OS 3.9 that calls for a subsequent committee to develop a program. It is clear that increased sedimentation will adversely affect steelhead.

Any activities that require the moving or excavation of earth contributes to the sedimentation of natural environments, most notably creeks, streams, and rivers. Sediment is carried over impervious surfaces during rain events and then moved downstream by flood flows. The continued development of the Salinas River Valley will no doubt result in an increase in short-term, construction related sedimentation of aquatic habitats, but also in the creation of long-term sediment sources as previously undeveloped land is converted for agriculture and wineries. As noted above, there are thousands of acres of steeply sloped land that will be newly opened to development under the 2007 General Plan slope development policy. And, as noted, the EIR does not propose any substantive mitigation of the cumulative impacts of sedimentation from this development since Policy OS 3.9 defers this mitigation without any performance standards.

Long-term sources of sediment are those that are of principal concern to fisheries biologists. Fine sediments are mobilized from fields during rain or irrigation events, settling into nearby ditches, creeks or streams. Large rain events further mobilize this sediment into main stream and river routes, where impacts to steelhead occur.

Fine sediments impact steelhead in a number of ways. Most notably, over the long term sediment fills in complex foraging and refugia habitat, reducing the complexity and therefore the productivity of steelhead habitat. Sediment reduces the interstitial spaces needed for invertebrate productivity, limiting the diversity and abundance of the steelhead's main prey item. Sediment also reduces oxygenation of steelhead eggs and alevin, potentially causing the substantial lose of young. Sediment suspended in the water column can cause complications with respiration, foraging, prey avoidance, and even mortality.

9. Cumulative impact analysis is inadequate and no mitigation is proposed

The DEIR's cumulative impact analysis consists of the recitation of a list of policies relevant to biological resources, recitation of the list of additional mitigation measures and a single paragraph of analysis:

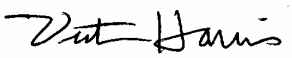
> "Together, these [policies and mitigation measures] would reduce the 2007 General Plan's contribution to cumulative impacts, but in some cases these impacts would still remain considerable. As development continues toward buildout, particularly development of existing lots of record, low-intensity development will cover larger expanses of the county's jurisdiction (federal lands such as Fort Hunter Liggett and Los Padres National Forest and state parks, which provide substantial areas of habitat within the county would not be affected). Similarly, expansion of the cities, which is outside the control of Monterey County, will impact habitats adjoining urban areas. Non-discretionary activities, such as the conversion of grassland to intensive agriculture, will also continue to contribute to the larger impact on these resources. Because the extent and species coverage of the future NCCP is unknown, there is a potential for cumulative impacts on special status species not covered by the NCCP. As a result, there would be a considerable contribution to cumulatively significant biological impacts." DEIR, p. 6-22.

The DEIR's apparent conclusion is that considerable contributions will be made to cumulatively significant impacts due to three causes: 1) sprawl caused by low-intensity development, particularly development of lots of record, 2) expansion of cities, and 3) non-discretionary activities, such as the conversion of grassland to intensive agriculture. Because the first and third causes are within the County's control, the County is obligated to propose all feasible mitigation to address the acknowledged cumulative impact. Despite this, the cumulative impact discussion does not even consider additional mitigation to address the acknowledged impacts.

The EIR must propose mitigation measures that would address either the causes of these cumulative impacts or their effects. The County may bar or condition low-intensity development, including development of lots of record, where that development threatens to contribute to cumulative impacts. And there is simply no reason that the County must treat conversion of grassland to agriculture, or development on slopes, or construction of wineries, as non-discretionary activities, when such development contributes to cumulative impacts. If the County nonetheless intends to permit this activity without restriction or conditions, then it must adopt other mitigation to address its effects, including *prompt* implementation of an NCCP that will address the cumulative impacts.

If there are any questions regarding these comments, please do not hesitate to contact me at (650) 327-0429, ext. 82, or harris@traenviro.com.

Sincerely,



Victoria Harris
Program Director

Exhibits:

Exhibit A: The Nature Conservancy, Intact Natural Vegetation Designated for Agriculture in Southern Monterey County, 2009

Exhibit B: The Nature Conservancy, Analysis of Slope and Vegetation by Planning Area for Land Permitting Agriculture Under the 2007 Monterey County General Plan

Exhibit C: The Nature Conservancy, Linkage Summary for the Central Coast, 2009

References:

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Exhibit A

The Nature Conservancy, Intact Natural Vegetation Designated for Agriculture in Southern Monterey County, 2009

Map provided in separate mailing

Exhibit B

The Nature Conservancy, Analysis of Slope and Vegetation by Planning Area for Land Permitting Agriculture Under the 2007 Monterey County General Plan, January 2009

AREA_NAM_1	LAND_USE	Slope Class	Land Cover (from CalVeg)	Acres
Cachagua	Farmlands 40 - 160 Ac Min	25 - 30% Slope	Converted Vegetation	2
Cachagua	Permanent Grazing 10 - 160 Ac Min	25 - 30% Slope	Converted Vegetation	2
Cachagua	Resource Conservation	25 - 30% Slope	Converted Vegetation	1
Carmel Valley Master Plan	Permanent Grazing 10 - 160 Ac Min	25 - 30% Slope	Converted Vegetation	1
Carmel Valley Master Plan	Resource Conservation	25 - 30% Slope	Converted Vegetation	1
Carmel Valley Master Plan	Rural Grazing 10 - 160 Ac Min	25 - 30% Slope	Converted Vegetation	0
Central Salinas Valley	Farmlands 40 - 160 Ac Min	25 - 30% Slope	Converted Vegetation	158
Central Salinas Valley	Permanent Grazing 10 - 160 Ac Min	25 - 30% Slope	Converted Vegetation	51
Central Salinas Valley	Resource Conservation	25 - 30% Slope	Converted Vegetation	11
Central Salinas Valley	Rural Grazing 10 - 160 Ac Min	25 - 30% Slope	Converted Vegetation	9
Greater Monterey Peninsula	Permanent Grazing 10 - 160 Ac Min	25 - 30% Slope	Converted Vegetation	5
Greater Monterey Peninsula	Resource Conservation	25 - 30% Slope	Converted Vegetation	6
Greater Salinas	Farmlands 40 - 160 Ac Min	25 - 30% Slope	Converted Vegetation	11
Greater Salinas	Permanent Grazing 10 - 160 Ac Min	25 - 30% Slope	Converted Vegetation	2
Greater Salinas	Resource Conservation	25 - 30% Slope	Converted Vegetation	6
North County	Farmlands 40 - 160 Ac Min	25 - 30% Slope	Converted Vegetation	16
North County	Permanent Grazing 10 - 160 Ac Min	25 - 30% Slope	Converted Vegetation	6
North County	Resource Conservation	25 - 30% Slope	Converted Vegetation	11
North County	Rural Grazing 10 - 160 Ac Min	25 - 30% Slope	Converted Vegetation	4
South County	Farmlands 40 - 160 Ac Min	25 - 30% Slope	Converted Vegetation	22
South County	Permanent Grazing 10 - 160 Ac Min	25 - 30% Slope	Converted Vegetation	85
South County	Resource Conservation	25 - 30% Slope	Converted Vegetation	28
South County	Rural Grazing 10 - 160 Ac Min	25 - 30% Slope	Converted Vegetation	7
Toro	Farmlands 40 - 160 Ac Min	25 - 30% Slope	Converted Vegetation	2
Toro	Permanent Grazing 10 - 160 Ac Min	25 - 30% Slope	Converted Vegetation	1
Toro	Resource Conservation	25 - 30% Slope	Converted Vegetation	14
Cachagua	Farmlands 40 - 160 Ac Min	GT 30% Slope	Converted Vegetation	1
Cachagua	Permanent Grazing 10 - 160 Ac Min	GT 30% Slope	Converted Vegetation	67
Cachagua	Resource Conservation	GT 30% Slope	Converted Vegetation	2
Carmel Valley Master Plan	Permanent Grazing 10 - 160 Ac Min	GT 30% Slope	Converted Vegetation	1
Carmel Valley Master Plan	Resource Conservation	GT 30% Slope	Converted Vegetation	5
Carmel Valley Master Plan	Rural Grazing 10 - 160 Ac Min	GT 30% Slope	Converted Vegetation	3
Central Salinas Valley	Farmlands 40 - 160 Ac Min	GT 30% Slope	Converted Vegetation	240

AREA_NAM_1	LAND_USE	Slope Class	Land Cover (from CalVeg)	Acres
Central Salinas Valley	Permanent Grazing 10 - 160 Ac Min	GT 30% Slope	Converted Vegetation	97
Central Salinas Valley	Resource Conservation	GT 30% Slope	Converted Vegetation	30
Central Salinas Valley	Rural Grazing 10 - 160 Ac Min	GT 30% Slope	Converted Vegetation	27
Fort Ord	Permanent Grazing 10 - 160 Ac Min	GT 30% Slope	Converted Vegetation	0
Greater Monterey Peninsula	Permanent Grazing 10 - 160 Ac Min	GT 30% Slope	Converted Vegetation	2
Greater Monterey Peninsula	Resource Conservation	GT 30% Slope	Converted Vegetation	43
Greater Salinas	Farmlands 40 - 160 Ac Min	GT 30% Slope	Converted Vegetation	11
Greater Salinas	Permanent Grazing 10 - 160 Ac Min	GT 30% Slope	Converted Vegetation	12
Greater Salinas	Resource Conservation	GT 30% Slope	Converted Vegetation	8
North County	Farmlands 40 - 160 Ac Min	GT 30% Slope	Converted Vegetation	19
North County	Permanent Grazing 10 - 160 Ac Min	GT 30% Slope	Converted Vegetation	15
North County	Resource Conservation	GT 30% Slope	Converted Vegetation	49
North County	Rural Grazing 10 - 160 Ac Min	GT 30% Slope	Converted Vegetation	0
North County LCP	Resource Conservation	GT 30% Slope	Converted Vegetation	0
South County	Farmlands 40 - 160 Ac Min	GT 30% Slope	Converted Vegetation	20
South County	Permanent Grazing 10 - 160 Ac Min	GT 30% Slope	Converted Vegetation	129
South County	Resource Conservation	GT 30% Slope	Converted Vegetation	29
South County	Rural Grazing 10 - 160 Ac Min	GT 30% Slope	Converted Vegetation	20
Toro	Farmlands 40 - 160 Ac Min	GT 30% Slope	Converted Vegetation	2
Toro	Permanent Grazing 10 - 160 Ac Min	GT 30% Slope	Converted Vegetation	1
Toro	Resource Conservation	GT 30% Slope	Converted Vegetation	18
Cachagua	Farmlands 40 - 160 Ac Min	LT 25% Slope	Converted Vegetation	111
Cachagua	Permanent Grazing 10 - 160 Ac Min	LT 25% Slope	Converted Vegetation	15
Cachagua	Resource Conservation	LT 25% Slope	Converted Vegetation	5
Carmel LUP	Resource Conservation	LT 25% Slope	Converted Vegetation	0
Carmel Valley Master Plan	Permanent Grazing 10 - 160 Ac Min	LT 25% Slope	Converted Vegetation	20
Carmel Valley Master Plan	Resource Conservation	LT 25% Slope	Converted Vegetation	36
Carmel Valley Master Plan	Rural Grazing 10 - 160 Ac Min	LT 25% Slope	Converted Vegetation	3
Central Salinas Valley	Farmlands 40 - 160 Ac Min	LT 25% Slope	Converted Vegetation	137137
Central Salinas Valley	Permanent Grazing 10 - 160 Ac Min	LT 25% Slope	Converted Vegetation	2838
Central Salinas Valley	Resource Conservation	LT 25% Slope	Converted Vegetation	21
Central Salinas Valley	Rural Grazing 10 - 160 Ac Min	LT 25% Slope	Converted Vegetation	473
Coast Non-Coastal	Resource Conservation	LT 25% Slope	Converted Vegetation	4

AREA_NAM_1	LAND_USE	Slope Class	Land Cover (from CalVeg)	Acres
Fort Ord	Permanent Grazing 10 - 160 Ac Min	LT 25% Slope	Converted Vegetation	1
Fort Ord	Resource Conservation	LT 25% Slope	Converted Vegetation	0
Greater Monterey Peninsula	Farmlands 40 - 160 Ac Min	LT 25% Slope	Converted Vegetation	301
Greater Monterey Peninsula	Permanent Grazing 10 - 160 Ac Min	LT 25% Slope	Converted Vegetation	389
Greater Monterey Peninsula	Resource Conservation	LT 25% Slope	Converted Vegetation	75
Greater Salinas	Farmlands 40 - 160 Ac Min	LT 25% Slope	Converted Vegetation	46180
Greater Salinas	Permanent Grazing 10 - 160 Ac Min	LT 25% Slope	Converted Vegetation	195
Greater Salinas	Resource Conservation	LT 25% Slope	Converted Vegetation	518
North County	Farmlands 40 - 160 Ac Min	LT 25% Slope	Converted Vegetation	7257
North County	Permanent Grazing 10 - 160 Ac Min	LT 25% Slope	Converted Vegetation	272
North County	Resource Conservation	LT 25% Slope	Converted Vegetation	157
North County	Rural Grazing 10 - 160 Ac Min	LT 25% Slope	Converted Vegetation	33
North County LCP	Farmlands 40 - 160 Ac Min	LT 25% Slope	Converted Vegetation	0
North County LCP	Resource Conservation	LT 25% Slope	Converted Vegetation	0
South County	Farmlands 40 - 160 Ac Min	LT 25% Slope	Converted Vegetation	15944
South County	Permanent Grazing 10 - 160 Ac Min	LT 25% Slope	Converted Vegetation	2588
South County	Resource Conservation	LT 25% Slope	Converted Vegetation	112
South County	Rural Grazing 10 - 160 Ac Min	LT 25% Slope	Converted Vegetation	73
Toro	Farmlands 40 - 160 Ac Min	LT 25% Slope	Converted Vegetation	4796
Toro	Permanent Grazing 10 - 160 Ac Min	LT 25% Slope	Converted Vegetation	147
Toro	Resource Conservation	LT 25% Slope	Converted Vegetation	137
Toro	Rural Grazing 10 - 160 Ac Min	LT 25% Slope	Converted Vegetation	0
Cachagua	Farmlands 40 - 160 Ac Min	25 - 30% Slope	Intact Natural Vegetation	39
Cachagua	Permanent Grazing 10 - 160 Ac Min	25 - 30% Slope	Intact Natural Vegetation	7077
Cachagua	Resource Conservation	25 - 30% Slope	Intact Natural Vegetation	1866
Cachagua	Rural Grazing 10 - 160 Ac Min	25 - 30% Slope	Intact Natural Vegetation	125
Carmel LUP	Resource Conservation	25 - 30% Slope	Intact Natural Vegetation	0
Carmel LUP	Rural Grazing 10 - 160 Ac Min	25 - 30% Slope	Intact Natural Vegetation	0
Carmel Valley Master Plan	Permanent Grazing 10 - 160 Ac Min	25 - 30% Slope	Intact Natural Vegetation	25
Carmel Valley Master Plan	Resource Conservation	25 - 30% Slope	Intact Natural Vegetation	364
Carmel Valley Master Plan	Rural Grazing 10 - 160 Ac Min	25 - 30% Slope	Intact Natural Vegetation	307
Central Salinas Valley	Farmlands 40 - 160 Ac Min	25 - 30% Slope	Intact Natural Vegetation	2685
Central Salinas Valley	Permanent Grazing 10 - 160 Ac Min	25 - 30% Slope	Intact Natural Vegetation	23575

AREA_NAM_1	LAND_USE	Slope Class	Land Cover (from CalVeg)	Acres
Central Salinas Valley	Resource Conservation	25 - 30% Slope	Intact Natural Vegetation	4612
Central Salinas Valley	Rural Grazing 10 - 160 Ac Min	25 - 30% Slope	Intact Natural Vegetation	1031
Coast Non-Coastal	Resource Conservation	25 - 30% Slope	Intact Natural Vegetation	434
Coast-Big Sur	Permanent Grazing 10 - 160 Ac Min	25 - 30% Slope	Intact Natural Vegetation	0
Coast-Big Sur	Resource Conservation	25 - 30% Slope	Intact Natural Vegetation	0
Fort Ord	Farmlands 40 - 160 Ac Min	25 - 30% Slope	Intact Natural Vegetation	0
Fort Ord	Permanent Grazing 10 - 160 Ac Min	25 - 30% Slope	Intact Natural Vegetation	3
Greater Monterey Peninsula	Permanent Grazing 10 - 160 Ac Min	25 - 30% Slope	Intact Natural Vegetation	710
Greater Monterey Peninsula	Resource Conservation	25 - 30% Slope	Intact Natural Vegetation	2657
Greater Monterey Peninsula	Rural Grazing 10 - 160 Ac Min	25 - 30% Slope	Intact Natural Vegetation	22
Greater Salinas	Farmlands 40 - 160 Ac Min	25 - 30% Slope	Intact Natural Vegetation	120
Greater Salinas	Permanent Grazing 10 - 160 Ac Min	25 - 30% Slope	Intact Natural Vegetation	3426
Greater Salinas	Resource Conservation	25 - 30% Slope	Intact Natural Vegetation	641
North County	Farmlands 40 - 160 Ac Min	25 - 30% Slope	Intact Natural Vegetation	14
North County	Permanent Grazing 10 - 160 Ac Min	25 - 30% Slope	Intact Natural Vegetation	737
North County	Resource Conservation	25 - 30% Slope	Intact Natural Vegetation	117
North County	Rural Grazing 10 - 160 Ac Min	25 - 30% Slope	Intact Natural Vegetation	117
South County	Farmlands 40 - 160 Ac Min	25 - 30% Slope	Intact Natural Vegetation	2681
South County	Permanent Grazing 10 - 160 Ac Min	25 - 30% Slope	Intact Natural Vegetation	48472
South County	Resource Conservation	25 - 30% Slope	Intact Natural Vegetation	4796
South County	Rural Grazing 10 - 160 Ac Min	25 - 30% Slope	Intact Natural Vegetation	4085
Toro	Farmlands 40 - 160 Ac Min	25 - 30% Slope	Intact Natural Vegetation	89
Toro	Permanent Grazing 10 - 160 Ac Min	25 - 30% Slope	Intact Natural Vegetation	1816
Toro	Resource Conservation	25 - 30% Slope	Intact Natural Vegetation	1000
Toro	Rural Grazing 10 - 160 Ac Min	25 - 30% Slope	Intact Natural Vegetation	37
Cachagua	Farmlands 40 - 160 Ac Min	GT 30% Slope	Intact Natural Vegetation	51
Cachagua	Permanent Grazing 10 - 160 Ac Min	GT 30% Slope	Intact Natural Vegetation	28982
Cachagua	Resource Conservation	GT 30% Slope	Intact Natural Vegetation	10416
Cachagua	Rural Grazing 10 - 160 Ac Min	GT 30% Slope	Intact Natural Vegetation	480
Carmel LUP	Resource Conservation	GT 30% Slope	Intact Natural Vegetation	0
Carmel LUP	Rural Grazing 10 - 160 Ac Min	GT 30% Slope	Intact Natural Vegetation	0
Carmel Valley Master Plan	Permanent Grazing 10 - 160 Ac Min	GT 30% Slope	Intact Natural Vegetation	241
Carmel Valley Master Plan	Resource Conservation	GT 30% Slope	Intact Natural Vegetation	1321

AREA_NAM_1	LAND_USE	Slope Class	Land Cover (from CalVeg)	Acres
Carmel Valley Master Plan	Rural Grazing 10 - 160 Ac Min	GT 30% Slope	Intact Natural Vegetation	1171
Central Salinas Valley	Farmlands 40 - 160 Ac Min	GT 30% Slope	Intact Natural Vegetation	8770
Central Salinas Valley	Permanent Grazing 10 - 160 Ac Min	GT 30% Slope	Intact Natural Vegetation	93314
Central Salinas Valley	Resource Conservation	GT 30% Slope	Intact Natural Vegetation	23097
Central Salinas Valley	Rural Grazing 10 - 160 Ac Min	GT 30% Slope	Intact Natural Vegetation	4848
Coast Non-Coastal	Resource Conservation	GT 30% Slope	Intact Natural Vegetation	2481
Coast-Big Sur	Permanent Grazing 10 - 160 Ac Min	GT 30% Slope	Intact Natural Vegetation	0
Coast-Big Sur	Resource Conservation	GT 30% Slope	Intact Natural Vegetation	0
Fort Ord	Farmlands 40 - 160 Ac Min	GT 30% Slope	Intact Natural Vegetation	0
Fort Ord	Permanent Grazing 10 - 160 Ac Min	GT 30% Slope	Intact Natural Vegetation	2
Greater Monterey Peninsula	Permanent Grazing 10 - 160 Ac Min	GT 30% Slope	Intact Natural Vegetation	4630
Greater Monterey Peninsula	Resource Conservation	GT 30% Slope	Intact Natural Vegetation	14456
Greater Monterey Peninsula	Rural Grazing 10 - 160 Ac Min	GT 30% Slope	Intact Natural Vegetation	313
Greater Salinas	Farmlands 40 - 160 Ac Min	GT 30% Slope	Intact Natural Vegetation	404
Greater Salinas	Permanent Grazing 10 - 160 Ac Min	GT 30% Slope	Intact Natural Vegetation	14596
Greater Salinas	Resource Conservation	GT 30% Slope	Intact Natural Vegetation	4397
North County	Farmlands 40 - 160 Ac Min	GT 30% Slope	Intact Natural Vegetation	29
North County	Permanent Grazing 10 - 160 Ac Min	GT 30% Slope	Intact Natural Vegetation	1294
North County	Resource Conservation	GT 30% Slope	Intact Natural Vegetation	127
North County	Rural Grazing 10 - 160 Ac Min	GT 30% Slope	Intact Natural Vegetation	120
South County	Farmlands 40 - 160 Ac Min	GT 30% Slope	Intact Natural Vegetation	4620
South County	Permanent Grazing 10 - 160 Ac Min	GT 30% Slope	Intact Natural Vegetation	119583
South County	Resource Conservation	GT 30% Slope	Intact Natural Vegetation	19093
South County	Rural Grazing 10 - 160 Ac Min	GT 30% Slope	Intact Natural Vegetation	9862
Toro	Farmlands 40 - 160 Ac Min	GT 30% Slope	Intact Natural Vegetation	193
Toro	Permanent Grazing 10 - 160 Ac Min	GT 30% Slope	Intact Natural Vegetation	10403
Toro	Resource Conservation	GT 30% Slope	Intact Natural Vegetation	3403
Toro	Rural Grazing 10 - 160 Ac Min	GT 30% Slope	Intact Natural Vegetation	56
Cachagua	Farmlands 40 - 160 Ac Min	LT 25% Slope	Intact Natural Vegetation	578
Cachagua	Permanent Grazing 10 - 160 Ac Min	LT 25% Slope	Intact Natural Vegetation	21357
Cachagua	Resource Conservation	LT 25% Slope	Intact Natural Vegetation	5081
Cachagua	Rural Grazing 10 - 160 Ac Min	LT 25% Slope	Intact Natural Vegetation	672
Carmel LUP	Resource Conservation	LT 25% Slope	Intact Natural Vegetation	0

AREA_NAM_1	LAND_USE	Slope Class	Land Cover (from CalVeg)	Acres
Carmel LUP	Rural Grazing 10 - 160 Ac Min	LT 25% Slope	Intact Natural Vegetation	0
Carmel Valley Master Plan	Permanent Grazing 10 - 160 Ac Min	LT 25% Slope	Intact Natural Vegetation	85
Carmel Valley Master Plan	Resource Conservation	LT 25% Slope	Intact Natural Vegetation	872
Carmel Valley Master Plan	Rural Grazing 10 - 160 Ac Min	LT 25% Slope	Intact Natural Vegetation	1393
Central Salinas Valley	Farmlands 40 - 160 Ac Min	LT 25% Slope	Intact Natural Vegetation	40196
Central Salinas Valley	Permanent Grazing 10 - 160 Ac Min	LT 25% Slope	Intact Natural Vegetation	114713
Central Salinas Valley	Resource Conservation	LT 25% Slope	Intact Natural Vegetation	15437
Central Salinas Valley	Rural Grazing 10 - 160 Ac Min	LT 25% Slope	Intact Natural Vegetation	3742
Coast Non-Coastal	Permanent Grazing 10 - 160 Ac Min	LT 25% Slope	Intact Natural Vegetation	0
Coast Non-Coastal	Resource Conservation	LT 25% Slope	Intact Natural Vegetation	1595
Coast-Big Sur	Permanent Grazing 10 - 160 Ac Min	LT 25% Slope	Intact Natural Vegetation	0
Coast-Big Sur	Resource Conservation	LT 25% Slope	Intact Natural Vegetation	0
Fort Ord	Farmlands 40 - 160 Ac Min	LT 25% Slope	Intact Natural Vegetation	0
Fort Ord	Permanent Grazing 10 - 160 Ac Min	LT 25% Slope	Intact Natural Vegetation	4
Fort Ord	Resource Conservation	LT 25% Slope	Intact Natural Vegetation	0
Greater Monterey Peninsula	Farmlands 40 - 160 Ac Min	LT 25% Slope	Intact Natural Vegetation	84
Greater Monterey Peninsula	Permanent Grazing 10 - 160 Ac Min	LT 25% Slope	Intact Natural Vegetation	3142
Greater Monterey Peninsula	Resource Conservation	LT 25% Slope	Intact Natural Vegetation	8376
Greater Monterey Peninsula	Rural Grazing 10 - 160 Ac Min	LT 25% Slope	Intact Natural Vegetation	72
Greater Salinas	Farmlands 40 - 160 Ac Min	LT 25% Slope	Intact Natural Vegetation	4809
Greater Salinas	Permanent Grazing 10 - 160 Ac Min	LT 25% Slope	Intact Natural Vegetation	10710
Greater Salinas	Resource Conservation	LT 25% Slope	Intact Natural Vegetation	1130
North County	Farmlands 40 - 160 Ac Min	LT 25% Slope	Intact Natural Vegetation	465
North County	Permanent Grazing 10 - 160 Ac Min	LT 25% Slope	Intact Natural Vegetation	5061
North County	Resource Conservation	LT 25% Slope	Intact Natural Vegetation	2303
North County	Rural Grazing 10 - 160 Ac Min	LT 25% Slope	Intact Natural Vegetation	687
North County LCP	Farmlands 40 - 160 Ac Min	LT 25% Slope	Intact Natural Vegetation	0
North County LCP	Permanent Grazing 10 - 160 Ac Min	LT 25% Slope	Intact Natural Vegetation	0
North County LCP	Resource Conservation	LT 25% Slope	Intact Natural Vegetation	0
North County LCP	Rural Grazing 10 - 160 Ac Min	LT 25% Slope	Intact Natural Vegetation	0
South County	Farmlands 40 - 160 Ac Min	LT 25% Slope	Intact Natural Vegetation	67114
South County	Permanent Grazing 10 - 160 Ac Min	LT 25% Slope	Intact Natural Vegetation	270970
South County	Resource Conservation	LT 25% Slope	Intact Natural Vegetation	15576

AREA_NAM_1	LAND_USE	Slope Class	Land Cover (from CalVeg)	Acres
South County	Rural Grazing 10 - 160 Ac Min	LT 25% Slope	Intact Natural Vegetation	33295
Toro	Farmlands 40 - 160 Ac Min	LT 25% Slope	Intact Natural Vegetation	2469
Toro	Permanent Grazing 10 - 160 Ac Min	LT 25% Slope	Intact Natural Vegetation	5000
Toro	Resource Conservation	LT 25% Slope	Intact Natural Vegetation	3561
Toro	Rural Grazing 10 - 160 Ac Min	LT 25% Slope	Intact Natural Vegetation	223
TOTALS				
All Planning Areas	All land uses permitting agriculture	LT 25% Slope	Intact Natural Vegetation	640771
All Planning Areas	All land uses permitting agriculture	25 - 30% Slope	Intact Natural Vegetation	113678
All Planning Areas	All land uses permitting agriculture	GT 30% Slope	Intact Natural Vegetation	382753
All Planning Areas	All land uses permitting agriculture	GT 25% Slope	Intact Natural Vegetation	496432
Cachauga, CSV, Toro, South County	All land uses permitting agriculture	LT 25% Slope	Intact Natural Vegetation	599984
Cachauga, CSV, Toro, South County	All land uses permitting agriculture	25 - 30% Slope	Intact Natural Vegetation	103984
Cachauga, CSV, Toro, South County	All land uses permitting agriculture	GT 30% Slope	Intact Natural Vegetation	337171
Cachauga, CSV, Toro, South County	All land uses permitting agriculture	All slopes	Intact Natural Vegetation	1041138

This table summarizes the amount of <u>Grassland/Oak Woodland*</u> within the <u>four Landuse categories</u> designated for Agriculture**		
AREA_NAME	SLOPECLASS	~ Acres of Grassland/Oak Woodland* in the following land use classes: Farmlands 40 - 160 Ac Min, Permanent Grazing 10 - 160 Ac Min, Resource Conservation, Rural Grazing 10 - 160 Ac Min
Cachagua	> 30% slope	27,221
Cachagua	25-30% slope	6,886
Cachagua	< 25% slope	22,298
Carmel LUP	> 30% slope	0
Carmel LUP	25-30% slope	0
Carmel LUP	< 25% slope	0
Carmel Valley Master Plan	> 30% slope	2,067
Carmel Valley Master Plan	25-30% slope	593
Carmel Valley Master Plan	< 25% slope	2,133
Central Salinas Valley	> 30% slope	72,139
Central Salinas Valley	25-30% slope	21,911
Central Salinas Valley	< 25% slope	140,186
Coast Non-Coastal	> 30% slope	361
Coast Non-Coastal	25-30% slope	103
Coast Non-Coastal	< 25% slope	769
Coast-Big Sur	> 30% slope	0
Coast-Big Sur	25-30% slope	0
Coast-Big Sur	< 25% slope	0
Fort Ord	> 30% slope	2
Fort Ord	25-30% slope	3
Fort Ord	< 25% slope	4
Greater Monterey Peninsula	> 30% slope	12,748
Greater Monterey Peninsula	25-30% slope	2,598
Greater Monterey Peninsula	< 25% slope	9,792
Greater Salinas	> 30% slope	14,426
Greater Salinas	25-30% slope	3,392
Greater Salinas	< 25% slope	14,861
North County	> 30% slope	1,569
North County	25-30% slope	985
North County	< 25% slope	8,496
South County	> 30% slope	98,922
South County	25-30% slope	45,406
South County	< 25% slope	337,035
Toro	> 30% slope	9,371
Toro	25-30% slope	2,361
Toro	< 25% slope	9,496
Totals		

***For our analysis, we used the dataset CalVegt2000 (http://www.fs.fed.us/r5/rsl/projects/mapping/). When we refer to Grassland/Oakwood we're talking about the following categories from the CalVeg dataset: "Annual Grassland", "Blue Oak Forest/Woodland", Coast Live Oak Forest/Woodland", "Valley Oak Forest/Woodland"**		
****The Four landuse categories designated for Agriculture are "Farmlands 40-160 Ac Min", "Permanent Grazing 10 - 160 Ac Min", "Resource Conservation", "Rural Grazing 10 - 160 Ac Min"**		

Exhibit C

The Nature Conservancy, Linkage Summary for the Central Coast, 2009

This table provides data sources and descriptions for the linkages mapped on TNC, Intact Natural Vegetation Designated for Agriculture in Southern Monterey County, 2009

L_ID	SOURCEDOC	AUTHOR	DATE_	SCALE	Name	Notes
322	Hwy 68 Corridor Assessment 2005	TNC		Fine	Highway 68 western crossing	One of only two viable wildlife crossings across Highway 68 between the Santa Lucia Range and Ft. Ord Identified by TNC and BLM as part of Highway 68 review.
323	Monterey County Project Operations Plan	TNC		Coarse	Eastern Salinas Valley Foothills	Low foothills along the eastern edge of the Salinas Valley provide critical north-south connectivity as well as east-west connections from Salinas Valley to the interior Diablo Ranges. Vineyard are spreading in this important area
329	Mount Hamilton Focus Plan	TNC		Coarse	Santa Cruz Mtn-Gabilan Range	Broadly defined regional coarse-scale corridor to link major ranges
338	Monterey County Project Operations Plan	TNC	1/4/2002	Fine	Sierra de Salinas-Salinas River	Identified by TNC (Monterey Project). One of only areas where undeveloped benchlands abut high quality river and riparian habitats on the west side of the Valley
339	Monterey County Project Operations Plan	TNC	1/4/2002	Coarse	Salinas Valley floor	non-specific corridor - denotes need to maintain permeablility through agricultural lands so wildlife can move between valley, floodplain and adjacent foothills.
340	Monterey County Project Operations Plan	TNC	1/4/2002	Fine	Gabilan Creek -Aromas Hills	Links northern Gabilan Range to Santa Cruz Range via hills around Prunedale and Aromas -
343	Monterey County Project Operations Plan	TNC	1/4/2002	Coarse	Salinas Valley - Peachtree Valley	This corridor is generalized in location and is intended to maintain wildlife movement east-west between the Salinas Valley and interior Diablo Range through the San Lorenzo River watershed in the vicinity of lower Peachtree Valley
344	Monterey County Project Operations Plan	TNC	1/4/2002	Coarse	Salinas Valley - San Lorenzo Creek	This corridor is generalized in location and is intended to maintain wildlife movement east-west between the Salinas Valley and interior Diablo Range through the San Lorenzo River watershed south of the Salinas Valley-Peachtree Valley corridor
346	Monterey County Project Operations Plan	TNC	1/4/2002	Coarse	Camp Roberts - Ft. Hunter Liggett	Located between the reservoir and Jolon Hills, this series of low hills and valley need to be maintained to facilitate movement of wildlife between Camp Roberts and Ft. Hunter Ligget
347	CC Ecoregional Assessment 2006	TNC	8/1/2006	Coarse	Parkfield - Cottonwood Pass	Linkage spans area of private ownership in high quality, unprotected habitat in the interior Diablo Ranges
350	Monterey County Project Operations Plan	TNC	1/4/2002	Fine	Sierra de Salinas-Toro Peak	Area of unprotected land between Arroyo Seco and parklands to the north
353	Monterey County Project Operations Plan	TNC	1/4/2002	Fine	Southern Sierra de Salinas - Salinas River	One of few areas in this region where wildlife can move through natural habitat between the Salinas River and southern Sierra de Salinas

L_ID	SOURCEDOC	AUTHOR	DATE_	SCALE	Name	Notes
354	CC Ecoregional Assessment 2006	TNC	8/1/2006	Fine	Sierra de Salinas - Arroyo Seco	
357	Monterey County Project Operations Plan	TNC	1/4/2002	Fine	Arroyo Seco- Salinas River linkage	Key steelhead corridor as well as wildlife corridor between Salinas River and Santa Lucia Range. Needs restoration across valley floor
359	CC Ecoregional Assessment 2006	TNC	8/1/2006	Coarse	Camp Roberts - Stockdale Mtn.	Broad area providing critical permeability between the southern Salinas Valley and the interior in an area of large ranches
363	CWC- Central Coast Assessment	CWC	8/1/2002	Coarse	Santa Cruz Mtn-Gabilan Range	Broadly defined corridor to link major ranges; overlaps with 305,363,329 which are located along different elevations but serve same purpose
373	CC Ecoregional Assessment 2006	TNC	1/20/2006	Fine	Tembladero Slough	Identified by local experts; one of only connections between Santa Cruz Mts.southward to Elkhorn Slough
376	Hwy 68 Corridor Assessment 2005	TNC	4/21/2005	Fine	Toro Peak Foothills-Salinas River	northernmost viable linkage connecting the northern Santa Lucia Range to the Salinas River northward
375	Hwy 68 Corridor Assessment 2005	TNC	4/21/2005	Fine	Hwy 68 - Toro Creek	narrow yet esssential corridor between lowland wildflower fieldsalong Highway 68 to preserve at west end of subdivision along Toro Creek
377	CC Ecoregional Assessment 2006	TNC	8/1/2002	Coarse	Salinas River - Chalone Creek	Key areas to maintain connectivity between Salinas River, southern Gabilans and San Benito River Valley. Includes Toro Creek
378	CC Ecoregional Assessment 2006	TNC	8/1/2006	Coarse	Salinas River - Pinnacles Nat'l Mon.	Area along Salinas River where river floodplain has unobstructed connections to foothills of southern Gabilan Range ,providing regional connectivity.

This table provides data sources and descriptions for the linkages mapped on TNC, Intact Natural Vegetation Designated for Agriculture in Southern Monterey County, 2009

L_ID	SOURCEDOC	AUTHOR	DATE_	SCALE	Name	TYPE	KEY_SPP	HABITAT
305	Missing Linkages: Restoring Connectivity in CA	CWC - South Coast Wildlands Project	11/2/2000	Coarse	Santa Cruz Mtn-Mt. Hamilton	Landscape Linkage, Choke-poin	mountain lion, medium sized carnivores	Mixed coniferous, oak woodland, serpentine grassland, chaparral, redwood
307	Missing Linkages: Restoring Connectivity in CA	CWC - South Coast Wildlands Project	11/2/2000	Coarse	Santa Lucia - Gabilan, Ventana Wilderness	Choke point	mountain lion	grassland, scrub and oak woodlands
308	Missing Linkages: Restoring Connectivity in CA	CWC - South Coast Wildlands Project	11/2/2000	Coarse	Fort Ord - Ventana	Missing Link	coyote, bear, bobcat, mountain lion	maritime chaparral, grassland, oak woodlands
309	Missing Linkages: Restoring Connectivity in CA	CWC - South Coast Wildlands Project	11/2/2000	Coarse	Los Padres - Hearst Castle	Landscape Linkage	mountain lion, bear, spotted owl, red-legged frogs	oak woodlands/savanna, riparian, coast grasslands
311	Missing Linkages: Restoring Connectivity in CA	CWC - South Coast Wildlands Project	11/2/2000	Coarse	S. Diablo - Carizzo	Landscape Linkage	large mammal, mountain lion, kit fox	oak woodland, grassland, riparian, Diablen scrub
315	Missing Linkages: Restoring Connectivity in CA	CWC - South Coast Wildlands Project	11/2/2000	Coarse	Camp Roberts	Choke-point	kit fox, tule elk	grassland, oak woodlands
316	Missing Linkages: Restoring Connectivity in CA	CWC - South Coast Wildlands Project	11/2/2000	Coarse	Salinas River Riparian Corridor	Landscape Linkage	riparian birds, neotropical migrants, steelhead, kit fox	riparian, grasslands
319	Missing Linkages: Restoring Connectivity in CA	CWC - South Coast Wildlands Project	11/2/2000	Coarse	Lower N. Salinas River	Landscape Linkage	neotropical migrants, steelhead, large & small mammals	valley riparian forest, woodland, and scrub
81	Missing Linkages: Restoring Connectivity in CA	CWC - South Coast Wildlands Project	11/2/2000	Coarse	Santa Cruz Mtn-Gabilan Range			
97	Missing Linkages: Restoring Connectivity in CA	CWC - South Coast Wildlands Project	11/2/2000	Coarse	Pajaro River			

L_ID	LAND_COVER	OTHER_OWNR	BARRIERS	FEATURES	RSRCH_NEED	DOCUMENTS	COMMENTS
305	Natural Vegetation, Agriculture	Sargent, Castro Valley Ranch	roads, gaps in habitat cover	riparian habitat, underpasses	document use of linkage, design, evaluate, purchase		evaluate underpass/overpass movement
307	Natural Vegetation, Agriculture, Residential		Hwy 101, gaps in habitat cover, sand/gravel operations		document use of linkage, design, evaluate, purchase	Steelhead documents	design successful under/overpass
308	Natural Vegetation, Agriculture, Residential	UC Hastings Research Reserve, CSUMB	roads, gaps in habitat cover	possibly bridges over Salinas	document use of linkage, design safe road crossings	BLM, CSUMB	
309	Natural Vegetation, Agriculture	Hearst Corporation, State Parks	Hwy 41, Hwy 46	contiguous habitat, riparian habitat	document use of linkage		presence of focal species north & south of corridor
311	Natural Vegetation	ranches, TNC	none but potential for fragmentation high	contiguous habitat, riparian habitat	land ownership, identification of large, connected ranches	anecdotal, USFWS recovery plans	core area that links existing public lands
315	Natural Vegetation, Agriculture	address overgrazing issues	roads, minor gaps in habitat cover	contiguous habitat	document use of linkage, design, evaluate, purchase	kit fox point occurrence	
316	Natural Vegetation	many	Hwy 101, railroad crossing, small towns	broad, undeveloped flood plain	land ownership patterns, design linkages	reserve design with Packard grants	
319	Natural Veg, Rural Residential, Agriculture	ag interests, public agencies at former Fort Ord	insufficient flow, dam, gaps in cover	contiguous riparian habitat, bridges	document use by neotropical migrants, evaluate restoring steelhead run	Roberson et al. 1993, RHJV 2000, Titus et al. 1999	Connects the Santa Lucia and Diablo Ranges via the Salinas River

TRA
ENVIRONMENTAL
SCIENCES, Inc.

545 Middlefield Road, Suite 200
Menlo Park, CA 94025-3472
Tel: (650) 327-0429
Fax: (650) 327-4024
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TRA ENVIRONMENTAL SCIENCES, INC.

QUALIFICATIONS SUMMARY

Established in 1972, TRA Environmental Sciences, Inc. (TRA) is a full-service environmental consulting firm specializing in environmental impact analysis and conservation planning. The firm has a wide range of in-house expertise and has prepared environmental documents on a variety of projects including recreational developments, trails, schools, subdivisions, quarries, landfills, wastewater treatment plants, and General, Specific, and Master Plans. TRA also prepares specialty analyses such as endangered species habitat conservation programs, constraints analyses, biological assessments, peer review of other environmental reports, mitigation monitoring, and computer-generated visual studies.

TRA Environmental Sciences, Inc. has a highly professional staff that works closely on each job. We consistently deliver large amounts of work, on time and at a reasonable cost. We have 34 years of experience in environmental review of complex and controversial projects, and have provided the highest level of support to lead agencies in public representation throughout the environmental review process. The senior staff has at least 17 years of experience in the field, and most have been with the firm for 15 years or more. When supplemental expertise is needed, we use a network of subcontractors that we have collaborated with over the years in various disciplines, such as traffic, air quality, cultural resources, geology, hydrology, bioengineering, fluvial geomorphology, and socioeconomics.

Our Areas of Expertise:

Biological Assessment and Wetland Delineation. TRA Environmental Sciences, Inc. prepares specialty analyses such as biological surveys and assessments, wetland delineations, endangered species habitat conservation plans, and constraints analyses.

The firm has authored or had major participation in more than 10 habitat conservation plans for endangered species in California and elsewhere, as well as the Southern California Coastal Sage Scrub NCCP and the Placer Legacy conservation project, which are regional programs. The firm also does many smaller scale biological assessments. This work is supported by mapping through the use of the firm's GIS and AutoCAD capabilities, which play a role in many of the firm's projects.

TRA has conducted many site specific biological assessments, special status species surveys, and impact studies throughout the greater Bay Area. These biological inventories often require specific knowledge of the California red-legged frog (CRLF), San Francisco garter snake, steelhead and several rare plants that occur on the coastside, in the Santa Cruz Mountains, or in creeks and tidal marshes in the Bay Area.

TRA has experience in the surveillance and identification of the following special status animals:

Common Name

Invertebrates
San Bruno elfin butterfly
Mission blue butterfly
Callippe silverspot butterfly
Bay checkerspot butterfly
Smith's blue butterfly

Vertebrates
Steelhead
California red-legged frog
California tiger salamander
San Francisco garter snake
Long-eared owl
Northern spotted owl
Burrowing owl
Least Bell's vireo
Willow flycatcher
San Joaquin kit fox
San Francisco dusky-footed woodrat

TRA has also completed habitat surveys for species such as the California least tern, California clapper rail, snowy plover, salt marsh harvest mouse, and various bat species in the San Francisco bay area.

TRA staff is experienced in conducting project-specific surveys following US Fish and Wildlife Service (USFWS) and CA Department of Fish and Game (CDFG) protocols for CRLF, California tiger salamander, burrowing owl, San Joaquin kit fox, and rare listed and protected plants. TRA also has experience conducting pre-construction surveys for nesting raptors, burrowing owls, and other species. When federally listed species are identified, TRA staff is also able to assist clients with USFWS Section 7 and Section 10a (HCP) permits.

TRA biologists are experienced in conducting surveys for special status plant species, especially in San Mateo County. TRA biologists are familiar with sensitive plant species within coastal prairie, coastal salt marsh, central coast riparian scrub, chaparral, deciduous and evergreen woodlands, and serpentine grassland communities. TRA annually monitors rare plants on San Bruno Mountain as part of the habitat management component of the San Bruno Mountain Habitat Conservation Plan. TRA staff is familiar with the taxonomy of the local flora and are experienced with local botanical references, as well as the Jepson Manual.

TRA has past experience conducting surveys for the following special status plant species (listed alphabetically by scientific name):

Common Name	**Scientific Name**
San Mateo thornmint	*Acanthomintha duttonii*
Franciscan onion	*Allium peninsulare* var. *franciscanum*
Coast rock cress	*Arabis blepharophylla*
San Bruno Mountain manzanita	*Arctostaphylos imbricata imbricata*
Montara manzanita	*Arctostaphylos montarensis*
Alkali milk-vetch	*Astragalus tener var. tener*
Coastal bluff morning glory	*Calystegia purpurata ssp. saxicola*
San Francisco bay spineflower	*Chorizanthe cuspidata cuspidata*
Mt. Hamilton thistle	*Cirsium fontinale campylon*
Fountain thistle	*Cirsium fontinale fontinale*
Western leatherwood	*Dirca occidentalis*
Santa Clara Valley dudleya	*Dudleya setchellii*
San Mateo wooly sunflower	*Eriophylum latilobum*
San Francisco wallflower	*Erysimum franciscanum*
Fragrant fritillary	*Fritillaria liliacea*
Hillsborough chocolate lily	*Fritillaria biflora* var. *ineziana*
San Francisco gumplant	*Grindelia maritima*
Marsh gumplant	*Grindelia stricta angustifolia*
Diablo helianthella	*Helianthella castanea*
Congdon's tarplant	*Hemizonia parryi congdonii*
Crystal Springs lessingia	*Lessingia arachnoidea*
San Francisco lessingia	*Lessingia germanorum*
San Mateo tree lupine	*Lupinus eximius*
Dudley's lousewort	*Pedicularis dudleyi*
White-rayed pentachaeta	*Pentachaeta bellidiflora*
Hickman's cinquefoil	*Potentilla hickmanii*
San Francisco campion	*Silene verecunda verecunda*
Most beautiful jewel-flower	*Streptanthus albidus peramoenus*

TRA has developed hands-on expertise in revegetation and habitat restoration. Much of past restoration work has been in concert with efforts to preserve an endangered or threatened plant or animal species. TRA understands the complexities of developing a revegetation or restoration plan in a regulatory framework, as well as the complexities of implementing the plan in the field.

TRA is familiar with the range of revegetation and habitat restoration techniques. These include biological surveys, soil tests, methods of controlling or removing unwanted weedy species, collecting and preparing seed of desired species, providing an adequate substrate to grow desired species, applying seed or planting container plants, and monitoring the results.

TRA has extensive experience in implementing vegetation management and herbicide application programs. Exotic species control activities began in 1985 as part of TRA's long-term contract as Habitat Manager carrying out the activities of the San Bruno Mountain Habitat Conservation Plan. To re-establish and conserve habitat areas of protected butterfly species, TRA began herbicide spraying and mechanical removal of invasive plant species that were progressively encroaching on native habitat areas.

At the intersection of botanical services and aquatic resources, TRA staff can conduct wetland delineations to determine whether specific wetlands are covered under the jurisdiction of the U.S. Army Corps of Engineers, California Regional Water Quality Control Board, California and Local Coastal plans, or other regulatory agency jurisdiction. Our biologists are trained in the U.S. Army Corps of Engineers (USACE) routine method of wetland delineation, and have

conducted several wetland delineations in San Mateo County. TRA can assist clients with obtaining nation-wide permits from the USACE, Streambed Alteration Agreements with CDFG, and other necessary permits.

Several staff members at TRA are trained wetland delineators and have experience on several wetland delineation projects. We are familiar with the federal unified method, with the approach used by the California Coastal Commission in coastal areas of California, and with approaches identified in Local Coastal Programs. Project sizes range from square feet (San Juan Highway Bike Lane) to hundreds of acres (Kirby Canyon Landfill; Sand Creek Specific Plan).

TRA regularly completes biological assessments, most of which occur within a 50-mile radius of our Menlo Park office. Staff is familiar with all of the research methods and databases that the resource agencies expect to see in biological site assessments. These methods and databases include the California Natural Diversity Database, the Wildlife Habitat Relationships Database, the Manual of California Vegetation, state and federal survey protocols, California Native Plant Society protocols, and standard field guides and floras. We have expertise in assessing the potential occurrence of several sensitive species including, but not limited to: California red-legged frog, California tiger salamander, numerous butterfly species, birds such as Western burrowing owl, and mammals such as San Joaquin kit fox, dusky-footed wood rat, and bats.

Open Space and Recreation Plans. TRA Environmental Sciences, Inc. has completed a variety of tasks on different types of recreational projects including parks, trails, a marine reserve, open space district land acquisition, bike lanes, off-highway vehicle use, a hot springs resort and golf courses. We have done both formal and informal environmental review of master plans on trails and parks. On several master plan projects TRA has been hired early on in the process in order to identify the environmental impacts the master plan could be causing, and to make recommendations on how to avoid significant impacts.

Our project experience is primarily in the San Francisco Bay Area and on the central coast of California. Project settings range from urban to rural. Our clients have included cities, counties, water districts, and open space district planners, as well as private industry and professional master planning consultants.

Habitat Conservation Planning. TRA specializes in habitat conservation planning. The firm has authored or had major participation in dozens of habitat conservation plans for endangered species in California and elsewhere, including the regional programs: the Southern California Coastal Sage Scrub NCCP and the Placer Legacy conservation project. TRA prepared the first Habitat Conservation Plan completed under the Endangered Species Act, the San Bruno Mountain HCP. In addition, the firm continues to assist San Mateo County with the implementation of the San Bruno Mountain HCP since its approval in the early 1980's.

Mitigation Monitoring. The California Environmental Quality Act currently requires that mitigation monitoring plans be prepared prior to project approval. TRA has prepared several mitigation monitoring plans on several different types of projects. These plans specify mitigation measures, responsible parties, and in order to demonstrate that mitigation proposed during environmental review is actually implemented, expected work products are identified.

TRA also has experience in monitoring mitigation activities including operational compliance at quarries, restoration work at housing and public facility developments, and sensitive plant and animal species monitoring in a variety of habitats.

California Environmental Quality Act (CEQA)/National Environmental Policy Act (NEPA). TRA was founded to prepare environmental documents during the early years of NEPA and CEQA and has remained in step with the evolution of the guidelines for environmental review of projects. We keep apprised of statutory and regulatory changes through journals, annual publications, conferences, and the California Office of Planning and Research (OPR) web site and other law websites.

TRA Environmental Sciences, Inc. has prepared all types of CEQA and NEPA documents, including environmental impact reports (EIR), environmental impact statements (EIS), combined EIR/EIS, environmental assessments (EA) combined EIR/EA, Biological Assessments (BA), Initial Studies (IS), Initial Study/Mitigated Negative Declarations (IS/MND), and Categorical Exemptions. We have also completed environmental review of several types of documents prepared by other firms or agencies.

Part of our conservation planning work entails preparing maps using GIS and AutoCAD. These capabilities have played a major role in many of the firm's recent projects. The maps have proven to be an important tool for describing conservation options and discussing these options with the landowners and the agencies that are involved.

When needed, TRA works with a network of subcontractors with special expertise in particular endangered species. Such individuals are selected based on their demonstrated ability and knowledge with particular species. Many have permits from the U.S. Fish and Wildlife Service to handle relevant listed species. The number of these permits is very limited, so if the species must be handled in order to do a survey, an individual or firm with the required permit must be used in the study.

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RECENT BIOLOGICAL ASSESSMENTS AND MITIGATION MONITORING

Revised Management and Remediation Plan for a Wetland Ecosystem Restoration Site, Pacifica, California, 2006
A Management and Restoration Plan for the Pacifica Police Station site was prepared in 2001 by L.C. Lee & Associates, Inc. TRA, at that time, had performed the initial biological assessment. In 2006, TRA was contracted to update the management and restoration plans for the five-year-old police station. This current Remediation Plan presents relevant portions of the 2001 Management Plan and contains remediation measures that further address regulatory issues at the site's riverine waters/wetlands ecosystem on Calera Creek, east of Highway 1 in Pacifica.
Lead Agency/Client: City of Pacifica

Biological Constraints Assessment, Lake Road Property, San Mateo County, 2006
In order to determine biological constraints on management activities performed by the water district, surveys were conducted to document vegetation, habitat types and functions, and wildlife observed or suspected to be present on the property. This report documented all sensitive species present and discussed sensitive species with the potential of using the site.
Lead Agency/Client: Los Trancos County Water District Board of Directors

California Red-legged Frog Surveys: Calero Dam, Almaden Dam and Guadalupe Dam Santa Clara County, California, 2006
California red-legged frog (Rana aurora draytonii) surveys were completed within wetland areas below Almaden, Calero, and Guadalupe Dams in Santa Clara County to meet the mitigation requirements included in the Initial Study/Mitigated Negative Declaration (IS/MND) for the Santa Clara Valley Water District Dam Instrumentation Project: Phase IB and II. Surveys were completed following USFWS Revised Guidance on Site Assessments and Field Surveys for the California Red-legged Frog (August 2005).
Lead Agency/Client: Santa Clara Valley Water District

Calera Creek Wetland and Riparian Ecosystem Restoration Site Compliance Monitoring Pacifica, San Mateo County, 2005 – Present
TRA performed compliance monitoring for the Calera Creek Wetland and Riparian Ecosystem Restoration Site in December of 2005 to satisfy Year 4 monitoring requirements as defined in the *Draft Final Monitoring Plan for the Restoration of Lower Calera Creek and Adjacent Wetlands: Pacifica Wastewater Treatment Plant* (LC Lee & Associates 1996). TRA completed vegetation monitoring, which included sampling fifteen, 10-foot wide belt transects running perpendicular to the channel. Measurements were taken of vegetation within the bankfull width of the channel. Within each transect, data collected include: (1) species present and percent cover of each, (2) canopy cover, (3) total vegetation cover, (4) percent cover of bare ground, (5) percent cover of litter, (6) percent cover of herbaceous vegetation, and (7) overall vegetation vigor and survival. TRA also compiled recent wildlife sightings and recorded wildlife observations and evidence of faunal use of the restoration area in order to evaluate the overall health and function of the ecosystem. Additionally, Balance Hydrologics completed the assessment of channel 'bankfull' geometry characteristics, evaluated overall geomorphic stability of the system, and analyzed water quality. TRA combined their findings with Balance Hydrologics in order to prepare the Year 4 Monitoring Report for the U.S. Army Corps of Engineers, U. S. Fish and Wildlife Service, California Coastal Commission, and the San Francisco Bay Regional Water Quality Control Board.
Lead Agency/Client: City of Pacifica

Phragmites Removal Project, Baylands Nature Preserve
Palo Alto, Santa Clara County, 2005-2006
The City of Palo Alto proposed the removal of non-native *Phragmites australis* from the floodbasin within the Baylands Nature Preserve. Due to the project setting within wetland habitat and the potential for special-status species including the federally endangered Salt marsh harvest mouse, environmental review of the project was required. TRA examined the project goals and site conditions, consulted with the U.S. Fish and Wildlife Service, and helped the City to devise a project description that would avoid potential impact to listed species. Considerations taken into account in project planning include special-status species potentially present within the project area, avoidance of wildlife and pickleweed habitat, potential recreational and water quality impacts, and Best Management Practices for the use of an aquatic herbicide (Imazapyr). TRA provided the supporting documentation for a Categorical Exemption on this project.
Lead Agency: City of Palo Alto

Bear Creek Bank Stabilization Project
Woodside, San Mateo County, 2003 to Present
This is a bank stabilization and restoration project on Bear Creek in Woodside, California. The creek provides habitat for steelhead and non-breeding habitat for California red-legged frog (CRLF). TRA has completed the Biological survey, CRLF survey, and revegetation plan for this project. TRA is currently acting as Agency contact and liaison between the five agencies (US Fish and Wildlife Service, National Marine Fisheries Service, US Army Corps of Engineers, California Department of Fish and Game, and SF Bay Regional Water Quality Control Board) that have jurisdiction over the project. TRA biologist will move steelhead during cofferdam installation and survey for CRLF prior to construction activities.
Client: Private

San Bruno Mountain Habitat Conservation Plan, Technical Assistance
San Mateo County, 1982 to Present
TRA has performed the background biological data and authored much of the San Bruno Mountain HCP. Additionally, TRA has been performing the biological program of the HCP since 1982. This involves developing and implementing an annual work program in accordance with the San Bruno Mountain 5-Year Plan. The work program includes 1) managing subcontractors performing weed control and replanting, 2) coordinating prescribed burning and grazing projects, 3) conducting biological monitoring for the endangered species, 4) providing planning assistance to developers, 5) coordinating and sharing data with agencies and volunteer groups, and 6) submitting annual reports to the US Fish and Wildlife. The firm has also done community outreach to volunteer groups and by assisting the County with public workshops.
Lead Agency/Client: San Mateo County

Guadalupe Valley Quarry Mitigation Monitoring
San Mateo County, 1995 to Present
This project involves monitoring operational compliance with mitigation measures imposed by San Mateo County as conditions of the mining permit renewal. Monitoring includes scheduled and unannounced site inspections of operating conditions, review of inspection findings by geologists, and annual inspection of revegetation efforts and progress. Of primary concern has been adequate control of dust emissions caused by quarry operations, control of surface water runoff and water quality, the import of recycled material, and noise impacts on the adjacent community from haul truck traffic during night time operations. Routine inspections and good management practices by the quarry operator have resulted in improved compliance with permit conditions and elimination of dust and noise complaints.

Carnegie Foundation Biological Resource Mitigation Program
Stanford, Santa Clara County, 2003-present
Prepare and implement the Carnegie Easement Enhancement Plan. TRA prepared a management plan for a three-acre conservation easement adjacent to the new Carnegie Foundation Headquarters located in the foothills of Stanford University. The management plan included the installation of ten wood piles to

encourage ground squirrel use in the grasslands and a program to monitor ground squirrel use of the wood piles. The plan also included a mowing program to reduce weed growth within the easement over time and a program to monitor new native tree plantings within the easement.

Kirby Canyon Landfill Created Wetland Monitoring Study
San Jose, Santa Clara County, 2000-2003
As a result of a Nationwide 26 permit granted by the Army Corps of Engineers for the Kirby Canyon Landfill, Waste Management built a wetland and an open water pond at the site. The Corps required five years of monitoring of the wetland and riparian vegetation. TRA took over the monitoring responsibilities the second year, which included a protocol survey for California red-legged frog. Monitoring methods follow criteria set forth in a wetland mitigation plan approved by the Corps in consultation with the US Fish and Wildlife Service.
Client: Waste Management

San Mateo County Youth Service Center Biological Assessment and Mitigation Plan
San Mateo County, 2003
Biological assessment and mitigation plan for a new Youth Services Center that would be located in an area with serpentine grassland, which contains habitat for the rare fragrant fritillary (Federal species of concern and CNPS List 1B) and potentially five other rare species. Plan includes methods for salvaging rare plants and requirements for monitoring, reporting, and remediation if necessary.

Pescadero Cellular Antenna Installation, Local Coastal Plan Biological Assessment
Pescadero, San Mateo County, 2000
TRA conducted a biotic assessment of the project area. Nearby pond supports probable red-legged frog breeding habitats. Biosearch prepared the follow-up assessment for the red-legged frog and recommended take avoidance and mitigation measures. Work also included project monitoring after construction.

STAFF BIOGRAPHIES

TRA **VICTORIA HARRIS**
SENIOR ASSOCIATE III

Ms. Harris is a natural resources specialist and biologist and has been at TRA since 1981. Since then she has managed over 100 CEQA Environmental Impact Reports (EIRs) and Initial Studies on diverse projects, including the construction of a recycled water project, stream improvement projects, small and large residential developments, office parks, road expansions, road bridges, landfill expansions, quarry operations, and general plan amendments. For the above studies she has acted as client liaison with the Lead Agency and researched and prepared the impact analysis sections for the following EIR or Initial Study disciplines: project description, plan consistency, land use, biology, noise, aesthetics, public services, socioeconomics, alternatives, and CEQA issues. In 2005 she was named Vice-President for Biological and Conservation Planning at TRA.

Ms. Harris also has expertise in preparing Habitat Conservation Plans (HCPs) and Natural Community Conservation Plans (NCCPs) for state and federally listed threatened and endangered species. She has participated in the preparation of several HCPs and HCP/NCCPs. The HCPs have ranged from small-single species HCPs to large multi-species HCP/NCCPs covering several hundred acres and involving multiple political jurisdictions.

In 2005, Ms. Harris was named Vice President of Conservation and Biological Studies. Her primary duties for these projects include project management and administration, attending task force meetings, coordinating biological studies for the covered species, and drafting HCPs. For most of these HCPs, Ms. Harris also directed the completion of the NEPA documentation required by the USFWS and the CEQA documentation required by land use agencies in California.

Selected Projects

- Prepared the Initial Study/Mitigated Negative Declaration for the San Mateo County Community College District Faculty/Staff Housing Project.
- Contributed to the preparation of the San Bruno Mountain HCP, which was the first HCP adopted by the U.S. Fish and Wildlife Service in 1982 and was the basis for the Incidental Take Permit provision (Section 10(a)(1)(B)) of the federal Endangered Species Act.
- Prepared numerous HCPs including: Placer County HCP/NCCP (vernal pool species), San Luis Obispo State Parks (snowy plover, Morro shoulderband snail), Kern Water Bank (San Joaquin kit fox and other species), Natomas Basin and Metro Air Park (giant garter snake and Swainson's hawk), Metropolitan Bakersfield (San Joaquin kit fox and other species), Seascape Uplands and Tucker Pond (Santa Cruz long-toed salamander), San Benito County (San Joaquin kit fox and other species), and Quail Hollow Quarry (listed insects)
- Conducted and overseen biotic surveys for four endangered butterflies in California: Mission blue, San Bruno elfin, callippe silverspot, and Smith’s blue.
- Managed preparation of CEQA documents for several transportation related projects in the Bay Area including bridge replacements, highway widenings, roadway extensions, and bike and pedestrian pathways.
- Assists State Parks and Recreation Department with regulatory compliance at Off-highway Vehicles Areas; review of OHV fund grants for CEQA compliance, reviews OHV fund grants for wildlife habitat management plan compliance.

Educational Background

University of California, Berkeley
Bachelors of Science, Conservation of Natural Resources

TRA **AUTUMN MEISEL**
ASSOCIATE IV

Mrs. Meisel joined TRA in 2005 and is an ecologist specialized in habitat assessment and management. She earned a Master's degree in conservation ecology from San Francisco State University in 2002. She is competent in overall site and habitat assessment, biological monitoring, and landscape level planning and management. In the field, Mrs. Meisel has experience in plant and wildlife identification, nesting bird surveys and burrowing owl focused surveys, construction monitoring, red-legged frog surveys, California tiger salamander monitoring, reconnaissance-level site surveys, wetland delineations, hydrologic monitoring, and vegetation and wildlife monitoring. She has worked in both conservation and land development settings and is familiar with on-the-ground conditions and/or concerns that may arise. She also has expertise in CEQA analysis, and has written sections for many different projects.

Prior to joining TRA, Mrs. Meisel worked as an environmental analyst, providing start to finish consultation services related to Clean Water Act Section 401 and California Department of Fish and Game 1602 permits. She has performed numerous biological assessments and has experience in analyzing the potential for occurrence of special-status species in a variety of habitats. She has written numerous mitigation and monitoring plans for the creation and/or enhancement of wetland, riparian, and grassland habitats, and has provided monitoring and year-end reporting services for mitigation plans, applying adaptive management when needed to ensure that sites meet their performance standards.

Mrs. Meisel also has expertise in habitat restoration at degraded sites and has overseen invasive weed control efforts, native out-planting, and plant establishment maintenance. She has lead volunteer groups in restoration work and provided education to others about ecology and resource management. Mrs. Meisel has aided in prioritizing restoration needs when resources were limited and has designed experimental vegetation management methods to better understand how to best meet desired goals so that resources may be put to the greatest use.

Selected Projects

- Manager for the San Bruno Mountain Habitat Conservation Plan. Tasks include grassland and coastal scrub management, invasive plant control, endangered butterfly monitoring, education, and reporting to lead and regulatory agencies.
- Contributing author on numerous CEQA documents, and has prepared Categorical Exemptions, Initial Studies, and Mitigated Negative Declarations for a variety of projects.
- Has completed numerous biological assessments, restoration monitoring, and has worked on the preparation of Habitat Conservation Plans.
- Worked as an environmental analyst, providing start to finish consultation services related to Clean Water Act Section 401 and California Department of Fish and Game 1602 permits.
- Performed numerous biological assessments in a variety of habitats and has compiled lists of potentially-occurring special-status species. She has written numerous mitigation and monitoring plans for the creation and/or enhancement of wetland, riparian, and grassland habitats, and has provided monitoring and year-end reporting services for mitigation plans, applying adaptive management when needed to ensure that sites meet their performance standards.

Educational Background

California State University, San Francisco
M.A., Conservation Biology
University of California, San Diego
Bachelors of Science, Biology. Ecology, Behavior, and Evolution

Ms. Krier joined TRA in 2006, and is an associate biologist with a background in environmental policy, ecology, and watershed science. She is an experienced project manager with skills in formulating project approach and in training and directing field crews. She has supervised field crews in data collection, species identification and data reporting on various biological elements such as wildlife, vegetation, and water quality.

One of Ms. Krier's areas of expertise is in watershed monitoring, assessment and analysis. Her responsibilities in this area have included lake and stream water quality sampling, shoreline and riparian assessments, and biological data collection. She has extensive experience collecting benthic macroinvertebrates and using backpack electroshock methods to voucher and tag fish. In her studies on watersheds, she has used ArcGIS, GPS and aerial photo interpretation in data analysis and in the production of figures for scientific reports. In conjunction with the University of Montana's Watershed Health Clinic, Ms. Krier spent four years performing field and laboratory work with the Montana Department of Environmental Quality using EPA assessment and monitoring protocols on Montana lakes and streams.

Ms. Krier's thesis work for her Master's degree investigated the chemical, riparian and land use changes along a tributary of the Clark Fork River in Montana. This tributary is known to be a principal contributor of phosphorus into the already nutrient rich Clark Fork River. These components were analyzed in comparison to a geologic study performed a decade previous.

Selected Projects

- Currently assisting with the preparation and management of a permit package application for a fuels management plan for a property owned by the Peninsula Open Space District (POST).
- Currently assisting with projects for the State Department of Parks and Recreation, Division of Off-Highway Vehicles including an EIS/EIR for the Habitat Conservation Plan for OHV parks in San Luis Obispo County.
- Experience with research and assessment of existing conditions and environmental impacts of activities to the natural and human environment; habitat assessments for rare and endangered species.
- Contributing author on numerous CEQA documents, and has prepared Initial Studies and Mitigated Negative Declarations for a variety of projects.
- Performed numerous biological assessments in a variety of habitats and has compiled lists of potentially-occurring special-status species. She has written mitigation and monitoring plans for the creation and/or enhancement of wetland, riparian, and grassland habitats, and has provided monitoring and year-end reporting services for mitigation plans. She has performed restoration and construction monitoring.
- Prior to joining TRA, spent four years performing water quality, riparian vegetation, fisheries and shoreline assessments for Montana lakes and streams.

Educational Background

University of Montana, Missoula, MT
Masters of Science, Environmental Studies
University of Colorado, Boulder, CO
Bachelor of Arts, Environmental, Population, and Organismic Biology and English Literature

Mr. Williams joined TRA in 2007, and is a biologist and planner specialized in habitat assessment. He earned a Master's degree in environmental studies from San José State University in 2004. He is competent in overall environmental impact assessment, including habitat, noise, geology and air quality assessment. In the field, Mr. Williams has experience in plant and wildlife identification, nesting bird and burrowing owl focused surveys, construction monitoring, reconnaissance-level site surveys, wetland delineations and noise monitoring. He has worked in both conservation and land development settings and is familiar with on-the-ground conditions and/or concerns that may arise. He also has experience in CEQA analysis, and has written initial studies as well as biological, air quality and geology sections of EIRs.

Prior to joining TRA, Mr. Williams worked as an assistant project manager and staff ecologist at Live Oak Associates, providing start to finish consultation services. He performed numerous biological assessments and analyzed the potential for occurrence of special-status species in a variety of habitats. He has provided monitoring and year-end reporting services for mitigation plans.

At TRA, Mr. Williams is responsible for completing biological surveys, wetland delineations, and CEQA documents. He has experience with the analysis of project impacts on biological resources under CEQA. Recently he has completed constraints analysis and impact studies for an estate home on the California coast, and two redevelopment projects in San Jose. These involved determining geology and soils constraints, including prime farmland, and addressing all of the CEQA Initial Study Checklist questions in detail.

Selected Projects

- Harbor Master’s House: El Granada: Biological Assessment.
- 2550 Mission College Boulevard. Wrote the initial study checklist and air quality section for this EIR.
- City of Cupertino, Stevens Creek Restoration Project. Providing nesting bird survey and biological assessment for the restoration of Stevens Creek.
- Contributing author on numerous CEQA documents, and has prepared Initial Studies and differing sections of EIR documents for a variety of projects.
- Performed numerous biological assessments in a variety of habitats and has compiled lists of potentially-occurring special-status species.
- Experienced in plant and bird identification, nesting bird surveys and burrowing owl focused surveys, construction monitoring, reconnaissance-level site surveys, wetland delineations and vegetation monitoring.

Educational Background

California State University, San José
Masters of Science, Environmental Studies
George Mason University, Fairfax, VA
Bachelors of Science, Decision Science/Management of Information Systems

Professional Training

Wetland Delineation, Wetland Training Institute, September 2006
Arid West Supplement, Wetland Training Institute, April 2007
CEQA, University of California at Davis, April 2008

Mrs. Sloan joined TRA in 2008, and is an associate biologist with a background in marine and aquatic sciences, coastal ecology and resource management. Prior to joining TRA she managed projects requiring skills in multiple-stakeholder facilitation, experimental design and field crew management. She has supervised field crews in data collection, species identification and data reporting on various biological elements such as wildlife, vegetation, and water quality.

One of Mrs. Sloan's areas of expertise is the monitoring and habitat assessment of aquatic ecosystems in Coastal California, specifically in San Mateo and Santa Cruz counties. Her responsibilities in this area have included: Discreet and continuous water quality monitoring; Biological surveys for steelhead trout, California red-legged frogs, San Francisco garter snakes and tidewater gobies; Aquatic habitat assessment for non-point source pollution, eutrophication and sediment toxicity; Hydrologic assessments; Chemical and manual weed eradication in coastal dune, scrub and chaparral habitats; and Management of invasive bull frog populations. She has extensive experience collecting, managing, analyzing and presenting continuous and discreet water quality data, including: dissolved oxygen, temperature, pH, salinity, turbidity, carbon, nitrogen, phosphorus, chlorophyll, biological oxygen demand, sediment grain size and chemical pollutants and toxins. As a coastal ecologist, she has used ArcGIS, GPS, aerial photos and LiDAR data as interpretive tools for resource management and information dissemination.

In conjunction with the Environmental Studies and Biology Departments of San Jose State University, Moss Landing Marine Laboratories and California State Parks, Mrs. Sloan is in the fifth year of performing water quality and fisheries monitoring in Pescadero Marsh Natural Preserve, CA. This is a continuation of Mrs.Sloan's thesis work, which focused on characterizing the water quality surrounding a sandbar breach-associated fish kill event at Pescadero Lagoon.

Selected Projects

- Currently assisting with the preparation of an Initial Study and Mitigated Negative Declaration for a new, 400-student charter high school development project.
- Currently assisting with the preparation of the biology section of an Initial Study for the California Department of Parks and Recreation, Division of Off-Highway Motor Vehicles.
- Experience with research and assessment of existing conditions and environmental impacts of activities to the natural and human environment; habitat assessments for rare and endangered species.
- Contributing author on a marbled murrelet management plan for a California State Parks parcel.
- Prior to joining TRA, spent four years performing water quality, fisheries and habitat assessments on the Central Coast of California.

Permits Held

- Currently possesses an ESA Section 10(a)(1)(A) scientific research permit for the collection of adult and juvenile steelhead and coho in San Gregorio, Pomponio and Pescadero Creek and Lagoon habitats (permit #10017 expires 11/2012).
- Renewal of California State Scientific Collecting permit SC-007802 for the sampling of juvenile steelhead in Pescadero Lagoon currently being processed.

Educational Background

California State University, San Jose
Masters of Science, Environmental Studies
Eckerd College, St. Petersburg, FL
Bachelors of Science, Marine Science - Biology concentration and Chemistry minor

TRA **AARON GABBE, Ph.D.**
ASSOCIATE III

Mr. Gabbe joined TRA in 2008, and is an associate biologist with a PhD in Environmental Studies from the University of California, with an emphasis in conservation biology. Aaron's Masters and Ph.D work provided him with over 10 years experience conducting ecological research focused on interactions between plants and birds and applying science to conservation and restoration. Aaron has conducted ecological research from start to finish: from development of data collection methodology, to data analysis, to publication. Projects include those designed to assess habitats, monitor populations, and inventory species. Having conducted field research in California, Mr. Gabbe has an excellent knowledge of California ecosystems, flora, and fauna. Prior to joining TRA, he worked on field projects where he developed the experimental design, hired, trained, and managed field crews in data collection, species identification and data reporting.

Aaron's Ph.D. research focused on ecology, conservation and evolution of a pollination system between rufous hummingbird populations and their host plants in the Sierra Nevada Mountains. He designed and implemented the ecological experiments and population monitoring protocol and drafted a conservation plan for rufous hummingbird populations.

Other research work Aaron has participated in consisted of collaboration with the Cache River Restoration Project team in Illinois where research focused on the habitat relationships and foraging behavior of floodplain forest songbirds to inform land managers on how to best restore songbird habitat. Aaron was a Crew Leader with the Sustainable Ecosystems Institute in Boise, Idaho where he managed and coordinated the activities of research assistants on a project that analyzed the effects of timber harvest and forest habitat on avian communities and collaborated with team of natural resource professionals to develop and implement monitoring protocol.

Mr. Gabbe has numerous publications in journals such as *Conservation Biology*, *Restoration Ecology*, *Functional Ecology*, and *Ecology*, on topics ranging from tree species preference by foraging insectivorous birds and the implications for floodplain forest restoration, to the adaptive nature of dilute nectar: rufous hummingbird (*Selasphorus rufus*) concentration preference and constraints in nectar production patterns. Aaron has also refereed peer-reviewed articles for Ecology, Ecological Applications, The Auk, and The Wilson Bulletin

Educational Background

University of California, Santa Cruz
Ph.D. in Environmental Studies, December 2007
University of Illinois, Urbana-Champaign
M.S. in Natural Resources and Environmental Sciences, December 1999
University of Wisconsin, Madison
B.S. in Wildlife Ecology, December 1992