April 13, 2005

Re: Comments on Biological Resources Report and Impact Analysis, and Draft Environmental Impact Report (DEIR) for the University City North/South Transportation Corridor Study

You have asked me to provide an analysis and commentary on the City of San Diego's Biological Resources Report and Impact Analysis ("Biology Report"), and Draft Environmental Impact Report (DEIR) for the University City North/South Transportation Corridor Study. As you know, I am a professional biological consultant residing in San Diego, and have over 24 years of independent experience in the preparation of biological studies, having prepared over 3,300 studies since 1981. A copy of my current resume and SOQ is attached. With respect to this assessment, I feel entirely capable to review the relevant documents, having spent many hours in Rose and San Clemente Canyons over the years. I am highly familiar with the flora, fauna, and habitat-types associated with these natural parks, as well as the California Environmental Quality Act, the City of San Diego's Multiple Species Conservation Program Subarea NCCP Plan, the City's Land-use Adjacency Guidelines, Environmentally Sensitive Lands Ordinance, and related environmental documents.

It is my professional opinion that Regents Road Bridge-associated impacts, including impacts associated with the I-52/Regents Road intersection, to sensitive habitat and sensitive plants must be considered significant and not mitigable to below a level of significance. This is because the bridge will permanently and substantially diminish habitat for wildlife and plants; substantially affect the habitat of a numerous sensitive, rare, or endangered species; permanently impact a regionally-significant wildlife corridor, directly and indirectly impact jurisdictional wetlands; and generate noise that will exceed the limits for bio-habitat protection (60 dBA Leq).

For ease of review, this letter is formatted to follow the general formatting provided in the Biology Report and DEIR. A summary of my most significant overall concerns about the adequacy of the analysis from a biological standpoint is provided first, as follows:

- The report does not identify a single "project" as defined by CEQA, and fails to provide an adequate biological alternatives analysis. This leaves no opportunity for cross-comparative analysis.
- The jurisdictional wetland delineation is clearly not correct. Significantly greater federal and state wetlands and waters are present in Rose Canyon, including a large ephemeral (vernal) pool wetland.
- The report does not contain any form of wildlife corridor study, in spite of the fact that Rose Canyon and San Clemente Canyon are recognized as regionally-significant corridors.
- The impact section minimizes temporary and temporal impacts.
- The shadow effects of the proposed bridge span are significantly underplayed. Direct, permanent, and non-mitigable impacts must be detailed, with the scientific framework/analysis and supporting documents to be provided.
- The mitigation section contains neither specific mitigation plans nor any details regarding the feasibility of proposed "generalized" mitigation approaches.

The following details reflect the various sections of the Biology Report and DEIR. The page numbers listed reflect the pagination of the Biology Report, although the same flaws have been incorporated into the DEIR, with some exceptions:

Project Description Section (Pg 2)

The Biology Report does not provide a biological analysis of "Alternative 4". The report states that "*a biological analysis was not deemed necessary".* Under normal circumstances, Alternative 4 would probably be discussed as one of the "environmentally superior" alternatives. The report must provide a full and comprehensive analysis of

each of the seven alternative "projects." It is misleading to dismiss Alternative 4 by simply stating that it is *"not to be addressed further"*.

Methods Section

General Survey Limitations (pg 8)
The report does not discuss the rationale for neglecting directed seasonal surveys for certain high-interest species (bats, etc.) predicted as occurring in the project site. A discussion of why certain studies were completed and others were not must be provided to the reader. How can the significance of impacts to these species be assessed in the absence of measurable survey data?

No rationale is provided in the General Survey Limitations Section of the Biology Report and DEIR for not completing a Wildlife Corridor study. The Management Summary/Abstract Section of the Biology Report briefly mentions that no "formal investigations" were provided, in spite of the fact that San Clemente and Rose Canyons are recognized as regionally-significant biological corridors. Completion of a formal Wildlife Corridor study is required to ascertain the significance of permanent, temporary, cumulative, and temporal project impacts.

The structure of the DEIR and Biology Report mislead the reader into believing that all the Alternatives (1-7) have similar levels of impact. This is a product of the "lumping" process that does not allow each alternative to be considered independently. For example, the I-52/Regents Road Bridge and I-52/Genessee Avenue Widening projects are "lumped" together with alternatives, providing little clear indication as to the nature of the alternative in its own right.

Survey Results Section

Geology and Soils Section (pg 14)

The Biology Report and DEIR discuss the fact that Altamont Clay soils are present in the study area, but they do not discuss the relationship of this substrate with numerous rare geophytes, such as *Brodiaea, Muilla*, and other. This discussion must be provided, along with a rationale for not providing focused surveys for these rare species during periods of maximum detectability.

Water Resources Section (pg 14)

The documents state that side-canyon hydration within a potentially impacted tributary Rose Creek is wholly dependent on urban runoff. This is highly speculative and not substantiated by any facts. The report must provide a basis for this determination. To the contrary, most of the vegetation within this tributary wetland is likely natural in origin, as reflected by the natural physiography associated with the canyon. The "urban runoff" statement misleads the reader and downplays the significance of tributary waters of the U.S. such as this.

Botanical Resources - Flora Section (pg 14)

The documents state that *"The number of non-native species present (29) is considered relatively high".* In my professional experience, this is incorrect, again misleading the reader into assuming that this is may constitute low value habitat. The number observed is relatively low in comparison with other urban canyon sites the City of San Diego, many of which contain nearly 100 percent non-native species.
The documents state that *"An additional 15 to 25 percent of the site's flora is expected to be comprised of annuals that could not be detected during the early summer survey season"*. Assuming that up to 25 percent of the site's flora was undetectable is unacceptable. This strongly suggests that surveys at other times of the year (such as during the spring) are needed complete the site flora and reduce this number to 5-10%, which are more typical of the industry standard. The report should have augmented the identified flora in the late summer or fall, if necessary to provide a complete and accurate botanical inventory. Which sensitive species might have been missed? *Holocarpha virgata* is probably present in the project alignment. What about the aforementioned geophytes, such as *Muilla*

clevelandii? Impacts to sensitive species, in particular, such as these must be assessed pursuant to CEQA. Many of these species are not "covered" under the MSCP. This means that species-specific mitigation could be warranted, particularly in the case of rare geophytes. In the absence of survey data, the analysis is by definition incomplete and misleading.

Vegetation Communities Section (pg 15)

The documents list and describe fourteen discrete vegetation communities. Several of these are clearly misidentified, resulting in a general devaluing of these habitats.

The documents describe "Southern Cottonwood-Willow Riparian Forest". This vegetation community is not present in the project area. Southern Cottonwood-Willow Riparian Forest occurs *"along perennially wet stream reaches of the transverse and peninsular ranges from Santa Barbara south…"* (Holland, 1986). The actual vegetation community represented onsite is "Southern Sycamore-Alder Riparian Woodland" found in *"very rocky streambeds subject to seasonally high-intensity flooding. Platanus favors more intermittent hydrographs"* (Holland, 1986). The dominant tree species adjacent to the Rose Creek floodway is California Sycamore, or *Platanus racemosa*. By classifying this habitat as "cottonwood/willow" dominated, the documents do not acknowledge the significance of the massive Sycamores present along the rocky streambed. Sycamore-dominated woodlands are much rarer and of significantly greater endangerment than cottonwood/willow-dominated habitats in San Diego. This has bearings on the impact analysis. Impacting large California Sycamores, which are directly within the bridge alignment, with their associated understory would trigger substantially greater amounts of mitigation.

The documents describe Chamise Chaparral on the east side of existing Regents Road. Although Chamise is present, the vegetation community in this location is better classified as relict Southern Maritime Chaparral as indicated by the presence of Linda Vista formation and proximity to known large-block stands of this rare vegetation-type. The documents only report Chamise in this habitat - many others clearly present, with a brief inventory presenting no less than 11 chaparral indicators. Again, the documents downplay the diversity of this habitat-type. If correctly identified, mitigation requirements, sensitive species surveys, etc. would be more rigorous.

The documents discuss Native Grasslands. This vegetation community is not accurately mapped in the documents, however. Native Grassland is found as interstices in the sage scrub-covered slope areas between the end of Regents Road and the bottom of tributary canyon draining to Rose Creek. This area is mapped as coastal sage scrub only, in spite of the fact that numerous native grassland species are present on the slope. Native Grassland habitats are substantially more endangered than sage scrub, triggering more rigorous mitigation, directed spring surveys, etc.

A very large vernal wetland area is also mapped in the documents as Native Grassland. By labeling this jurisdictional wetland as "grassland", the report dismisses the regional significance of this large seasonal water body. Based on various factors, this feature may qualify as supporting San Diego Claypan Vernal Pool habitat within the floodplain fringe of Rose Creek. If correctly identified, mitigation requirements, sensitive species surveys, etc. would be more rigorous. Also, additional regulators (U.S. Army Corps of Engineers, others) would recommend a redesign that entirely conserves or minimizes impacts to this jurisdictional wetland.

Zoological Resources - fauna Section (pg 21)

The report briefly mentions a variety of sensitive species that were either observed or expected to occur on the project site: Western Spadefoot, Orange-throated whiptail, Coastal Rosy Boa, San Diego Ringneck Snake, Two-striped Garter Snake, Coronado skink, Red-diamond Rattlesnake, Black-shouldered Kite, Red-shouldered Hawk, Cooper's Hawk, various owls, Downey Woodpecker, Blue-gray Gnatcatcher, and others. If these were observed or are expected, the documents must provide a detailed discussion of project-related impacts and mitigation opportunities for each.

The documents state that *"The Eucalyptus Woodland on-site is relatively small and patchy; thus, uses by avian species are expected to be limited to perching and occasional foraging…"* This is incorrect - nesting has been observed on or adjoining study area on numerous occasions by both the project biologists and naturalists associated with the Friends of Rose Canyon. The conclusions that the Eucalyptus Woodland is relatively small and patchy downplays the direct impacts associated with project implementation, specifically the direct "take" of raptors and other avian species. The report must acknowledge that the Eucalyptus Woodland supports nesting raptors, and must provide an impact analysis that assesses the local and regional significance of this loss, and provides compensatory mitigation.

I have observed *Neotoma* (woodrat) nests in several locations within the project alignments. The documents do not discuss this - no discussion of *Neotoma* is provided in the report. There is a high probability that the species present in the alignment is *Neotoma lepida intermedia*, or San Diego Desert Woodrat, a sensitive species. The documents must discuss the presence of this species, assess probable impacts, and provide a detailed discussion of mitigation.

Wetlands Section (pg 23)

Mule Fat Scrub and "Wet Meadow" Section
The documents list Mule Fat Scrub and "Wet Meadow" as occurring onsite in the Wetlands Section of the report. These vegetation communities are not discussed in the Plant Communities Section of the documents, only in the Wetlands Section. The documents need a detailed discussion of habitat values and functions of each of these communities in the Plant Communities Section. The "Wet Meadow" was also not mapped on the Vegetation Exhibit (Figure 3a) in the Biology Report. This is confusing to the reader, and fails to provide disclosure with respect to project impacts.

Southern Willow Scrub Section
The documents state that *"two other isolated stands of SWS are located in the canyon, but not along or adjacent to a streambed."* This is not correct - these stands are located adjacent to Rose Creek and also within the unmapped "wet meadow" section which is clearly a federal jurisdictional vernal wetland.

Mule Fat Scrub Section
The documents separate this vegetation community from the adjoining areas of Southern Willow Scrub (SWS), creating a false dichotomy. This community is clearly a component of the SWS, based on its location and species composition. As part of the SWS, the habitat would qualify as federal jurisdictional wetland.

A large vernal wetland is present beneath the proposed alignment of the Regents Road Bridge. This feature, measuring approximately 390 feet in length by 120 feet in width (or slightly over one acre) is well established, supports an ordinary high water mark, supports a predominance of hydrophytic vegetation, and appears to support hydric soils. The pool also has adjacency to the floodway of Rose Creek, being situated at the periphery of the riparian floodway in the creek floodplain. The documents make only vague reference to this water body, referring to it as a "wet meadow". A previous report for this project, completed by Dudek and Associates in 1994, refers to this water body as supporting Freshwater Marsh vegetation. Freshwater Marsh is a regulated jurisdictional wetland, of high to very high biological resource value. The Biology Report and DEIR must recognize that a significant wetland is present in this location, and provide an impact analysis with a discussion of associated regulatory agency permitting requirements.

Wetlands Functions and Values Section (pg 32)

The documents understate the value of the onsite wetlands in supporting amphibians, such as Western Spadefoot (a sensitive species) and Pacific Treefrog. "Leaf litter" is stated as an important component of the amphibian habitat - this is generally incorrect and misleading. The specific hydrologic and heliotropic environment is critical to amphibian reproduction. Shading by the bridge would diminish this value significantly

The documents state that the on-site wetlands have "*moderately high*" physical and chemical functions. Nowhere in the documents are these alleged physical and chemical functions described. The conclusion that functions are "*moderately high*" understates the very high habitat value placed on these habitats during the regional preserve planning effort. The wetlands associated with this site have very high habitat value. This is misleading, again underplaying the regional and local significance of the wetlands along San Clemente Creek and Rose Creek.

The documents state that that "*upstream portions consist of narrower drainages that lack herbaceous vegetation*" This is untrue. Further, it states that "*these have lower physical and chemical functions"*. This is untrue also. Most of the upstream portions of the on-site drainage features are well vegetated, and function in the important capacity to filter materials and support high-value wildlife habitat, including potential nesting thickets for Least Bell's Vireo and other very rare species.

Sensitive Species Section (pg 33)

The maps provided with the documents do not show Spiny Rush, a sensitive plant, within the alignment of the Regents Road Bridge corridor, even though I observed several specimens of this large perennial species within the alignment in the spring of 2005. This misleads the reader into believing that the habitat is of less significance with respect to biological resources.

Sensitive Fauna Section
Report understates sensitive status of many of the raptors found within the project alignment - Red-shouldered Hawk, Barn Owl, and Great Horned Owl - are all protected raptors. This must be discussed in detail, as breeding populations would be affected by the project.

The documents state that Arroyo Toad, a federally-listed species, is not present because of lack of "*substantial, permanent ponding areas and sandy washes along stream courses necessary to support… Arroyo Toads"*. This is incorrect. In fact, this open sandy habitat is well-represented in the alignment, and protocol presence/absence surveys must be conducted.

Vernal Pools Section (page 43)
The documents state that *"no vernal pools were found within the project area"*. This is used as the rationale for determining that no San Diego Fairy Shrimp are expected to occur onsite. The documents also state that *"…a focused search for vernal pools was not performed over the entire study area".* This is inappropriate. A very large, vernal wetland is present directly beneath the alignment of the proposed Regents Road Bridge.

The onsite pool supports a predominance of hydrophytes during the inundation phase. Standing water was present in this basin for many weeks during the winter/spring of 2005. Waterfowl were observed on many occasions utilizing the pool. This large, seasonal pool could certainly support San Diego Fairy Shrimp, and protocol presence/absence surveys must be conducted, as the bridge supports will directly impact this jurisdictional wetland.

The rationale that *"no vernal pools…are expected to occur within any of the project alternatives"* is misleading. Extant, high-value San Diego Vernal Pool habitats are known to occur *"one mile to the east in the vicinity of Nobel Drive and MCAS Miramar."* This is relatively close to the Regents Road bridge alternative vernal wetland area. It is anticipated that San Diego Fairy Shrimp could easily be transported between these pools and the large pool at the project site.

Impact analysis - Direct Impacts Section (pg 47)

The Biology Report provides an Alternative Comparison (pg 68) for the various "projects". The Regents Road Bridge-associated Alternatives (#1, #2, #3) are listed as the most impactive, with other Alternatives being less impactive. The Biology Report also states that *"of all the alternatives, the Regents Road Bridge would result in the highest impacts to biological resources, and ultimately result in the bulk of the mitigation requirements".* This

suggests that other alternatives, such as Genesee Avenue Widening (Alternative #4), Grade Separation (Alternative #6), or "No Project (Alternative #7) are clearly environmentally superior.

The documents state that the proposed Regents Road bridge span over Rose Creek will have no direct impacts. This is incorrect and not substantiated by the current scientific literature. Shadow effect will result in significant, direct, and unmitigable losses of under-span vegetation and wildlife values and functions, including corridor functions. The proposed 10 foot "sliver" separation between the two proposed bridge spans is not sufficient to prevent shading impacts.

Figure 6. Impact Area Map Section
This figure shows "islands" of habitat that will be "conserved" and not either permanently or temporarily impacted. These "islands" are biologically inviable, being subject to substantial edge effects from construction and the denuding of the adjoining habitat. For this reason, they must be assessed as impacted.

Bridge Abutment Impacts Section
The documents state that only Non-native Grassland and Coastal Sage Scrub impacts are considered "significant". Eucalyptus Woodland impacts are dismissed as "not significant". In this case, the loss of mature Eucalyptus Woodland must also be assessed as "significant" due to its function for raptor nesting. These direct and cumulative impacts are particularly important in this case, because such habitats are being rapidly depleted in this part of the City as even marginally developable lands are being urbanized.

The documents state that only the southern abutment will result in significant impacts. This is incorrect. The northern abutment also impacts sensitive habitat, including open foraging areas for local raptors. This, too, must also be considered a direct and cumulative impact.

Bridge Support Impacts Section
The documents state that only 128 square feet will be impacted by each of the bridge supports. This is incorrect, and contradicts other technical report data. Soil compaction and residual effects of construction render a much larger area permanently impacted, with a permanent habitat conversion to ruderal vegetation. The project impact analysis does not adequately address direct support impacts and long-term affects of support construction. The large vernal wetland is present in this location. These supports result in significant, direct, and unmitigable impacts to this feature.

Bridge Span Impacts Section
The documents state that the "*highest point of bridge…60 feet from the ground… some degree of habitat change…vegetation loss or habitat conversion… only expected on the north-facing slope immediately below the southerly bridge touchdown and immediately adjacent to the northerly bridge touchdown*". It is unclear why the documents discuss the highest point of separation between the ground and the proposed bridge. Most of the bridge span is significantly closer to the ground. The shadow effects of the span are significantly underplayed, and the lowest point of bridge must be assessed, not highest point. Direct, permanent, and non-mitigable impacts should be detailed in this section. The scientific framework/analysis and supporting documents must be provided. This is a significant flaw of the biological analysis for these documents.
Bridge Construction Impacts Section
The documents state that the *"Construction contractor will be urged to limit impacts to the Diegan Coastal Sage Scrub and wetland area to absolute minimum".* This is unenforceable, ineffective, misleading, and unjustified. Neither the construction contractor nor any of his/her associates will be under any obligation to "minimize" upland impacts within the construction zone. Nearly 100 percent of the habitat in this area will be destroyed, regardless.

In this section, the documents again state that only Non-native Grassland and Coastal Sage Scrub impacts are considered "significant". As stated above, Eucalyptus Woodland impacts are again dismissed as "not significant". In this case, the loss of mature Eucalyptus Woodland must also be assessed as "significant" due to its function for raptor nesting. This is particularly important in this case, because such habitats are being rapidly depleted in this part of the City as even marginally developable lands are being urbanized.

Although not discussed in the documents, construction of the proposed Regents Road bridge will result in certain habitat conversion, including the introduction of non-native species, changes in extant soil types, vegetative cover, site hydrology, and numerous other permanent changes. These must be considered significant and not mitigable. The restoration of viable habitat, particularly diverse upland habitats, is effectively infeasible and biologically indefensible. Numerous similar bridge projects in Orange County and San Diego County have attempted to restore high-value Coastal Sage Scrub and related habitat-types. In every instance, the diversity of the resultant habitat is very low, often the reflection of a near monoculture of the dominant and most aggressive species. The incremental but permanent impacts resulting from bridge construction will also be significant and non-mitigable.

Alternative 3 Section

Rose Canyon Segment
In this section, the documents again state that only Non-native Grassland and Coastal Sage Scrub impacts are considered "significant". Eucalyptus Woodland impacts are again dismissed as "not significant". In this case, the loss of mature Eucalyptus Woodland must also be assessed as "significant" due to its function for raptor nesting.

San Clemente Canyon Impacts
In this section, the documents again state that only Coast Live Oak Woodland, Non-native Grassland, and Coastal Sage Scrub impacts are considered "significant". Eucalyptus Woodland impacts are again dismissed as "not significant". In this case, again, the loss of mature Eucalyptus Woodland must also be assessed as "significant" due to its function for raptor nesting

Direct Impacts to Jurisdictional Wetlands and other Waters Section

The documents state that the proposed bridge supports and the bridge span structures will have "*no direct impacts"*. This is not true. Two of the bridge supports, as designed, will be constructed in and at the edge of a large vernal wetland, and the span will directly impact canopy and understory vegetation as a result of shadow effects. Up to a dozen or more mature California Sycamores and large Arroyo Willows will be affected by the bridge as it is currently designed. This is significant and not mitigable.

The documents state that the jurisdictional habitats below the structure will not be impacted. All native habitats below urban bridges are significantly and unmitigably impacted by edge effects, including material thrown off bridge, debris from high-speed vehicles, etc. These areas degrade over time to inviability. Excellent examples of this may be seen in Los Angeles County, where bridges have been in place for many decades. In every case, the habitat beneath the bridge is extremely degraded. Other new bridge structures (SR 241 near the Upper Oso Reservoir in Orange County, and others) also show incipient signs of habitat degradation as a result of edge effects.

Bridge Construction Impacts Section
The documents state that the *"Construction contractor will be urged to limit impacts to the jurisdictional habitats to the absolute minimum…".* This is, again, unenforceable, ineffective, misleading, and unjustified. Neither the construction contractor nor any of his/her associates will be under any obligation to "minimize" wetland impacts or impacts to jurisdictional habitats within the construction zone.

The documents state that *"everything within the demarcated zone would be impacted, albeit temporarily*". This is not correct. Everything within the demarcated zone will clearly be impacted in a permanent and irreversible manner. All other urban bridges in Southern California show permanent effects of bridge presence. Effects include trampling, transient occupancy beneath the abutments, trash accumulation (broken glass, tire parts, etc), debris, and related edge effects. Over time, these degrade the habitat to the point of effective inviability. The report must acknowledge this and discuss each of the effects in detail.

Sensitive Species Direct Impacts (pg 60)

The documents state that impacts to Clay-field Goldenbush are not significant. This is a questionable and misleading assessment. Clay-field Goldenbush is a very rare species, apparently undocumented in Rose Canyon previous to this study. The population parameters in the vicinity of the project are entirely unknown. However, impacts to this rare species are clearly significant, as defined by CEQA. The documents must reflect this assessment, based on existing biological information, and provide a detailed discussion of species-specific mitigation. Clay-field Goldenbush is not "covered" under the City's permit pursuant to the MSCP.

The documents state that impacted birds would be "*displaced*" from the site. This is misleading. All specimens impacted must be considered "lost". Although the general reading public may believe that birds can simply "fly away" or be "displaced" and settle in new habitats, this neglects that fact that most acceptable habitats are already occupied by resident birds. Unfortunately, in nearly every case, these "displaced" birds end up being "lost" or destroyed by predators, disease, or inhospitable conditions.

Wildlife Corridor Direct Impacts Section (pg 62)

As discussed previously, a regionally and locally significant wildlife corridor exists along Rose Creek, linking natural areas to the east on MCAS Miramar with lands to the west, eventually joining San Clemente Canyon to the south. The documents state that *"The physical presence of the Regents Road bridge would likely have some impact on wildlife movement through Rose Canyon."* This is not quantified. The documents further state *"However, wildlife movement within the canyon is anticipated to be already somewhat constrained."* This is vague and unsubstantiated by study. Stating that the Regents Road bridge would be less impactive than the existing Genesee Bridge is irrelevant and again misleading. The report needs to draw quantifiable conclusions regarding direct impacts to the existing wildlife corridor. As stated previously, the edge effects from bridge presence will degrade the roadway corridor, thus permanently, significantly, and unmitigably impacting the wildlife corridor. Most significantly impacted will be keystone species such as Bobcat, Mule Deer, and others. The bridge will increase habitat fragmentation in Rose Canyon by creating a permanently degraded zone beneath the span. This habitat fragmentation in combination with the direct effects of widening the existing Genesee bridge would clearly result in significant, non-mitigable project impacts.

The documents state that the "*study of this phenomenon* (corridor impacts from existing Genesee Bridge) *was not part of the scope of the current study*". It is unclear why this was not studied. Wildlife corridor functionality is critical to the success of the Subregional NCCP, and extremely relevant and critical in drawing conclusions regarding wildlife corridor functions and values, particularly in constrained linkages such as is present beneath the Genesee Bridge.

Indirect Impacts Section

This section is very brief and understates the permanent, indirect impacts caused by the presence of a new bridge across Rose Canyon. These include permanent, adverse, and significant effects caused by increases in:

1. Noise --
   The current wildlife corridor will be subject to significant new (undefined) noise levels as a result of vehicular traffic and other affects. This is likely a significant and unmitigable, permanent indirect impact of the project as proposed.

2. Runoff from Hardscape Surfaces --
   The presence of four acres of new, impenetrable hardscape (pg 4.10-12 of DEIR) will significantly modify the drainage patterns associated with riparian area. This is a significant and unmitigable, permanent indirect impact of the project as proposed.

3. Erosion --
   Erosion adjoining the supports and abutments, and (ultimately) within Rose Creek will significantly modify the drainage patterns associated with riparian area and nearby upland areas. This is likely a significant and unmitigable, permanent indirect impact of the project as proposed.

4. Siltation --

It is anticipated that siltation from the eroded soils could significantly modify the drainage patterns associated with Rose Creek and its tributaries. Although sedimentation basins and grassy swales are proposed in the DEIR, these have not been assessed with respect to direct biological impacts. This is likely a significant and unmitigable, permanent indirect impact of the project as proposed.

5. Debris Accumulation --

All bridges over urban canyons accumulate a significant amount of debris beneath the span. No discussion of this issue is provided in the documents. What assurances are there that this debris will be removed on a regular basis? What would the biological impacts of debris removal entail? This needs full discussion in the documents. This is clearly a significant and unmitigable, permanent indirect impact of the project as proposed.

6. Dust --

Nuisance dust from vehicular traffic on the bridge will contribute to the degradation of the habitat beneath the span. This is not the same as construction dust. The generation of nuisance dust over the life of the bridge span must be thoroughly assessed. This is clearly a significant and unmitigable, permanent indirect impact of the project as proposed.

7. Light --

Although the documents briefly discuss light control, the indirect impacts of vehicular lighting and overhead lighting must be discussed in detail. This is a significant and unmitigable, permanent indirect impact of the project as proposed.

8. Fires (from debris off the bridge surface) --

The presence of a substantial vehicular bridge over Rose Canyon will significantly increase the probability for a wildfire as a result of debris thrown off the span. This is clearly a significant and unmitigable, permanent indirect impact of the project as proposed.

9. Transient Occupancy (beneath abutments) --

The bridge abutments would likely attract transients, graffiti, trampling, etc. These factors will incrementally affect the long-term viability of the wildlife corridor, the habitat beneath the span, and the habitat adjoining the abutments. This is clearly a significant and unmitigable, permanent indirect impact of the project as proposed.

10. Invasives --

Urbanization facilitates the spread of noxious invasive species. Also, the documents defer review of the landscape plan and invasives control plan and disclosure of impacts that should be reflected in the DEIR to the Deputy Director of LDR. This is clearly inappropriate. These measures must be discussed now, with an opportunity for citizen input.

Mitigation Section

The documents (pg 69) defer mitigation because "*no specific, approved project*" is being proposed. It states that *"no specific mitigation sites are proposed nor have conceptual mitigation plans been developed*." The rationale for this is that "*plans should be developed when a specific alternative is chosen."* This strategy fails to provide full and timely disclosure - mitigation must be provided that is project-specific and impact-specific in the DEIR.

The documents state that *"whichever alternative is chosen, indirect construction impacts including noise, dust…"* This suggests that construction is inevitable, and that the "no project" alternative project is not available. It is entirely inappropriate to draw this conclusion in the Biology Report and Biology subsection of the DEIR, particularly in the instance of not having a single defined project.

Mitigation for Wetland Impacts - General

This section suggests that wetland creation within Rose Canyon (for the Regents Road Bridge alternative) would fully mitigate impacts associated with the project. No specific locations, other than *"disturbed areas in the canyon* (which) *could be used*" are discussed. Any proposed wetland creation would likely result in habitat conversion, resulting in additional secondary habitat impacts. Details of where and how mitigation would be provided, even at the conceptual level, are clearly required now for full disclosure.

This section must list each of the alternatives, with specific mitigation for each measurable impact. For example, specific mitigation for the permanent wetland impacts associated with the bridge span across Rose Canyon must be detailed.

Mitigation for Upland Impacts

This section provides vague and non-specific "generalized" mitigation recommendations for upland habitat impacts. For example, the report states that "*Impacts to Non-native Grassland should be mitigation by planting this vegetation type within Rose Canyon to replace exotic plantings"* This is incomplete and potentially very misleading. Which areas of exotic plants? How will this planting be done? The report needs to detail the mitigation approach beyond general, vague statements such as this.

The Bridge Span section discusses lighting - how will lighting impacts to the vegetation below the bridge (and accompanying fauna) be avoided? Again, the report fails to detail how mitigation for lighting impacts will be provided, beyond vague statements such as *"lighting… must not extend into the canyon"*. This is an unachievable goal, and the documents must conclude that lighting impacts are significant and not mitigable.

Noise impacts are not assessed in the documents, other than concluding that if noise levels were below 60 dBA Leq, impacts would be considered less than significant. How does the project provide specific mitigation measures to ensure that permanent noise impacts will be less than significant (i.e: less than 60 dBA Leq)? Raptors (including sensitive species) often nest at significant heights - how will these nests be shielded from excessive traffic noise? The DEIR states that 600 linear feet of cut/fill will be "at grade" and significantly lower segments of the proposed bridge are proposed. The report must detail project design features that will clearly and definitively support the conclusion about noise impacts and mitigation.

The Bridge Construction Section mentions (in discussion of the Migratory Bird Act) that *"If nesting birds are detected during this survey in areas to be impacted, the nest locations shall be protected and left undisturbed until fledging of offspring occurs*.". This is vague - how will the nests be protected? Who will verify that fledging has taken place without "take"? This is typical of the vagueness of the mitigation section of this report. Specific details of compliance with the Migratory Bird Treaty Act and California Fish and Game Code, which prohibit the "take" of most birds, must be developed and provide at this time.

Deir

At the end of the Biological Resources Subsection (Section 4.3), the DEIR contains a summary table, Table 4.3-16, (on page 4.3-76). This table apparently summarizes biological resource impact significance, as determined by the project consultant, ProjectDesign Consultants of San Diego.

The Biological Resources Report (page 77) concludes that wildlife corridor impacts are *"problematic*, and that *"This impact is considered non-mitigable".* This is in direct conflict with the data presented in the DEIR in Table 4.3-16 and the conclusions of ProjectDesign Consultants.

It is my professional opinion that bridge-associated impacts to sensitive habitat and sensitive plants must be considered "SNM", or significant and not mitigable to below a level of significance. This is because the bridge will permanently and substantially diminish habitat for wildlife and plants; substantially affect the habitat of a numerous

sensitive, rare, or endangered species; directly and indirectly impact wetlands; and generate noise that will exceed the limits for bio-habitat protection (60 dBA Leq).