

DAVID H. WRIGHT, PH.D.
1573 49TH STREET
SACRAMENTO, CA 95819-4402
DWRIGHTECO@CALWEB.COM
916-739-8906

"EVERYTHING WE KNOW WE HAVE LEARNED FROM NATURE" - RICHARD MANNING

September 7, 2005

Mr. Tim Haddad
Environmental Coordinator
Marin County Community Development Agency
3501 Civic Center Drive, Room 308
San Rafael, CA 94903-4157

Re: Comments on Lawson's Landing Master Plan Draft EIR

Dear Mr Haddad,

I have been retained by the Environmental Action Committee of West Marin to review the Draft Environmental Impact Report (DEIR) for the Lawson's Landing Master Plan (State Clearinghouse Number 2000092067). This letter is separate from and in addition to the comments prepared by Grasseti Environmental Consulting.

My qualifications for expert comment are as follows. I hold a bachelor's degree in population biology from Princeton University, and a Ph.D. in ecology and evolutionary biology from the University of Arizona. I have worked as an entomologist and conservation biologist in California for ten years, including seven years in the Endangered Species Division of the U.S. Fish and Wildlife Service. In that capacity I had responsibility for projects affecting Myrtle's silverspot butterfly and other special status species in Marin County. I was the primary author of the federal recovery plan for Myrtle's silverspot butterfly and contributed to the listing package for seven coastal plants (USFWS 1998). Since November of 2001 I have worked as an independent biological consultant. I have personal knowledge of the Tomales dunes area.

Comments on Baseline and Mitigation

Part of the baseline for the Master Plan must be the pre-existing codes and standards that form the regulatory context of Marin County master plans.

The DEIR's equating of *status quo* operations at Lawson's Landing with lack of future impacts is flawed. In cases where existing conditions at Lawson's Landing have been causing progressive decline over time of species populations or degradation of environmental conditions, then perpetuation of existing conditions into the future will cause further decline or degradation. I discuss specific, potentially significant impacts of continued degradation below.

The DEIR improperly assumes that improving facilities at the Lawson's Landing campground will not result in increased use. Even if maximum usage is to be capped, it is more reasonable to assume that new or improved facilities and population growth will yield a higher average level of use on days below the cap, with accompanying increases in overall average impacts.

The County fails to implement appropriate mitigation with the Master Plan and DEIR. The County has discretion and responsibility to bring uses under the Master Plan closer to compliance with County regulation.

Biological Resource

1. Despite wording on page 4.13-1, Peter Baye's (with David Wright) biogeographic assessment of the Tomales Dunes is not included in Appendix J, nor is the "Baye 2004" citation given in the References.
2. Table 4.13-1 is referenced on page 4.13-7 for information on special-status species potentially occurring on the project site, but fails to include special-status animals. On page 4.13-22 the Myrtle's silverspot butterfly, federally listed as endangered, is incorrectly referred to as "listed as threatened."
3. The Myrtle's silverspot butterfly account (p. 4.13-10) should be corrected to say that the species occurs in coastal prairie, coastal scrub, and grassland as well as dune habitats. Indeed, the violets providing its larval habitat are more likely to occur in coastal prairie or grassland than in the dunes.
4. In February of 2005 I reported a likely sighting of the Myrtle's silverspot butterfly near the site, during the summer of 2004, to the Marin County Community Development Agency and the California Natural Diversity Data Base. The DEIR should incorporate the information about this new sighting.
5. The DEIR should disclose that many species of flowers found on-site are potential nectar sources for adult Myrtle's silverspots, or known to be visited by closely related subspecies. More detailed information about nectar plants was provided in the Baye (with Wright) 2004 report.

6. The DEIR fails to disclose that much of the site is considered by the U.S. Fish and Wildlife Service to be a high-priority habitat area for recovery of the Myrtle's silverspot butterfly (USFWS 1998).
7. The DEIR fails to disclose and discuss the presence or potential occurrence of other rare invertebrate species. The "Tomales tessellated dune weevil" (*Trigonoscuta tessellata raphani* Pierce 1975), an on-site endemic species, must be included. The Tomales asellid (*Caecidotea tomalensis*), a unique freshwater isopod species known from Marin, Sonoma, San Francisco and San Mateo counties, has potential to occur on-site in near-perennial wetlands. A rare damselfly species, the San Francisco forktail damselfly (*Ischnura gemina*) has been reported from wetlands on the site and must be addressed.
8. The lack of focused biological surveys of the site impairs the ability of the DEIR to adequately disclose and evaluate the biological resources present and the impacts of the proposed plan. As I noted in the Baye (2004) report, the unique environment of the Tomales dunes is likely to support multiple special-status insects, and has been inadequately surveyed. Survey data are glaringly lacking even for relatively well-known or easily identified species such as the Myrtle's silverspot butterfly or the Pacific sand bear beetle (*Lichnanthe ursina*). Such surveys should take place before the assessment of impacts.
9. Assessment of project impacts on sensitive habitats and special-status species in the DEIR is so vague and data-free as to be practically useless in evaluating impacts, weighing alternatives or planning mitigation. For example, the DEIR itself states, "It is difficult to accurately assess the degree to which impacts to sensitive habitats can be avoided, however, because a specific footprint for each of the proposed facilities has not yet been determined, and wetlands, as defined by the Coastal Act, have not been identified" (p. 4.13-15). This missing information should be added, assessed, and the DEIR re-circulated.
10. The DEIR recommends as mitigation for impacts to sensitive habitats that the proposed wastewater treatment system be relocated to a vaguely identified area "generally located in the northern portion of the site" (p. 4.13-22). However, it does not appear that this location has been surveyed for special status species or their habitat, therefore the assertion that impacts would be lessened there is not supported by any data. As I noted above, grassland and coastal prairie actually are more likely to support violets—the larval food plant of the endangered Myrtle's silverspot butterfly—than are dune habitats. I am *not* recommending that the wastewater treatment plant remain as proposed; rather, I am saying that complete, essential information about project alternatives and their impacts, including mitigations that may themselves have impacts, is missing, and must be disclosed and analyzed in the DEIR.
11. As a consequence of its erroneous assumptions that current operating conditions imply no future impacts, and that site improvements will not increase average visitation (see *Comments Regarding Baseline and Mitigation*, above), the DEIR makes many incorrect conclusions about

project impacts and cumulative impacts. Though the errors are not limited to these I will present two examples. First, many biological impacts on-site are linked to the level of human visitation, but the DEIR does not disclose or evaluate future impacts. Baye (2004) reported observations of children chasing and capturing red-legged frogs at Lawson's Landing, and discussed human and pet disturbances to western snowy plovers. Butterflies and attractive, more easily captured species like the Pacific sand bear beetle also likely suffer harassment, capture, injury, and perhaps removal from the site due to visitor recreational activities. Simple trampling from human foot traffic may kill or injure some species. For example, the connections (haustoria) between tidal marsh *Cordylanthus* (bird's beak, a plant) and their host species are fragile and disturbance results in some mortality (Grewell et al. 2003, Grewell 2004). Existing levels of visitation could be causing declining species populations, and perpetuating such levels would cause continuing decline. Harrison et al. (1991) showed that even relatively modest levels of take for research purposes were capable of contributing to the decline and eventual extirpation of a local butterfly population. The scenario at Lawson's Landing is worsened by the likelihood that average visitation actually will increase with the project and regional population growth. The DEIR must investigate, describe, and correctly analyze these broad biological impacts.

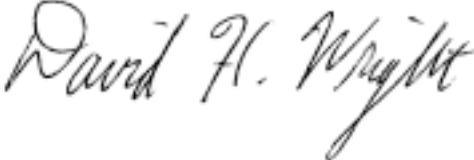
The second example is non-native invasive species on the site. Current operations at Lawson's Landing appear to have no provision for removing or controlling invasive non-natives, yet their populations are demonstrably growing and impairing important dune habitat. Notable among these is European beach grass (*Ammophila arenaria*), which is progressively covering and holding down dune habitat that previously was naturally open and mobile. Current operations at the site and levels of visitation likely are responsible for bringing certain invasive species to the site, such as varieties of iceplant cultivated in landscaping on site (including plantings in the long-term trailer park), and seeds or other propagules carried in on visitors' vehicles or boots. I noted in the Baye (2004) report that dune stabilization by non-native invasive plants is very detrimental to the native and special status insects of the dune habitats, as it is likely to be to most indigenous dune-adapted species. European beach grass and iceplant species establish near-monospecific stands, excluding native species and destroying natural habitats. The project as proposed would result in continued significant degradation of sensitive native coastal dune habitat by invasive non-native species. Repeated and new introductions of invasive species would take place and would likely increase with increased average visitation. The DEIR fails to properly acknowledge the progressive future impacts of the project stemming from non-native species invasion, or to propose an adequate project alternative or mitigation to address it.

12. The DEIR fails to adequately discuss and analyze the direct and indirect effects of project alteration of groundwater levels and groundwater chemical composition (e.g., nitrogen concentration) on seasonal wetlands and the species that use them. Reduced or fluctuating groundwater levels may lead to premature drying of seasonal wetlands and mortality of species that rely on longer ponding durations. Groundwater contamination, e.g. by nitrates, may lead to impaired life cycles of some species or excessive growth of others, such as algae, grasses, or tall emergent plants.

13. Portions of the proposed project include elements of intentional dune stabilization. Dune stabilization is inappropriate at the site.

Thank you for the opportunity to comment on the Lawson's Landing Master Plan DEIR. I look forward to seeing a re-circulated document.

Sincerely,

A handwritten signature in black ink that reads "David H. Wright". The signature is written in a cursive style with a large, prominent 'D' and 'W'.

David H. Wright, Ph.D.

cc: USFWS, Sacramento, Endangered Species Division, Coast Bay Delta Branch

References:

- Baye, P., with D. Wright. 2004. Biogeographic assessment of Tomales Dunes, Marin County, California: vegetation, flora, and invertebrates. Report prepared for Environmental Action Committee of West Marin, Point Reyes Station, California. 75 pp. incl. figures.
- Grewell, B.J. 2004. Species diversity in northern California salt marshes: functional significance of parasitic plant interactions. Ph.D. dissertation, University of California, Davis. 143 pp. incl. figures.
- Grewell, B.J., DaPrato, M.A., Hyde, P.R. and E. Rejmankova. 2003. Reintroduction of endangered soft bird's beak (*Cordylanthus mollis* ssp. *mollis*) to restored habitat in Suisun Marsh. Final report to CalFed Ecosystem Restoration Program, Contract 99-N05. April 10, 2003. 142 pp. incl. figures and appendices.
- Harrison, S., J.F. Quinn, J.F. Baughman, D.D. Murphy and P.R. Ehrlich. 1991. Estimating the effects of scientific study on two butterfly populations. *American Naturalist* 137:227-243.
- Pierce, W.D. 1975. The sand dune weevils of the genus *Trigonoscuta* with a correlation of their anatomy to the geological history of our coast lines. Natural History Museum of Los Angeles County, Los Angeles, California.
- USFWS. 1998. Recovery plan for seven coastal plants and the Myrtle's silverspot butterfly. U.S. Fish and Wildlife Service, Region 1, Portland, Oregon. 141 pp.