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June 19, 2015

SUBJECT: Monterey Downs Draft EIR Comments – City of Seaside, Monterey County

To the City of Seaside (attention: T. Wissler Adam):

I am submitting the following technical review of the Environmental Impact Report, and supporting environmental documents, on behalf of the Ventana Chapter of the Sierra Club. The scope of my review focuses on critical review of the assumptions and conclusions of environmental impact assessments related to plant communities and special-status species of the ancient stabilized dune (paleodune) habitats of the project site and vicinity. The opinions and technical arguments in my comments reflect my independent professional and scientific views only. A summary of my expert qualifications are attached.

1. Project description and environmental setting descriptions are basically deficient.

The project description (Section 2) fails to correctly identify the environmental setting of the project site and vicinity as a stabilized ancient dune system (paleodune; Pleistocene [ice age, “pre-Flandrian” of Cooper 1967] dune sheet. This is a significant omission because of the environmental importance and very limited geographic distribution of this ancient geomorphic feature in California, and its association with relict endemic species. This omission is repeated in Section 4.3 Biological Resources) and Appendix 10.3 (Biological Resources). Coastal dunes (and/or paleodunes) are mentioned only in species accounts (descriptions of species’ habitat types) and other plans that cover the project vicinity, such as the Fort Ord re-use plan (BRP), but not explicitly in context of the project site or vicinity..

Paleodunes include distinctive variations of the following vegetation types: coastal prairie (grassland), maritime chaparral, seasonal and perennial freshwater marshes, and oak woodlands. These communities have soils, landforms, and histories that differ from their counterparts on other geologic and geomorphic settings, such as Holocene dunes and older Pliocene sandstone formations.

The omission of this environmental context systematically underestimates the significance of biological impacts to these paleodune communities and the populations of special-status species they support. The biological diversity of disjunct (isolated from main populations) populations of special-status species depends on their environmental and prehistorical context (e.g., the age, origins, and soil/climate history of relict populations). The “Environmental Setting” discussion at Section 4.3, however, discusses only species distributions and provides no meaningful information or discussion about the environmental setting of the project. It aggregates the distinctive Central Coast paleodune habitats with more widely distributed (generalized) interior and coastal vegetation types on other geologic and geomorphic settings.

Only expert individuals with scientific background in coastal geomorphology and ecology would be able to identify the biological resource impacts, and particularly cumulative impacts, to habitats and species (including special-status species) associated with or dependent on scarce and declining paleodune communities with distinct soil types. The omission of the ecologically significant of the paleodune landscape setting (biological resource context) of vegetation, habitats, and special-status species precludes meaningful public comment on significant impacts and mitigation for biological resources.

2. The DEIR fails to assess impacts to wetland habitats, including but not limited to federal and state jurisdictional wetlands.

The DEIR fails to provide minimal survey information regarding the presence, extent, or distribution of wetland habitats, including but not limited to jurisdictional wetlands subject to federal or state regulations or land use policies. The DEIR states on p. 4.3-14:

A formal wetland delineation was not conducted at the time, as digging to conduct soils or hydrological analyses was prohibited by the Right-of-Entry agreement issued by FORA. However, a formal wetland is not required under CEQA; therefore, for purpose of analyzing impacts, as much data as possible was taken, including observations of ground moisture at the surface and the presence of hydrophytic vegetation...

First, the DEIR fails to disclose what survey methods “as much data as possible” about wetlands means: no information is provided regarding the areas surveyed, the dates (seasons) of surveys, and the rainfall year (drought observations underestimating long-term normal circumstances of wetland occurrence, versus average to above-average rainfall years), or the qualifications (wetlands expertise) of the observers. The potential presence of wetlands does not depend on soil analyses, since single-parameter wetland criteria (vegetation criteria alone may suffice for wetland jurisdiction under California Department of Fish and Wildlife or Coastal Commission review) policies, so the unexplained “prohibition by Right-of-Entry” explanation has no bearing on the omission of all wetland survey data, regardless of whether the surveys were “formal”, informal, or specific to federal or state jurisdiction under different regulations. CEQA does require meaningful description of the biological resources that may be significantly impacted by a proposed project, and this would include some

biologically meaningful description of wetlands, regardless of their purely legal “jurisdictional” status under federal or state laws. Jurisdictional status is primarily relevant to assessment of impacts under Land Use policies; biological (ecological) status of wetland baseline conditions is relevant to analysis of significant impacts of biological resources.

Since paleodune soils are primarily sandy and permeable, influenced by seasonal fluctuations in groundwater levels, the wetlands they support may be atypical (particularly in relation to soil and hydrology parameters) for the arid western region, and require special, focused methods for determination or delineation, as outlined in the U.S. Army Corps of Engineers wetland jurisdictional manual for the Arid West region. In the absence of paleodune-specific wetland surveys and assessments, it is highly likely that the extent of wetlands (jurisdictional or not) in any depressional topography of the project area would be underestimated, particularly during the current historic extreme long-term drought. This deficiency in survey methods is likely to result in underestimation of potentially significant impacts to wetlands.

Dune or paleodune depressional wetlands may include regionally or globally rare plants and invertebrates associated with vernal pools that are detectible only in wet or average rainfall years (high groundwater levels or rainfall-driven inundation conditions). Therefore, the inadequate wetland survey and assessment methods also indicate potentially substantial risk of underestimation of special-status species impacts, specific to species with specialized life-histories adapted to ephemeral or seasonal amphibious habitats.

3. Special-status plant species impact criteria are invalid and unsound in terms of biological or regulatory meaning, and preclude meaningful analysis or public comment regarding special-status plant species.

The DEIR confuses “take” prohibitions for federally listed fish and wildlife species under Section 9 of the (Federal) Endangered Species Act with Section 9 prohibitions regarding listed plants that are exclusive of “take”. There is no “take” prohibition for listed plant species under the U.S. Endangered Species Act (other prohibited actions for plants exist under Section 9, but not “take”, and these may not apply to destructive actions to federally listed plants that significantly conflict with their survival or recovery), so take authorization is not possible and thus not a possible surrogate biological or meaningful regulatory threshold for CEQA impact significance. This error is asserted in the DEIR at p. 4.3-35:

These impacts would be considered less than significant given these special-status plants are HMP species for which no take authorization is required from FWS or DFW. Nevertheless, the HMP and BO require identification of sensitive biological resources such as these special-status plants that may be salvaged for use in restoration activities in habitat management areas; see Biological Compliance Measure 1 (BIO/COMP-1).

In contrast, a meaningful biological threshold for significant impacts to special-status (federally listed) plants could include actions that “cause conflicts with recovery objectives”, “significantly interfere with survival and recovery of special-status or listed plants” or “cause

or substantially contribute to declines in the abundance, geographic distribution, or population viability of listed plants” or (highest threshold possible) “jeopardize listed plant species”. But no objective or biologically meaningful impact thresholds for special-status plants were proposed or applied in the DEIR. Only the vacuous plant “take” threshold was applied, and this precludes any meaningful discussion of significant impacts to federally listed plants or special-status plants that are recognized as rare by the comprehensive and scientifically peer-reviewed California Native Plant Society rarity rank system that is widely used in CEQA documents as a threshold for significance. The DEIR arbitrarily rules out the possibility of “significant impacts” for even rare species listed by CNPS if they are not yet state-listed or federally listed, as in the case of Kellogg’s horkelia (*Horkelia kelloggii*) on DEIR p. 4.3-35. The DEIR effectively rules out the possibility of any “significant” impacts to plants by restricting the impact threshold to “take” that cannot exist for federally listed plants. This threshold is unjustified, arbitrary and confused: the DEIR provides no reasonable justification or explanation for the exclusion of all other significant thresholds for rare/special-status plants other than (impossible) “take” under federal and state endangered species laws.

The DEIR is also basically deficient in analysis of potential impacts and mitigation for special-status plant species, regardless of the significance threshold it applies. The DEIR provides inadequate biological analysis of the number, size, viability, and distribution of special-status plant species populations. Three of the five special-status plants species listed in table 4.3-3 are manzanita species (*Arctostaphylos* spp.), which depend on long-lived persistent soil seed banks for regeneration after fires or other disturbances, particularly for non-burl sprouting species. The DEIR identifies only above-ground vegetation stands of manzanita as biological resources, and fails to assess the potential distribution of their seed banks and suitable host vegetation, which is the most important criterion for long-term impacts caused by development. Similarly, the successional, dynamic nature of vegetation supporting golden-fleece (*Ericameria* spp.) and *Ceanothus* spp. (dependent on colonization and extinction in disturbed vegetation gaps over long periods of time) makes it impossible to analyze project long-term impacts based solely on the extent of area occupied by mature plants. The impacts of these disturbance-reliant or dependent species must include analysis of the long-term dynamics of their populations, seed banks, dispersal and colonization patterns, and suitable substrates for regeneration. Thus, the DEIR fails to accurately analyze the potential magnitude, geographic context, or species recovery context of potential project impacts to special-status plant species.

In addition, the mitigation measures for some special-status plants on which the DEIR relies are purely programmatic, and fail to provide any project-specific information about the feasibility or efficacy of compensatory mitigation special-status plants. The DEIR arbitrarily asserts that a future HCP that is neither extant nor approved (merely in draft stage) would take care of impacts to special-status (federally listed) plants, even though there is no analysis of even draft HCP proposals for rare plant mitigation (DEIR p. 4.3-35). The other principal mitigation measure for rare plants is BIO COMP-1/HMP Plant Species Salvage, which is a purely programmatic mitigation measure that proposes the least reliable, least feasibly (riskiest, failure-prone) mitigation measure for plants: salvage and translocation. This

mitigation measure provides only administrative review and approval measures that have absolutely no scientific basis for the feasibility of conserving the plant species or populations the project may affect. The DEIR provides no evidence for the assumption that salvage or translocation measures may be or have been feasible for the species proposed in the environments proposed. The DEIR lacks any assessment of precedents for feasibility of mitigation of the plant species addressed, or their close relatives (surrogate or proxy species) in similar environments. The proposal of criteria that state and federal agencies should review and approve the plan does not indicate that they would do so, or have any scientific basis to do so. There is in fact no substantive mitigation proposed for rare plants in the DEIR: there is only a hollow mitigation-like administrative procedure proposed that would be equally applicable to utterly infeasible compensatory mitigation measures to conserve viable plant populations.

Mitigation measure BIO-1 also includes actions that are likely not effective or feasible to avoid or offset impacts to special-status plants. Monterey spineflower (*Chorizanthe pungens*) and sand gilia (*Gilia arenaria*) are annual plants whose populations depend on sparse, open dune or paleodune vegetation to regenerate and persist. “Avoidance” of populations that entails development all around their habitat would inevitably cause a decline in the habitat quality that enables them to persist, and would likely cause their indirect long-term extirpation as surely as direct impacts of grading and paving would in the short-term. The DEIR fails to analyze the minimum size viable population or habitat required for their conservation, or the integrity of the environmental setting required for their conservation. Thus, BIO-1 avoidance-based mitigation is likely infeasible and would probably result in significant impacts. Compensatory mitigation proposed under BIO-1 (which also mistakenly refers to plant “take”) provides no analysis of potential efficacy or feasibility based on past salvage, translocation, or restoration attempts involving these species in paleodune habitats like those of the project site, or even other younger dune environments.

4. California tiger salamander (*Ambystoma californiense*) impacts and mitigation are inadequate.

The DEIR acknowledges that California Tiger Salamanders (CTS) have a “moderate” potential to occur in the project area, but it fails to identify the nature and magnitude of ecological impacts to the species and its habitat; instead, it reduces biological impacts to legal impacts of “take”. The DEIR fails to analyze the mechanisms of “take” such as widespread elimination of adult upland foraging habitat in mammal burrows, and creation of major barriers to dispersal (loss of corridors and dispersal pathways to breeding habitats) consistent with draft recovery plans and listing of the species. The DEIR fails to provide any biologically meaningful impact analysis or feasible mitigation for CTS, and instead relies on deferred, programmatic mitigation and permitting processes with no biological basis or precedents identified or analyzed.

5. Oak woodlands and riparian woodland. The project would have significant and unmitigated impacts on these two important vegetation types. The biological significance of these impacts is underestimated because of the ancient paleodune environmental setting of

these vegetation types. These are unacceptable biological impacts in my professional opinion.

Conclusions. The DEIR's analysis of biological resource impacts is scientifically flawed, and mitigation measures are also inadequate: they are impermissibly programmatic, deferred and predicated on fundamentally flawed biological and regulatory premises. The CEQA flaws in biological resources identified above also apply to other biological resources, but my comments provide explicit critical review of these examples as to illustrate the types of errors; they are not exhaustive.

Please contact me if you have any questions regarding these comments.

Respectfully submitted,



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STATEMENT OF QUALIFICATIONS

My qualifications for expert comments on environmental planning, regulation, and assessment of coastal dunes are summarized here: Ph.D. Department of Plant Sciences, University of Western Ontario (1990). My principal professional experience in California for over 25 years has been with conservation planning for coastal habitats and ecosystems, and recovery planning for endangered coastal species. I prepared endangered species recovery plans for the U.S. Fish and Wildlife Service (Sacramento) covering modern and ancient coastal dune systems, estuaries, and lagoons of the Central and Northern California coast, and prepared biological opinions for formal endangered species consultations. I managed joint EIR/S documents and permits for the U.S. Army Corps of Engineers, Regulatory Branch (Division), San Francisco District. I currently work as an independent expert consultant in coastal ecology (coastal wetland, estuarine, fluvial, and terrestrial ecosystems) in California. My clients have included National Park Service, California State Parks, California Coastal Commission, California State Coastal Conservancy, Marin County, San Francisco Estuary Institute, Sonoma Land Trust, Solano Land Trust, Audubon Society chapters, California Native Plant Society. I am a part-time instructor for San Francisco State University Romberg Tiburon Center, and author/co-author of scientific publications in coastal wetland ecology.