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John E. Harris
California State Parks
North Coast Redwoods District

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RE: Coastal Dune Restoration Plan for Tolowa Dunes State Park and Lake Earl Wildlife Area

Dear Mr. Harris,

These comments are submitted by Californians for Alternatives to Toxics regarding the proposed Mitigated Negative Declaration for the Coastal Dunes Restoration Plan for Tolowa Dunes State Park (TDSP) and Lake Earl Wildlife Area (LEWA).

Californians for Alternatives to Toxics (CATs) is a public interest, non-profit organization that is concerned about pesticide use on public lands and advocates for non-chemical vegetation management for the health of its members, park workers and visitors and the natural world. Its members enjoy the natural beauty of Tolowa Dunes State Park and the Lake Earl Wildlife Area, and believe the use of herbicides adversely impacts that natural beauty in a manner that has not been properly analyzed and mitigated in the proposed adoption.

As written, the Coastal Dune Restoration Plan Initial Study/ Mitigated Negative Declaration (IS/MND) raises many concerns about the future health of the TDSP and LEWA ecosystems because of California State Parks, North Coast Redwood District (DPR) and the California Department of Fish and Game's (CDFG) primary reliance on imazapyr and glyphosate for European beachgrass management. While CATs welcomes and supports well thought-out efforts to prevent and control invasive plants to support and sustain the native dune environment, CATs questions the efficacy and soundness of the proposed plan to restore the dunes with harmful herbicides. CATs believes the Initial Study, Mitigated Negative Declaration and work plan do not adequately address the environmental effects of large-scale and repeated herbicide application and therefore cannot be adopted without complete analysis, clear project descriptions, further discussion of alternative treatments and accurate representation of environmental impacts and planned mitigations.

The proposed Mitigated Negative Declaration (MND) is inadequate for the scope of the restoration plan that includes over 300 acres of coastal lagoon and dune complex managed by two agencies and large numbers of special status, native wildlife and plant life. The MND as written does not adequately address the scope of such a restoration undertaking and appears to be purposefully vague about the duration of the management plan and the number of herbicide applications. The public has right to be fully informed about activities that could potentially harm the environment, the alternatives to those activities and the mitigations that will be undertaken to minimize harm. This document fails to adequately inform the public. The following comments will document the specific shortcomings, errors, omissions and questions that CATs has about the Coastal Dunes Restoration Plan for TDSP and LEWA. Attached materials and evidence support our claims including expert opinions, current science on specific herbicides and other references.

There are several gaps of information in the document that indicate that further study and environmental analysis (or perhaps transparency) is needed before the adoption of a restoration plan. A glaring example is the inclusion of LEWA in the MND. It is stated that the CDFG proposes to use the restoration methods described in the MND for beachgrass removal in the LEWA, yet surveys and studies of sensitive species and wetland delineation has not been completed. On page 34 of the document, Mitigation Measure Biological 2- Wetlands states- *DFG will complete an ACOE wetland Delineation on the portion of LEWA included in the project prior to using herbicide.* This is not mitigation but rather a necessary task that should be completed before the proposal of a restoration plan.

How can the potential environmental impacts and appropriate mitigation methods be understood for an area that has not been surveyed? How can the public and the agencies make informed decisions about the restoration plan without the full picture? It is not appropriate for the LEWA to be included in the MND without these surveys. Just because European beachgrass is present at both sites does not mean that the agencies should use a one-size-fits-all herbicide management plan. By deferring this necessary analysis, DPR (and CDGA) are piecemealing the project in violation of CEQA.

Another gap of information in the document is in the Special Status Species section. While Parks state that *the project will be conducted in compliance with all applicable State and Federal threatened and endangered species protection laws and regulations* specific information about which special status species are found in LEWA is not included nor are the expected impacts to the individual species described. The two agencies need to evaluate and disclose critical information such as this in the environmental review document. Appropriate mitigations cannot be developed for potential harms to individual species and their habitats if that evaluation and disclosure is not provided, as is the case here.

Page 24 of the document states- *sixty-one special status plant species were identified within the assessment area. Twenty-five have the potential to be impacted by project activities.* The twenty-five special status plants that have the potential to be impacted and the project activities are likely to impact them must be disclosed and proper evaluation provided.

Page 28 states- *Thirty-seven special status animals were identified within the assessment area, ten of which have the potential to be impacted by project activities.* The animal species which are likely to be impacted and the project activities which may impact them, must be disclosed and analyzed. Herbicides impact species in different ways and this should be included in the analysis. The agencies are not able to adequately comply with State and Federal laws for threatened and endangered species protection if complete analysis is not included in the restoration plan.

This information must be disclosed so that the public can understand the impact of the proposed project and provide meaningful comment. In the absence of this information, it is impossible to evaluate proposed mitigation and alternative, rendering as incomplete the information about mitigation and alternatives.

In addition, the mitigation measures for both sensitive plants and special status animals are inadequate in the MND. Mitigation Measure Biological 1- Sensitive Plants creates a 5 meter herbicide exclusion buffer around sanddune phacelia plants greater than 6 inches in size. What about small plants (Humboldt Bay Wallflower only grows to 6 inches in size), immature plants and new growth? How will they be protected from the toxic effects of imazapyr, glyphosate and herbicide adjuvant?

After close reading, it does not appear that mitigation for potential impacts on special status animals has been included in the MND. Page 33 vaguely reads:

Herbicide use will be conducted in compliance with applicable county, state and federal law and in accordance with the *Nature Conservancy's Weed control methods handbook Tools and techniques for use in natural areas* (Tu et al. 2001). Pesticide use has the potential to adversely impact special status wildlife; however, the project includes conditions for impact avoidance, such as restricting the timing of application and following applicable laws that will reduce this potential to a level of less than significant.

It is not evident in the document what the “conditions for impact avoidance” are or how they are included in the project. This needs to be fully developed before the restoration plan is adopted. How can this document act as a guide to the agencies involved or act as a conduit of transparency to the public without actual description of the “impact avoidance” strategies?

Another implication in the above statement is that relying on pesticide regulation law is mitigation. Following state and federal laws for pesticide application does not constitute mitigation. Pesticides are known to adversely effect wildlife and analysis of the effects needs to be included for this MND to lawfully fulfill CEQA. This is supported by state law and a California Court of Appeal decision in case No. A107080 (CATs v. CDFA (2005) 236 Cal.App.4th 1,,13) which requires agencies to “set forth specific data as needed to meaningfully assess whether the proposed activities would result in significant impacts”.

Page 29 has a clue to the scope of the herbicide use in the project – *approximately one half to threequarters, of the live biomass of target plants, will be treated with herbicide.* While

specific quantities of glyphosate or imazapyr or areas treated are not included in the document, this statement raises concern and question about not only the effects on special status species but also on water quality, soil health and important micro-organism communities.

The MND states on page 19 that 325 types of mushroom and fungi are found in the study area yet potential effects on them from herbicide application is not included. This is a significant omission with potentially serious ramifications for the native dune ecology because current research indicates that glyphosate treatments causes changes in soil fungi levels which can disrupt native plants or advantage invasive species (See research compiled by Dr. Susan Kegley attached to this letter).

The areas proposed for restoration are rich in water yet the document claims that there will be no discharge of herbicide into water or onto other non-target areas. CATs does not believe that Parks can make this claim due to our research on the proposed herbicides. While Parks does not seem to be concerned about herbicides degrading water quality, CATs is. The MND does not rely on current research about toxicity, mobility and persistence of the two proposed herbicides: glyphosate and imazapyr. Current and applicable research shows imazapyr has a longer persistence in soil than originally believed- up to 436 days (Cox, Imazapyr:Herbicide Factsheet) which is significant especially with compounding repeat applications as proposed in the restoration plan. Persistence in regard to repeat application of imazapyr needs to be analyzed before the MND can be adopted.

Along with being persistent in soil, imazapyr is highly mobile and readily contaminates water (Kegley Declaration). This is significant because it poses risk to non-target plants and aquatic organisms that have not been considered in the IS/MND. In the shifting dune ecology imazapyr could easily move off target and effect the environment in ways not addressed in the MND. Glyphosate binds strongly to soil and often enters aquatic environments during heavy rains, tidal influences and general soil to water movement that is not uncommon in the project area (CETOS Glyphosate fact sheet)

Imazapyr has been found in both surface water and groundwater after forestry applications in the southeaster U.S. (Cox). What water monitoring will be adopted in the restoration plan? As written, the MND does not include water quality testing after the repeat application of herbicides or take into consideration the aquatic organisms near the treatment sites.

CATs is not convinced that the goal of the restoration plan to remove European beachgrass and restoration of native habitat can be accomplished with herbicides. Invasive plants are rapidly developing resistance to both imazapyr and glyphosate (Ecological Risk Assessment-Imazapyr) while the broad-spectrum chemicals kill off native plants. Getting on a treadmill of pesticide use is not a good “restoration” model for our public lands.

Denuding the ground with chemicals and disrupting the soil and microorganism communities may lead to further invasive plant infestation. The repeat application of either/ or imazapyr and glyphosate along with chemical adjuvant can compound in the soil

creating higher concentrations and potentially killing the native plant seedbank. While DPR desires to remove the danger of monoculture European beachgrass, by relying on herbicide as the primary management strategy, a monoculture may be what is cultivated (Blossy Declaration).

CATs is also concerned about DPR's vague proposed chemical uses and analysis found in Appendix B. Information about Herbicides. DPR states that aquatic formulations of imazapyr and glyphosate will be used but does not specify which formulations will be used or where and under what conditions the different formulations will be employed. This is problematic because the different formulations have different toxic characteristics that require individual analysis (see Different Roundup Formulations article). Not disclosing exactly which formulation and the reasons for its use is also problematic because it denies the public complete and accurately represented information.

The document also includes the possibility of using a wide variety of adjuvant in the management plan yet fails to analysis the toxicity in combination with the active ingredients of the proposed herbicides or discuss the effects of adjuvant on living organisms such as non-target plants or amphibians. This is a significant omission because current research on these so-called "inert" ingredients points to increased toxicity for amphibians such as the red-legged frog commonly found at the proposed project sites(see Unidentified Inert Ingredients in Pesticides).

Six adjuvants are named in the document yet DPR fails to specify exactly which one will be used. This is significant because adjuvants improve the herbicide uptake through the cell wall and can have a toxicity of their own. For example, LI-700, one of the proposed adjuvants for the rehabilitation plan contains propionic acid, a hazardous compound (see Surfactant Toxicity- Glyphosate). How much LI-700 does DPR propose to use and what is its environmental fate in the coastal dune habitat?

Conclusion

We respectfully request that DPR proceed no further with the MND for the Coastal Dune Restoration Plan. DPR must develop an Environmental Impact Report that fully discloses and describes the scope of the proposed project. The EIR must evaluate issues as outlined above, and address the expertise as provided in the attached material which document the potential for significant environmental impacts associated with this project. Only then can a valid proposal for mitigation and consideration of alternative be a fairly assessed.

Sincerely,

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