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*via email*

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**Re: Marin County Open Space District Vegetation and Biodiversity Management Plan Draft Tiered Program Environmental Impact Report (State Clearinghouse No. 2013112063) and Draft Vegetation and Biodiversity Management Plan**

Mr. Raives:

On behalf of North Coast Rivers Alliance (“NCRA”), we submit the following comments on the Marin County Open Space District’s Draft Tiered Program Environmental Impact Report (“DEIR”) for the Draft Vegetation and Biodiversity Management Plan (the “VBMP Project” or “Project”).

The picturesque lands that make up the Marin County Open Space District (“MCOSD”) play an important role in preserving the beauty and bucolic character of Marin County. They serve critical ecological functions, by preserving natural habitats, wildlife migration corridors, streamside and lakeside buffers, refugia for endangered species, and genetic reservoirs for all species, and by maintaining visual separation between urban areas. NCRA fully supports MCOSD’s preservation and protection of these peaceful open spaces for hiking, quiet contemplation, and wildlife protection and observation. NCRA urges MCOSD to stand firm against activities that threaten the vital resources. Sadly, MCOSD’s VBMP Project is itself a threat to the lands it purports to manage and protect. By increasing the use of chemical controls, through pesticide<sup>1</sup> applications, MCOSD threatens the ecological health of the preserve system

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<sup>1</sup> Under federal law, a pesticide is (with exceptions that do not apply): “(1) any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest, (2) any substance or mixture of substances intended for use as a plant regulator, defoliant, or desiccant . . .” 7 U.S.C. § 136 (t). A pest is defined as “(1) any insect, rodent, nematode, fungus,

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and the health and safety of those who use it.

The DEIR fails to satisfy the requirements of the California Environmental Quality Act (“CEQA”), Public Resources Code section 21000 *et seq.*,<sup>2</sup> in five overarching respects. First, the DEIR’s alternatives analysis omits a no-pesticide alternative, is too vague to permit informed review, and is biased in favor of MCOSD’s chosen project. Second, the DEIR improperly relies upon the Marin Municipal Water District’s (“MMWD’s”) vegetation management plan to support its use of pesticides despite the fact that MMWD recently voted to *prohibit* pesticides because of concerns about human health impacts and toxicity to wildlife. Third, the DEIR’s tiering strategy violates CEQA’s requirements. Fourth, the DEIR’s analysis of the Project’s impacts is deficient in at least ten separate categories. Fifth, MCOSD unlawfully defers formulation of mitigation measures to a future date, as discussed more fully below.

### **I. The Alternatives Analysis Is Inadequate to Promote Informed Decision-Making**

The DEIR’s alternatives analysis is flawed in three ways. First, the DEIR fails to clearly describe the differences between the alternatives and the proposed project, an especially confusing omission with respect to Alternative 3, the “Risk Reduction” alternative. Second, the range of alternatives is inadequate; the DEIR should have analyzed a no-pesticide alternative. Third, the DEIR’s failure to assure that Alternatives 2 and 3 would include effective mitigation measures unlawfully sandbagged the analysis in favor of MCOSD’s chosen alternative.

The DEIR fails to clearly describe the differences between the alternatives and the proposed project. Pages 326 to 329 of the DEIR, which describe the three alternatives, compare the various alternatives to each other but make no reference to the proposed project at all. Though the DEIR does include seven pages of charts that purport to identify the differences between the proposed project and the three alternatives, the stated differences are vague and entirely unclear. What exactly *is* the difference between the proposed project’s “[c]hange in program emphasis to selection of projects/actions that improve the condition of natural resources

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weed, or (2) any other form of terrestrial or aquatic plant or animal life or virus, bacteria, or other micro-organism (except viruses, bacteria, or other micro-organisms on or in living man or other living animals) which the Administrator declares to be a pest under section 136w(c)(1) of this title.” 7 U.S.C § 136(t). California law similarly considers chemicals targeting unwanted plants to be pesticides. *See* Food & Ag. Code §§ 12753, 12754.5. Consistent with these definitions, NCRA will refer to the chemical treatments considered in the DEIR as “pesticides.”

<sup>2</sup> Undesignated references are to the Public Resources Code.

so they can withstand climactic and environmental changes” on the one hand, and Alternative 3’s “[c]hange in program emphasis to selection of projects/actions that manage fire risk and control invasive plants”? DEIR at 331. Presumably “improv[ing] the conditions of natural resources” in MCOSD’s preserves so as to “withstand climactic and environmental changes” includes “manag[ing] fire risk and control[ing] invasive plants,” so the actual difference between these boilerplate statements is unclear. *Id.* The DEIR makes no effort, for instance, to provide an example of the different management strategies that the proposed project and Alternative 3 would offer. Nor does it explain the source of the supposed funding differences between the two. The DEIR’s vague platitudes prevent the public from meaningfully considering the differences between and impacts of the alternatives presented and thus violate CEQA. 14 C.C.R. [“Guidelines”] § 15126.6(d) (a matrix may only be used to *summarize* the required comparison of alternatives with the project).

The DEIR’s range of alternatives is also inadequate. An EIR must present a reasonable range of potentially feasible alternatives. Guidelines § 15126.6(a). “The range of feasible alternatives shall be selected and discussed in a manner to foster meaningful public participation and informed decision making.” Guidelines § 15126.6(f). Here, the DEIR’s analysis flunks this test. One of the most controversial aspects of the proposed plan is its blanketing of Marin’s last open space preserves with pesticides – as the comments on the DEIR will attest. The DEIR’s failure to analyze an alternative that combined robust management activities with a ban on pesticides is thus unlawful. Such an alternative would have allowed the public to weigh the supposed financial and managerial benefits of pesticides against the environmental harm caused by their use. A no-pesticide alternative could potentially include features such as biological control of invasive species using natural predators and would avoid many of the potentially significant impacts identified in the DEIR. For example, it would prevent pesticides that are known to leach into groundwater from being sprayed atop aquifers, among many other environmental benefits. The only differences between Alternatives 1, 2, and 3 relate to their funding. By limiting itself to three alternatives with only minor differences, and by omitting a no-pesticide alternative, the DEIR frustrates informed decision making and thereby violates CEQA. Guideline § 15126.6(f).

Finally, MCOSD biased the alternatives analysis in favor of its chosen alternative by failing to include any mitigation measures in Alternatives 2 or 3. Although the preface to the comparison table states that “should either Alternative 2 or Alternative 3 be selected it is assumed that it would be necessary for MCOSD to adopt best management practices and mitigation measures similar to those for the proposed project” (DEIR at 338), the table itself repeatedly concludes that Alternatives 2 and 3 will have greater impacts than the proposed project because “there would be no mitigation measures to minimize” impacts (*e.g.*, DEIR at 340). Indeed, the table is internally inconsistent: it concludes that landslide impacts would be “similar” among the various alternatives because “it is likely [best management practices] would

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be implemented that would require” geotechnical surveys and appropriate construction methods, while at the same time concluding that, for instance, sedimentation would be worse under Alternatives 2 and 3 than the proposed project because “without the [proposed project] no new BMPs to help reduce erosion and sedimentation would be implemented.” DEIR at 341-342. By failing to mitigate the environmental impacts of Alternatives 2 and 3, the DEIR predetermined the outcome of the alternatives analysis, thereby precluding informed decision making in violation of CEQA. Guidelines § 15126.6. At an absolute *minimum*, the DEIR should analyze two additional alternatives that are identical to Alternatives 2 and 3 except that they include the mitigation measures and best management practices that the DEIR itself states “would be necessary for MCOSD to adopt.” DEIR at 338.

## **II. Reliance Upon MMWD Plan is Inappropriate**

The DEIR repeatedly claims that MMWD uses pesticides to conduct weed control on its lands and claims that MCOSD will work collaboratively to apply pesticides in a coordinated manner. *See, e.g.*, DEIR 249-250. The VBMP itself also appears to rely upon MMWD’s vegetation management plan as a source of its mitigation measures. *See, e.g.*, VBMP at 3-5 to 3-10 (discussing MMWD’s management plans in its discussion of appropriate natural resource management measures).

But yesterday the MMWD “Board of Directors were given a standing ovation by a packed room of residents after they voted to approve Staff’s recommendation to remove herbicides from further consideration in MMWD’s DRAFT Wildfire Protection and Habitat Improvement Plan.” Sharon Ruston, *The Marin Post*, *MMWD Board of Directors Votes to Remove Herbicides From Further Consideration!*, July 8, 2015, available at <https://marinpost.org/blog/2015/7/8/mmwd-board-of-directors-votes-to-remove-herbicides-from-further-consideration> (as visited July 8, 2015). It did so both due to community opposition and because the World Health Organization recently classified glyphosate as a probable human carcinogen. *See id.* *The MCOSD should follow MMWD’s lead and remove the use of pesticides from consideration.* And regardless, it must completely revamp its DEIR and VBMP Project to reflect MMWD’s enlightened rejection of pesticides as a vegetation management tool.

## **III. The DEIR is Inadequate to Allow Future Site-Specific Action without Further CEQA Review.**

The information provided in the DEIR is not sufficient to adequately inform the public as to the site-specific impacts of VBMP Project. Indeed, the DEIR admits this deficiency. *See e.g.* DEIR at 138 (“further site-specific investigation and mapping would be required” to determine locations of sensitive resources, value of those resources, and actions to take), 139 (anticipates modifications to mitigations and management activities based on site-specific information), 186

(site-specific geological information not available), 210 (fuel-zone hazard assessment “not directly applicable for site-specific fuel management decisions). Thus, pursuant to the MCOSD’s tiering strategy, it must conduct extensive additional studies before it may consider – let alone approve – site-specific vegetative management projects. DEIR at 76; Guidelines §§ 15152(f), 15168(c)(1). A “later EIR shall be required when the initial study or other analysis finds that the later project may cause significant effects on the environment that were not adequately addressed in the prior EIR.” Guidelines § 15152(f). Moreover, CEQA mandates the issuance of a notice of determination whenever any subsequent activity is approved or carried out. § 21152.

#### **IV. The DEIR’s Impact Analysis Is Inadequate to Promote Informed Decision-Making**

##### **A. Biological Resources**

The DEIR’s analysis of the Project’s impacts to biological resources is inadequate in four respects. First, the 100-foot buffer zone is riddled with exceptions and is thus inadequate as a mitigation measure. Second, formulation of mitigation measures is unlawfully deferred. Third, the EIR’s conclusion that impacts will be mitigated to a less-than-significant level cannot stand in light of its acknowledgment that the Project may have unavoidable impacts to special-status species. See *Vineyard Area Citizens for Responsible Growth v. City of Rancho Cordova* (“*Vineyard*”) (2007) 40 Cal.4th 412, 449 (a “potential substantial impact on endangered, rare or threatened species is *per se* significant”). Fourth, the DEIR fails to quantify impacts to sensitive natural communities.

The Project includes a 100-foot buffer zone between management activities and “special-status species occurrences, or essential habitat features such as nests in active use.” DEIR at 134. This mitigation measure is inadequate because it contains a gaping loophole. The DEIR notes that the Project did not originally permit any incursion into buffer zones and takes it upon itself to create a nebulous exception to the buffer zone for “necessary management activities taking place within the 100-foot buffer surrounding an identified natural resource.” DEIR at 135 (an exception “is necessary because other aspects of the [Project] could require activities within the buffer zone”). As examples of what types of activities could fall within the exception, the DEIR explains that “[f]or example, exceptions to vegetation treatment within this standard buffer zone may be necessary for invasive species control and eradication, particularly where they pose a substantial threat to the sensitive resource, or for essential fire fuel management activities.” DEIR at 134. Given that the main purpose of the Project is to conduct invasive species control and wildfire risk management, allowing incursions into the buffer zone for invasive species control and wildfire risk management defeats the entire purpose of having a “minimum 100 foot buffer zone” in the first place. This mitigation measure is illusory and unenforceable and thus

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violates CEQA. § 21081.6(b).

Many of the mitigation measures designed to ensure that the Project's impacts to biological resources will be mitigated have not yet been formulated; their adequacy is thus unknown. For example, and for illustrative purposes only, the DEIR states that "MCOSD will prepare a treatment plan" for management activities within the 100-foot buffer, and that this treatment plan "will evaluate options for the protection and enhancement [sic], if appropriate, identify controls for avoiding and minimizing potential adverse effects on the sensitive natural resource, and include requirements for construction and post-construction monitoring." DEIR at 135. But the public has a right to comment on the efficacy of these mitigation plans. It violates CEQA to merely require compliance with a future plan whose contents are wholly unknown. *Gentry v. City of Murrieta* (1995) 36 Cal.App.4th 1359, 1396. Mitigation measures for wetlands and wildlife habitat are similarly deferred. *E.g.*, DEIR at 140 (activities within 100 feet of a wetland are permitted subject to preparation of an unspecified "treatment program . . . to ensure careful controls are fully implemented and conditions adequately monitored"), 143 ("Any modifications to continuous vegetation cover will consider possible adverse effects on wildlife habitat values, and the MCOSD shall consider limiting excessive thinning or disruption of continuous canopy to native woodland and forest cover, if necessary to prevent significant impacts to native vegetation and wildlife habitat").

The DEIR's conclusion that impacts to biological resources will be mitigated to a less-than-significant level is contradicted by its admission that in some circumstances under the Project "disturbance to essential habitat of special-status species is unavoidable." DEIR at 134. Such an impact is "is *per se* significant." *Vineyard*, 40 Cal.4th at 449. This informational void is compounded by the lack of any concrete information about how MCOSD will avoid impacting special-status species when it exercises its unfettered discretion to ignore the 100-foot buffer zones. Without concrete mitigation plans that demonstrate to the public that such incursions indeed pose no risk of harm, there is no basis for concluding that "disturbance to essential habitat of special-status species" is a less-than-significant impact.

Finally, the DEIR's analysis of impacts to sensitive natural communities is inadequate to promote informed decision-making. The DEIR states that "quantification of potential impacts on existing biological resources is generally not possible," but it does not explain why. DEIR at 137. Moreover, the DEIR states that

complete avoidance of these [sensitive natural communities] is not feasible, given the need to address invasive species infestations, provide fire fuel management, and implement other possible programs in the VBMP. In these instances, further controls must be developed by MCOSD to address any potential adverse effects and provide appropriate mitigation, where warranted, as called for in Mitigation

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Measures 5.1-1 (a) and 5.1-1 (b). This would include site-specific mapping, evaluation of options for treatment, consideration of the rarity of the sensitive natural community type, and implementing a compensatory mitigation program, if warranted.

DEIR at 138. Given that the DEIR could not quantify impacts to sensitive natural communities nor promise to avoid those communities when spraying pesticides nor even provide the public with any information about the “compensatory mitigation program” MCOSD plans to implement, its conclusion that impacts to these communities would be less-than-significant is wholly unfounded.

## **B. Hydrology and Water Quality**

The DEIR fails to appropriately discuss the VBMP Project’s water quality impacts, including impacts of pesticide applications on watersheds. It fails to adequately mitigate the Project’s water resource impacts, and it incorrectly concludes that the VBMP Project’s impacts will be mitigated to less-than-significant levels.

The DEIR sets a wholly inadequate pesticide buffer – one that fails to account for variations between different pesticides, topographic features and vegetative covers – and appears to state that even this buffer would not apply in all circumstances. As discussed above, there are instances where MCOSD will be applying chemicals much closer to the water, but the DEIR fails to adequately apprise the public of these instances. *E.g.* DEIR at 169.

As discussed more thoroughly in section V. D. Pesticide Hazards, it is unacceptable that the DEIR fails to discuss the risks of fluazifop-P-butyl to “reach[] surface water via runoff for *several months or more* after application” (as identified on the Fusilade DX and Fusilade II pesticide labels approved by the U.S. Environmental Protection Agency (“EPA”)). The DEIR’s water quality discussion overlooks the extreme risk of runoff posed by Fusilade DX and Fusilade II; and instead assumes that its indeterminate buffer will prevent harm.

The DEIR also incorrectly assumes that mitigation measures will prevent erosion and sedimentation impacts from reaching waterways. DEIR at 172-174. But the mitigation measures fail to address the impacts of the Project. Because the Project intends to remove and/or kill unwanted vegetation, it will interfere with the normal action of plant roots and foliage to keep soil from eroding. When plants are killed, their roots will no longer provide soil stability on steep slopes, and their foliage will no longer prevent rain and wind erosion of the newly exposed soil. This will happen even in areas where mechanical soil disturbance has not occurred, yet Mitigation Measure 5.2-2(b) targets only disturbed soils.

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In addition, the DEIR's water quality analysis entirely fails to address the risks of groundwater contamination associated with the VBMP Project's use of pesticides. *See* DEIR at 147-176. Fusilade DX (and Fusilade II), Garlon 3A, Garlon 4 Ultra, Milestone, Transline, and Triclopyr 4E all risk contaminating groundwater, according to their EPA approved labels. In particular, fluazifop-P-butyl and clopyralid pose a heightened risk that the chemicals will leach or seep into groundwater, according to the EPA approved labels for Transline, Fusilade DX and Fusilade II. The DEIR must be revised and recirculated to address the impacts of pesticide applications on surface water quality, fish and wildlife health, soil erosion and sedimentation, and the risk that such applications could contaminate groundwater basins. Guidelines § 15088.5.

### C. Geology and Soils

The DEIR acknowledges that MCOSD's preserves are located atop highly unstable slopes that present a "very severe erosion hazard" and are riddled with landslides. DEIR at 180-181, 189, 191. Protecting against further mobilization of soils is of paramount importance: the DEIR admits that "debris flows have resulted in devastating consequences to urban areas located downslope of preserve hillsides." DEIR at 189. But the DEIR contains only vague promises rather than enforceable measures to reduce these risks. This amounts to an end-run around CEQA's public participation requirements that cannot be countenanced.

For example, the DEIR's discussion of landslide hazards merely leaves the public guessing about what will be done. The DEIR concedes that "VBMP best management practices do not address slope hazards and unstable materials" even as it admits in the next sentence that "[i]mplementation activities that reduce static stability of sloped areas, particularly where fuel[]breaks are located, would result in hazardous landslide and debris flow conditions." DEIR at 190. To remedy this obvious deficiency, the DEIR states only that "[g]eologic hazards . . . shall be assessed and if present shall be taken into account." DEIR at 190. But how? Its only other requirement is that "[g]round disturbance in areas of identified landslide and debris flow hazards shall be performed in a manner to avoid reactivation of landslides or decreasing slope stability." *Id.* at 191. What manner is that? CEQA mandates that the public be given the answers to these questions now. *Gentry, supra*, 36 Cal.App.4th at 1396 (to "require the applicant to comply with any recommendations of a report that ha[s] yet to be performed . . . improperly defers the formulation of mitigation"). Here, the DEIR merely promises that at some undefined future date MCOSD will hire a geologist and comply with his or her recommendations to avoid repeat "devastating consequences to urban areas located downslope of preserve hillsides." DEIR at 189-191. This stratagem precludes the public from ensuring the adequacy of the DEIR's mitigation and accordingly violates the law. *Gentry, supra*, 36 Cal.App.4th at 1396.

The DEIR states that the type of soil under MCOSD's preserves contains serpentine, a

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rock that it understatedly admits has a “unique chemistry.” DEIR at 181-182. This “unique chemistry” includes asbestos, an *extremely dangerous* chemical that causes mesothelioma.<sup>3</sup> The Project’s grading activities are likely to create dust. DEIR at 265. Are they thus likely to mobilize asbestos? The DEIR provides no discussion of this issue at all, and only identifies measures to *reduce* dust emissions, not *avoid* them. DEIR at 288. But even small amounts of asbestos-laden dust pose a significant public health concern. The DEIR must be recirculated with an assessment of this risk. Guidelines § 15088.5.

#### **D. Pesticide Hazards**

In at least six ways, the DEIR fails to appropriately analyze the significant ecological and human health risks associated with the 28 chemical treatment scenarios it evaluates. Therefore, it downplays the significant human health and environmental harms that will result from their use.

First, the DEIR indicates that the risk screening process data presented in DEIR Appendix E was developed by using the EPA’s “OPP Ecotoxicity Database” to find “toxicity data for the active ingredient” in each pesticide. DEIR at 262. But *inert* ingredients in pesticides are not harmless. *See* 7 U.S.C. § 136 (a) & (m) (defining active and inert ingredients, respectively). Inert ingredients often alter the way that formulated products interact with the environment by allowing them to bind to surfaces and penetrate into areas they otherwise would not. Inert ingredients can be highly toxic, and often increase the toxicity of active ingredients.<sup>4</sup> Studies have shown that glyphosate formulations, for example, have worse impacts than glyphosate alone.<sup>5</sup> The DEIR also fails to address the ecological and health impacts of the surfactant that

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<sup>3</sup> *See, e.g., Should We Be Worried About Asbestos in Serpentine Rock?*, BayNature, available at <https://baynature.org/articles/should-we-be-worried-about-asbestos-in-serpentine-rock/> (“The answer is yes, we actually should worry about exposure to the soil created from serpentine rock, especially airborne dust”) (as visited July 7, 2015).

<sup>4</sup> C. Cox, M. Sorgan, Unidentified Inert Ingredients in Pesticides: Implications for Human and Environmental Health, *Environmental Health Perspectives* (Dec. 2006) 114(12): 1803–1806. Available at: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1764160/> [accessed July 7, 2015].

<sup>5</sup> *Id.* Cox and Sorgan note that:

1) “Peixoto (2005) found that a glyphosate formulation caused a significant reduction in the activity of rat liver mitochondrial respiratory complexes *in vitro* but that glyphosate alone had no effect.” *Citing* F. Peixoto, Comparative effects of the Roundup and glyphosate on mitochondrial oxidative phosphorylation. *Chemosphere*. (2005); 61:1115–1122.

2) “*In vitro* treatment of human lymphocytes with glyphosate and a glyphosate formulation

will be mixed with the pesticides prior to application. See DEIR at 248. By examining only the

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resulted in a significantly higher rate of induction of sister chromatid exchange by the formulated product (Bolognesi et al. 1997). Both the formulation and glyphosate increased micronucleus formation in mouse bone marrow; the increase was “more pronounced” with the formulation.” Citing C. Bolognesi, et al, Genotoxic activity of glyphosate and its technical formulation Roundup. *J Agric Food Chem* (1997);45:1957–1962.

3) “Inert ingredients may enhance the reproductive toxicity of active ingredients. Both the herbicide glyphosate and a glyphosate formulation were toxic to human placenta cell cultures (Richard et al. 2005). However, the formulation was significantly more toxic than glyphosate alone; the median lethal dose for the formulation was half that of the active ingredient.” Citing S. Richard, et al, Differential effects of glyphosate and roundup on human placental cells and aromatase, *Environmental Health Perspectives* (June 2005); 113(6):716-20.

4) “In one study, a glyphosate-containing herbicide formulation inhibited progesterone production in vitro in mouse Leydig cells, but glyphosate did not (Walsh et al. 2000).” Citing Walsh LP, McCormick C, Martin C, Stocco DM. Roundup inhibits steroidogenesis by disrupting steroidogenic acute regulatory (StAR) protein expression. *Environmental Health Perspectives* 2000;108:769–776.

5) “Richard et al. (2005) noted that a glyphosate formulation inhibited the activity of human placental cell aromatase, which converts androgens into estrogens. Again, glyphosate alone did not inhibit the activity of this enzyme.” Citing S. Richard, et al, Differential effects of glyphosate and roundup on human placental cells and aromatase, *Environmental Health Perspectives* (June 2005); 113(6):716-20.

6) “Toxic effects of some pesticide formulations on fish can be increased by the inert ingredients. One of the most commonly known examples is glyphosate; some formulations are 10–100 times more acutely toxic to fish than is the active ingredient alone (U.S. EPA 1993).” Citing U.S. EPA 1993. Registration Eligibility Decision (RED): Glyphosate. Washington, DC:U.S. Environmental Protection Agency. Available at: [http://www.epa.gov/oppsrrd1/REDS/old\\_reds/glyphosate.pdf](http://www.epa.gov/oppsrrd1/REDS/old_reds/glyphosate.pdf) [accessed July 7, 2015].

7) “Howe et al. (2004) found that exposure of *Rana pipiens* tadpoles to environmentally relevant concentrations of glyphosate formulations reduced size at metamorphosis but increased time to metamorphosis, frequency of tail damage, and frequency of abnormal gonads. Glyphosate alone did not have these effects.” Citing Howe CM. Toxicity of glyphosate-based pesticides to four North American frog species. *Environ Toxicol Chem*. 2004;23:1928–1938.

8) “Everett and Dickerson (2003) found that a glyphosate formulation was 100 times more toxic to ciliated protozoans than glyphosate.” Citing Everett KDE, Dickerson HW. Ichthyophthirius multifiliis and Tetrahymena thermophila tolerate glyphosate but not a commercial herbicidal formulation. *Bull Environ Contam Toxicol*. 2003;70:731–738.

toxicity of the active ingredients instead of the formulated products and the products as mixed for application, the DEIR and Appendix E have overlooked significant sources of environmentally damaging materials.

Second, the screening process improperly downplays the risks posed by Fusilade DX and/or Fusilade II. *See* DEIR E-67. Fusilade DX (which is only registered for *agricultural use* with the EPA) and Fusilade II (which is available for non-agricultural use) pose significant risks to watersheds, including groundwater. The EPA approved labels for Fusilade DX and Fusilade II (which both contain 24.5% fluazifop-P-butyl, the active ingredient) state that it can contaminate groundwater through leaching, and has “a high potential for reaching surface water via runoff for *several months or more* after application.” (Emphasis added). Further, these products are “highly toxic” to aquatic organisms, including amphibians, fish and invertebrates. Yet the screening process claims that there is a low risk of fluazifop-P-butyl products harming these organisms. DEIR E-67. Because these products can contaminate surface waters “several months or more after application,” the risk of such harm is much higher than the DEIR lets on.

Third, the DEIR improperly downplays and ignores the harms associated with Milestone (active ingredient aminopyralid (triisopropanolammonium salt)) and Transline (active ingredient clopyralid (monoethanolamine salt)). According to the EPA approved labels for these products, the urine and manure of animals that consume plants treated with these chemicals can cause unintended plant damage, as the pesticides concentrations in the animal waste remain high enough to cause damage. Thus, foliar applications of Milestone (which can also make poisonous plants more palatable to grazing animals) and Transline can be consumed by grazing deer (or goats brought in for fuel management), and then eliminated, without regard to application precautions to protect sensitive habitats and resources. As Milestone poses a significant risk to aquatic amphibians, and can make even poisonous plants enticing, it should not be included as part of the VBMP Project.

Fourth, the screening process improperly downplays the chronic toxicity of the chemicals considered as part of the VBMP Project. For example, it ignores the significant risk of harm from clethodim, the active ingredient in Envoy Plus. In a January 13, 2014, memorandum the EPA found that all uses of clethodim have potential direct chronic toxicity effects on fish and aquatic-phase amphibians.<sup>6</sup> Thus, while acute exposure to clethodim is considered practically

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<sup>6</sup> C. Wendel, G. Orrick, *Clethodim: Preliminary Ecological Risk Assessment for Registration Review*, US EPA (Jan 13, 2014), pp. 1-2, as published at <http://www.regulations.gov/#!documentDetail;D=EPA-HQ-OPP-2008-0658-0020> [accessed July 7, 2015]. Available for download at <http://www.regulations.gov/contentStreamer?documentId=EPA-HQ-OPP-2008-0658-0020&disp>

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non-toxic to these aquatic organisms, prolonged exposure is likely to cause significant harms. The DEIR's screening process appears to address only the *acute* risks of clethodim on fish and thus incorrectly concludes that it is "[s]lightly toxic." DEIR E-11. The DEIR and Appendix E improperly fail to address the *chronic* toxicity of clethodim and any of the other chemicals in the VBMP Project, despite their significant harms to the environment. This omission must be addressed and the DEIR must be recirculated for public review and comment once its analysis is complete. Guidelines § 15088.5.

Fifth, the DEIR fails to account for the many harms associated with the use of glyphosate. Glyphosate – the active ingredient in Aquamaster/Roundup Custom and Rodeo – threatens human health, and environmental harm in several more ways than the significant impacts to fish, aquatic-phase amphibians and aquatic invertebrates discussed in the DEIR (DEIR at 265).<sup>7</sup> Glyphosate is extremely persistent, and can be detected at application levels months after application. Because glyphosate attacks the ability of plants and bacteria to synthesize aromatic amino acids, Monsanto has patented its use as an antimicrobial agent; its use interferes not only with target plants but also with soil bacteria (and bacteria inside anything that accidentally ingests its residue).<sup>8</sup> Healthy soil bacteria should be preserved – not jeopardized by glyphosate – to meet MCOSSD's goals of native vegetation restoration.<sup>9</sup> Yet the DEIR does not mention these significant ecological risks. The DEIR also ignores glyphosate's risks to human health. In March 2015, the World Health Organization's International Agency for Research on Cancer

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osition=attachment&contentType=pdf [accessed July 7, 2015].

<sup>7</sup> Indeed, given glyphosate's toxicity, it is possible that an unintended consequence of its use will be an increase in mosquitos in Marin County, as it *removes mosquito predators* from the food-chain.

<sup>8</sup> N. de María, et al., New insights on glyphosate mode of action in nodular metabolism: Role of shikimate accumulation, *J. Agric Food Chem.* (April 5, 2006) 54(7):2621-8; Monsanto Technology LLC, Missouri. Glyphosate formulations and their use for the inhibition of 5-enolpyruvylshikimate-3-phosphate synthase. 2010. US Patent number 7771736 B2. <https://www.google.com/patents/US7771736>.

<sup>9</sup> See e.g. McNear Jr., D. H. (2013) The Rhizosphere - Roots, Soil and Everything In Between. *Nature Education Knowledge* 4(3):1 (at the discussion of "Plant Growth Promoting Rhizobacteria (PGPR)"). Available at: <http://www.nature.com/scitable/knowledge/library/the-rhizosphere-roots-soil-and-67500617> [accessed July 7, 2015].

(“IARC”) determined that glyphosate is “probably carcinogenic to humans.”<sup>10</sup> It is suspected to cause miscarriages and abnormal fetal development, promote cell growth in breast-cancer cells, impact hormone levels, interfere with cytochrome P450 oxidase in the intestine and liver, and can impair the normal balance of intestinal microbes. The DEIR’s failure to consider these potentially significant human health risks must be corrected.

Sixth, the DEIR states that all Notices of Pesticide application will be removed four days after application, as part of BMP-Invasive Plant-1. DEIR at 167, 255, 269, 286; see sample notice at DEIR E-94.<sup>11</sup> As discussed above, however, glyphosate, fluazifop-P-butyl, and other chemicals proposed for use in the VBMP Project will persist in the environment long after that four day period ends. Thus MCOSD’s planned premature sign removal will expose sensitive receptors to higher levels of harmful chemicals, without any warning. Given that people use MCOSD’s open-space preserves for picnicking, and berry harvesting, MCOSD’s proposed mitigation cannot sufficiently reduce the harm of accidental pesticide exposure.

#### **E. Fire Hazards**

The DEIR fails to analyze significant aspects of the VBMP Project’s fire hazards, and thus fails to find that the Project would “[e]xpose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.” DEIR at 221, 239. This is because the DEIR frames the issue as whether an “incomplete or insufficient” fuel management strategy will increase a risk of loss. DEIR at 237. But the DEIR fails to ask whether the use of pesticides in the VBMP Project will increase the combustion risks on treated lands. Glyphosate is a desiccant. This means it causes vegetation to which it is applied to dry out. Indeed, glyphosate is used to remove moisture from cultivated plants in order to harvest and store their seeds. Thus, any vegetative material that has been exposed to glyphosate is more likely to ignite, burn hot, and spread fire rapidly. Yet this wildlife risk is ignored in the DEIR. Further, glyphosate’s persistence in the environment increases the likelihood that non-target plants will absorb at least some quantities of this dangerous desiccant, further increasing this fire risk. The DEIR’s failure to address these significant fire hazards violates CEQA, and must be corrected in a recirculated DEIR. Guidelines § 15088.5.

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<sup>10</sup> See Joint FAO/WHO Meeting on Pesticide Residues (JMPR). Available at: [http://www.who.int/foodsafety/areas\\_work/chemical-risks/jmpr/en/](http://www.who.int/foodsafety/areas_work/chemical-risks/jmpr/en/) [accessed July 7, 2015].

<sup>11</sup> NCRA notes that Appendix E’s Table of Contents does not reflect the appropriate page numbers; the sample notice is located at DEIR E-94, not E-74.

## F. Air Quality and Greenhouse Gas Emissions

The DEIR's analysis of air quality and greenhouse gas impacts is inadequate in four respects. First, the DEIR fails to meaningfully address whether the Project will cause odors. Second, the DEIR's incomplete analysis of the Project's greenhouse gas emissions is contrary to law. Third, the DEIR fails to address whether the Project's use of pesticides will cause a violation of air quality standards. Fourth, the DEIR's treatment of sensitive receptors is inadequate.

First, the DEIR fails to include information necessary to determine whether the Project's prescribed burns will "create objectionable odors affecting a substantial number of people." DEIR at 283. Two essential pieces of information are missing. First, with respect to the question whether MCOSED's burns have historically caused odor complaints, the DEIR states only that there "is no record of complaints about odor *which can be characterized as substantial or frequent.*" DEIR at 283 (emphasis added). But is there *any* record of complaints, which is the operative question in light of the past frequency of controlled burns? The DEIR must provide information on how many odor complaints have been filed in the past and describe each such complaint. Second, the DEIR states that the Project "is not anticipated to increase the *frequency* of prescribed burns," but it contains no information about whether the *scope* of the prescribed burns that do occur will increase. *Id.*

Second, the DEIR's analysis of the Project's greenhouse gas emissions is inadequate for three reasons. Most fundamentally, the DEIR excuses itself from performing a detailed analysis of the Project's greenhouse gas emissions on the basis that the "BAAQMD CEQA Air Quality Guidelines do not include quantified thresholds for temporary activities such as construction." DEIR at 204. But under CEQA the rule is that "in preparing an EIR, the agency must consider and resolve every fair argument that can be made about the possible significant environmental effects of a project, irrespective of whether an established threshold of significance has been met with respect to any given effect." *Protect the Historic Amador v. Amador Water Agency* (2004) 116 Cal.App.4th 1099, 1109. "[T]hresholds cannot be used to determine automatically whether a given effect will or will not be significant." *Id.* at 1108-1109. MCOSED must project the Project's greenhouse gas emissions and then explain whether those impacts are or are not significant.

The DEIR also improperly lacks enforceable mitigation for the Project's greenhouse gas emissions. It contains only platitudes: the Project "contains strategies for supporting the adaptation of natural systems to climate change and the consideration of ecosystem carbon storage in making vegetation management decisions." What are these strategies? Why is "consideration of ecosystem carbon storage" a mere "support[ed]" "strateg[y]" rather than a mandatory obligation? Lacking substance, the DEIR does not say. It should be revised to

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mandate that all of the Project's greenhouse gas emissions be eliminated by using electric rather than diesel motor vehicles and equipment, or otherwise offset.

The DEIR's analysis of greenhouse gases is also inadequate because it assumes without any explanation at all that Project implementation "is consistent with the requirements of Assembly Bill 32, which mandates a reduction of GHG emissions by 15 to 20 percent from 1990 levels by the year 2020." DEIR at 284. But the DEIR admits that the Project's ongoing management activities will cause greenhouse gas emissions, and those management activities will occur in 2020, so the justification (if any) for concluding that the Project will not impair, at least to some degree, the state's goal of dramatically reducing greenhouse gas emissions by that date is not immediately apparent. To the contrary, it appears that the Project will impede achievement of this laudable goal. The DEIR fails to show otherwise. Thus, its analysis fails to support its conclusions.

Third, the DEIR's discussion of whether the Project will contribute to air quality violations is incomplete. It contains no information on whether the Project's pesticide use will cause violations of air quality standards. Many of the pesticides that will be used contain volatile organic compounds, including but not limited to Envoy plus (clethodim), Fusilade DX/Fusilade II (fluzifop-P-butyl), Triclopyr 4E (triclopyr (triethylamine salt)), Garlon 4 Ultra (triclopyr (triethylamine salt)), and Poast (sethoxydim). They may also contain particulate matter, such as PM10 and PM2.5. The DEIR must be revised to include this crucial information about the air quality impacts of pesticides.

Fourth, the DEIR's treatment of sensitive receptors is inadequate. The EIR contains no information about approximately how many sensitive receptors are located near its preserves or whether any particular facilities that are especially likely to contain sensitive receptors, such as schools or nursing homes, are adjacent to its lands. It merely states that "[s]ome sensitive receptors may be located adjacent to MCOSD preserves." DEIR at 289. For the same reason, the DEIR's mitigation measures are inadequate. The DEIR makes no attempt to mitigate the impacts of fires and pesticides on those who are especially sensitive to health risks. It could not provide as mitigation a requirement that pesticides cannot be sprayed at locations near sensitive receptors, because MCOSD does not know – or at least, its DEIR fails to show – where those sensitive receptors are. Instead, the DEIR relies upon the general mitigation for ordinary hazards, such as best management practices for invasive species and fuel management. *Id.* Compliance with general air quality standards does not ensure that particularly sensitive receptors will be protected, yet the DEIR incorrectly assumes just that.

## **G. Noise**

The DEIR contrasts the VBMP Project's noise impacts with those of construction

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activities. DEIR at 300-301. The DEIR concludes that the VBMP Project's noise impacts will not exceed the County's significance thresholds. DEIR at 298-301. But the County's noise thresholds for construction activities in the built environment are not the appropriate measure of the noise impacts of the VBMP Project in its wildland context. The appropriate question is not whether the VBMP Project's noise impacts conflict with a threshold, but whether they will be significant under CEQA. *Protect The Historic Amador Waterways, supra*, 116 Cal.App.4th at 11108-1109. Here, the answer to that question is yes.

The Marin County Open Space District Code ("MCOSD Code"), which is Appendix A to the Marin County Code, restricts noise within the preserve system by prohibiting or criminalizing a wide range of activities. *See e.g.* MCOSD Code § 02.01.050 (misdemeanors and infractions). Thus, the MCOSD Code prohibits the following activities within its preserves:

- ▶ motorized vehicles and vessels (MCOSD Code §§ 02.04.010, 02.04.030)
- ▶ "any loud, unnecessary or unusual noise which disturbs the peace and quiet within any area within the district," and the "operat[ion] or possess[ion] of any public address system, amplified musical instrument or other noise-producing or transmitting device on district lands" (MCOSD Code § 02.02.100)
- ▶ groups of twenty or more participants conducting any activities without prior approval (MCOSD Code §02.02.040)
- ▶ organized "running, jogging or cross-country meets, events, or practice sessions" without prior approval (MCOSD Code § 02.02.070)
- ▶ organized games like "volleyball, baseball, softball, soccer, football and other similar organized sports" (MCOSD Code § 02.02.080(A))
- ▶ "loud or disturbing conduct or any act tending to a breach of the peace" (MCOSD Code § 02.02.170(D))
- ▶ any "noisy . . . dog or other animal" (MCOSD Code § 02.05.010 (d)).

For these reasons, as the MCOSD admits, its "preserves are quiet areas." DEIR at 300. When compared to the ambient noise within the open space preserves, the VBMP Project's use of trucks, weed eaters, brush cutters, chain saws, mowers, small excavators, and all-terrain vehicles will be a jarring contrast. *See* DEIR at 300-301. Thus, despite the DEIR's claims, the VBMP Project *will* "generate a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project" and thus *will* have a significant noise impact. *See* DEIR at 298. The DEIR's conclusion to the contrary is plainly unsupportable.

## **H. Visual Quality**

The MCOSD's preserve system plays a critical role in maintaining the visual character of Marin County. The open spaces, including the upland greenbelt and ridge areas, provide

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extraordinary viewsheds throughout much of the County. The DEIR and VBMP fail to protect these unsullied views. The DEIR states that the VBMP Project's visual resource impacts will be less-than-significant and that no mitigation measures are required. DEIR at 313-314. But to reach this conclusion, the DEIR makes several analytical leaps unsupported by the facts.

First, the DEIR does not distinguish between existing and planned fuel breaks in its discussion of their location. DEIR at 216. Yet the appropriate baseline for analyzing the Project's impacts does not include hypothetical fuel breaks that may occur, but instead those that already exist. *Communities For a Better Environment v. South Coast Air Quality Management Dist.* (2010) 48 Cal.4th 310, 322. Without a clear understanding of the baseline condition, it is impossible to assess how the VBMP Project will *alter* that condition.

Second, the DEIR states that the VBMP Project's "creation of new fuel breaks, thinning of vegetation for defensible space, and the removal of non-native vegetation may have short term visual impacts" but incorrectly assumes that vegetation will grow back and render these impacts less-than significant. DEIR at 312-313. Yet the very purpose of a fuel break – an area where "vegetative fuels have been removed" – is to *maintain* an area where fire cannot easily spread. DEIR 67; VBMP at 3-35 (a fuel break is a "permanent facility requiring ongoing maintenance"). The ongoing activities under the VBMP will include creating and maintaining fuel breaks, which will range from 60 to 200 feet wide, for primary and secondary breaks. DEIR at 67-68. In addition, the VBMP Project contemplates new "wide-area fuel[ ]breaks on the borders of preserves near residential communities." DEIR at 68. The VBMP states that these breaks "cover large areas of land, not necessarily located near roads." VBMP at 3-33. These new wide-area fuel breaks are in addition to the existing fuel breaks, all of which will be managed differently under the VBMP Project. DEIR at 67-68. These additional fuel breaks are *not* individually addressed as part of the DEIR's discussion of visual quality, despite proposed removal of vegetation in these "large areas of land." Indeed, the two examples of wide-area fuel breaks provided in the DEIR are 22 acres, and 20.1 acres respectively (when adding a proposed fuel break to an existing one). *See* DEIR at 227-228, (Figures 5.4-13, 5.4-14).

The DEIR thus mischaracterizes and ignores the significant visual resource impacts of the VBMP Project. Because the VBMP will convert "large areas of land" that are currently vegetated to permanent areas that will be maintained with "vegetative fuels" *removed*, the DEIR's conclusion that any visual impacts would not be a "permanent" alteration is incorrect. DEIR at 312-313. Further, the DEIR incorrectly downplays vegetation removal's "permanent changes to preserve area[s]" by assuming such changes are "superficial in nature" and lacking "substantial effect on visual quality." DEIR at 314. These vast denuded areas, which will be visible from neighborhood homes, are permanent alterations to the visual landscape. The DEIR must be revised to fully disclose, analyze, and where feasible, mitigate the VBMP Project's significant visual resource impacts.

## I. Cultural Resources

The EIR acknowledges that the Project's grading and soil disturbance could cause the destruction of "unidentified buried other or otherwise obscured cultural or historic resources." DEIR at 321. Its mitigation measures provide that the Federated Indians of the Graton Rancheria will recommend "a state-qualified archeologist or an archeological consultant" to develop "proposals for any procedures deemed necessary." *Id.* at 321-322. This mitigation measure must be revised to require formal notification of the State Office of Historic Preservation.<sup>12</sup> The mitigation measures go on to provide that if "discovered artifacts are considered prehistoric consultation with interested Native American groups is advised." *Id.* at 322. To meet CEQA's requirement that mitigation be enforceable, this mitigation measure must be revised to both *mandate* such consultation and specify who will be consulted if no other groups come forward. § 21081.6(b). Finally, the DEIR should disclose whether local Native American groups utilize MCOSD preserves for cultural activities and, if so, the extent to which the Project will affect such uses. §§ 21080.3.1, 21074.

## J. Cumulative Impacts

"One of the most important environmental lessons evident from past experience is that environmental damage often occurs incrementally from a variety of small sources. These sources appear insignificant, assuming threatening dimensions only when considered in light of the other sources with which they interact." *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 720. An adequate cumulative impacts analysis is essential to the CEQA process:

It is vitally important that an EIR avoid minimizing the cumulative impacts. Rather, it must reflect a conscientious effort to provide public agencies and the general public with adequate and relevant detailed information about them. A cumulative impact analysis which understates information concerning the severity and significance of cumulative impacts impedes meaningful public discussion and skews the decisionmaker's perspective concerning the environmental consequences of the project, the necessity for mitigation measures, and the appropriateness of project approval. An inadequate cumulative impact analysis does not demonstrate to an apprehensive citizenry that the governmental decisionmaker has in fact fully analyzed and considered the environmental consequences of its actions

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<sup>12</sup> Additionally, the State Office of Historic Preservation should be added to the list of responsible agencies. DEIR at 75.

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*Citizens to Preserve the Ojai v. County of Ventura* (1985) 176 Cal.App.3d 421, 431. Here, the DEIR's cursory cumulative impact analysis had precisely this pernicious effect. It is devoid of any meaningful information and thereby improperly "impedes meaningful public discussion and skews the decisionmaker's perspective." *Id.*

The DEIR repeatedly acknowledges both the Project's potentially significant impacts and the already compromised environment of Marin County. But it concludes without explanation that the Project will not make a meaningful contribution to further environmental deterioration. For example, the DEIR states that the cumulative effect of development in Marin County under the General Plan from which the Project is tiered is a "cumulatively significant" "loss of undeveloped habitat and possible further fragmentation of the remaining natural areas." DEIR at 360. As noted above, the DEIR also takes the position that in some cases "impacts on sensitive natural resources are unavoidable." *Id.*; see also DEIR at 134. Yet the DEIR concludes without any explanation at all that "with the adoption of recommended mitigation measures . . . implementation of the VBMP would not make a cumulatively considerable contribution to the identified cumulative impact to biological resources."

But the DEIR's facile claims of insignificant impacts conflict sharply with its underlying analysis. The DEIR's mitigation measures purport only to *mitigate*, not *avoid*, the Project's impacts on biological resources.<sup>13</sup> Consequently, the Project will make *some* contribution to a cumulatively significant impact. The DEIR's conclusion that the Project's incremental contribution is so minor as to be insignificant is wholly unsupported by the facts and analysis CEQA requires. CEQA mandates that the EIR contain information sufficient to allow the public to trace the agency's analytical path from evidence to conclusion. *Laurel Heights Imp. Ass'n v. Regents of University of California* (1988) 47 Cal.3d 376, 404. Moreover, under CEQA, even a "de minimis contribution" to an existing cumulative impact may be significant. *Communities for a Better Environment v. California Resources Agency* (2002) 103 Cal.App.4th 98, 117-121; see also § 21083(b)(2) ("individually limited" impacts may still be "cumulatively considerable"); Guidelines § 15065(a)(3) (same).

The rest of the cumulative impact analysis suffers from the same flaw. For example, the

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<sup>13</sup> Indeed, these mitigation measures are inadequate even to do that, because the primary means of mitigation the DEIR relies upon is a 100-foot buffer zone that is subject to incursion whenever MCOSD feels the need to conduct management activities near special-status species and sensitive natural resources. Compare, e.g., DEIR at 135 (allowing pesticide spraying within the buffer) with DEIR at 171 ("The 100 foot buffer would provide for substantial degradation or sequestering of any herbicide ingredients or byproducts through both soil, plant/litter and water contact").

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DEIR admits that the Project will “result[] in a significant impact by exceeding water quality standards” yet nonetheless concludes that the Project will “not make a cumulatively considerable contribution to the identified cumulative water and hydrology impacts” merely because the DEIR promises to mitigate impacts to water quality to some unstated degree. DEIR at 361-362. The discussions of impacts to geology and soils, fire hazards, air quality, noise, and visual quality are equally obscure and just as unlawful.

Where the DEIR does provide detailed reasons for its conclusions, those grounds are specious. For example, the DEIR states that pesticide spraying will not have significant cumulative impacts because of (1) pesticide degradation, (2) the localized nature of applications, and (3) the “low toxicity of herbicides.” DEIR at 364-365. However, as discussed above, many of the pesticides that will be used linger in the environment for months or weeks, these pesticides can easily mobilize into groundwater basins, and they are highly toxic to amphibians and other aquatic species. The environmental and human health hazards caused by the use of pesticides will have significant cumulative impacts, particularly in light of the fact that Marin County’s waterbodies are already designated as being excessively impaired by pesticides.

## **V. The Mitigation Measures Are Unlawfully Deferred**

“Mitigating conditions are not mere expressions of hope.” *Lincoln Place Tenants Association v. City of Los Angeles* (2005) 130 Cal.App.4th 1491, 1508. “Formulation of mitigation measures should not be deferred.” Guidelines § 15126.4(a)(1)(B). CEQA requires the DEIR to discuss “each” possible mitigation measure and “the basis for selecting a particular measure should be identified.” *Id.* “[R]equir[ing] . . . the . . . adopt[ion of] mitigation measures recommended in a *future* study is in direct conflict with the guidelines implementing CEQA.” *Sundstrom v. County of Mendocino* (1988) 202 Cal.App.3d 296, 306 (emphasis added). “Mitigation measures must be fully enforceable.” Guidelines § 15126.4(a)(2); *see also* § 21081.6(b)

Here, the DEIR violates all of these requirements. It unlawfully defers the creation of enforceable mitigation measures in most instances. For example, as discussed above, when addressing landslide risks the DEIR states only that “[g]eologic hazards . . . shall be assessed and *if present* shall be taken into account.” DEIR at 190 (emphasis added). Further, when discussing the impact of Project activities on sensitive resources (such as water bodies or special status species) the DEIR states that “[a] certain degree of flexibility on the part of MCOSED is required in order to accomplish biodiversity and invasive plant control objectives. So the degree of applied constraints on herbicide use must be weighed against the costs of allowing irreparable spread of invasive plants and a decline in the diversity of native plant and animal communities.” DEIR at 169; *see also* DEIR at 134. Thus, the DEIR states that, despite its selection of a 100 foot buffer zone around sensitive natural resources, “exceptions to treatment within this standard

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buffer zone may be necessary.” DEIR at 169. But the DEIR fails to inform the public – or decisionmakers – as to the specific standards that would trigger these exceptions, their associated environmental impacts, and whether and how these impacts would be mitigated to a less-than-significant level. *See, e.g.*, DEIR at 134-135, 140, 143, 169, 265-267. The DEIR must be recirculated with clearly defined and enforceable mitigation measures for all mitigable impacts, and make clear which impacts cannot be feasibly mitigated, and why.

## **VI. Conclusion**

The DEIR provides woefully deficient disclosure and analysis of its widespread and pervasive impacts on human and environmental health and safety. Because it is profoundly inadequate in the respects discussed above, it must be substantially revised and recirculated.

Very truly yours,

*Stephan C. Volker*

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