CALIFORNIA
Water Boards

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SECRETARY FOR
ENVIRONMENTAL PROTECTION

Santa Ana Regional Water Quality Control Board

May 31, 2016

ATTN: Edith Hannigan, Board Analyst
VTP Draft PEIR Comments
California Board of Forestry and Fire Protection
P.O. Box 944246
Sacramento, CA 94244-2460

DRAFT VEGETATION TREATMENT PROGRAM ENVIRONMENTAL IMPACT REPORT (VTPEIR), CALIFORNIA STATE BOARD OF FORESTRY AND FIRE PROTECTION – NO SCH# INDICATED

Dear Ms. Hannigan:

Staff of the Regional Water Quality Control Board, Santa Ana Region (Regional Board) reviewed the Draft Vegetation Treatment Program Environmental Impact Report (Draft VTPEIR) for the California State Board of Forestry and Fire Protection (Board of Forestry). The VTPEIR is meant to be consistent with the Board of Forestry's comprehensive wildfire control strategy, the *2010 Strategic Fire Plan for California.* Under this statewide Vegetation Treatment Program (VTP; Project), the California Department of Forestry and Fire Protection (Cal Fire) will conduct wildland fuel management projects, or "vegetation treatments," in its designated State Responsibility Areas (SRA). Periodic low-intensity treatments within fire-adapted plant communities (Executive Summary p.E-3; VTPEIR p.2-6) would consist of grouped activities within three main categories: fuel reduction near structures at the Wildland-Urban Interface (WUI); fuel-break installation and maintenance; and/or restoration designed to enhance ecological resiliency to fire (p.E-8; p.2-11).

Within these three categories, the vegetation treatment projects themselves would adapt alteration activities to three vegetation classifications ("treatable formations") distributed upon a given subregional landscape ("tree," "shrub," or "grass"–dominated habitats), including prescribed canopy burns and understory "underburns;" manual and mechanical work to reduce non-natives or native species; planting of native species in ecologically strategic locations; beneficial grazing by goats and sheep; and targeted applications of specific herbicides. Mechanical thinning, hand pruning, mastication (grinding), sawing, uprooting and chaining by bulldozers, drill seeding, tilling, and other methods would be used to alter a forest floor to a desirable outcome.

We recommend that the Project incorporate the following comments into the Final EIR, in order for the Project to best protect water quality standards (water quality objectives and beneficial uses) contained in the Water Quality Control Plan for the Santa Ana River Basin (Region 8 Basin Plan, 1995, as amended):

1. Total VTP treatments are projected for an average of 60,000 acres per year statewide during a 10-year period. Region 8 contains 1.6% of the treatable area (p.4-282). The proposed Project is preferred by the Board of Forestry over five alternatives (listed in compliance with CEQA) that would reduce the vegetation treatments. Regional Board staff agrees that the maximum treatment possible under the VTPEIR program, as proposed, would likely have low risk of significant, long-term adverse environmental impacts, including to water-quality beneficial uses and Total Maximum Daily Loads (TMDLs).

2. VTPEIR p.4-62 describes the routine use of an ignited gelled fuel mixture as an accelerant for starting prescribed burns. Another mixture of potassium permanganate and ethylene glycol contained in polystyrene spheres is said to be optimum for starting spot-fires from helicopters. The VTPEIR should consolidate and evaluate the results of toxicity studies on the residues of fire accelerants intended for Project use, particularly in subwatersheds having rapid stormwater runoff. We understand that the U.S. Forest Service has conducted such studies.

3. In Chapter 4 and Appendix D, Herbicides, the VTPEIR thoroughly evaluated the known potential environmental impacts of the seven herbicides[1], and one fungicide for heterobasidion root disease (borax), intended for varied, targeted use statewide. This evaluation includes review of any documented acute and chronic toxicity for each herbicide selected, with risk for aquatic biota and discussion of epidemiological pathways into plant and animal life. Perhaps ten percent of the activities in the various watersheds would constitute herbicide application at diluted concentrations, as part of an effort to first find all other feasible options to remove targeted vegetation (VTPEIR p.2-38; 4-77; 4-239). Herbicides would not be applied aerially, but instead manually from walking personnel, tractors, or all-terrain vehicles using various techniques: backpack applicator, spray bottle (p.4-73), pellet dispersal (4-73, p.2-33-4), or wiping. As part of Mitigation Measures HYD-1 through HYD 13, Board staff understands that Cal Fire intends to comply with each Regional Board and its Basin Plan by issuing a standard notification of components for each upcoming project with requests for consultation and site visits with Board staff. Similarly, Mitigation Measure BIO-11 states that aquatic habitats and species shall be protected through the use of watercourse and lake protection zones (WLPZ; California Forest Practice Rules, CCR Chapters 4, 4.5, and 10), and that the Regional Board may be consulted for operational restrictions. Regional Board staff believes that such notification via electronic mail, to addresses below, would suffice and we appreciate this level of communication. While consultations and visits may be necessary depending on the treatment situations, they may be limited once the program is established.

   The Board of Forestry should discuss with the U.S. Army Corps of Engineers the appropriate compliance with Clean Water Act Section 404 (p.4-165). A 404 Permit would likely require an applicable statewide Water Quality Standards Certification from

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[1] From Appendix D p.8, 22 23 - Sodium tetraborate decahydrate (Borax/boric acid), clopyralid, glyphosate (Roundup©), hexazinone, imasapyr, sulfometuron methyl, triclopyr, and p-Nonylphenol (NP9E). Each variously targets cell structure, metabolism, or attacks a predatory organism/fungus.

the State Water Resources Control Board (SWRCB) to cover inevitable stream crossing impacts and any temporary fill to a water body.

4. At sufficient dosages, herbicides can be deleterious to invertebrates and vertebrates in riparian environments (p. 4-74). Therefore, the VTPEIR provides assurances of protection of water bodies from adverse effects, with several commendable measures:

- Mitigation Measure HAZ-8 (p.244) states that projects shall avoid herbicide treatment in riparian areas or other sites adjacent to water bodies. P. 4-72 states that herbicides shall be handled in accordance with their attendant Material Safety Data Sheets (MSDSs), and that "minimum buffer widths are specified between activity areas and water bodies when using herbicides not approved for aquatic use." Where aquatic habitats, sensitive habitats, or sensitive plant species are identified, these areas shall be marked and herbicides would not be applied within 50 feet of these areas (p.4-239 says 15 feet for sensitive plant species); where such areas cannot be avoided during an area's treatment, Cal Fire would proceed with separate environmental review of that particular project.

- A Spill Prevention and Response Plan would be prepared and implemented (p.4-244) to keep herbicides out of water bodies.

- Mitigation Measures HAZ-3 and HAZ-4 (p.2-61, -62) require examination of whether herbicide use is warranted in the onsite situation and how the application may be implemented safely. The storage, loading, and mixing of herbicides shall be set back at least 150 feet from any aquatic feature or special status species/habitat, and non-toxic colorants may be added to the herbicide mixture to indicate treated areas (HAZ-11-12).

- P.App.D-97 states that the chemical active ingredients, and the parameters under which they will be used, are well within U.S. Forest Service guidelines.

- P.4-239 notes that the herbicides to be used have been selected for minimal ecological toxicity and environmental fate, minimal transport, and proven efficacy against targeted species. Where repeated exposures to most of these herbicides have been anticipated to disrupt endocrine, neurological, reproductive, and/or immune systems, or have somatic (carcinogenic) and mutagenic (generational) effects, lab testing has indicated that there is No Observed Adverse Effect Level (NOAEL) for chronic toxicity.

- Prescribed herbivory by domesticated animals may prove to reduce the need for herbicides (p.4-70) during the VTP.

- Animal ingestion, including human exposure, is expected to be non-toxic (p.4-240) and impacts to the food-web through insect uptake are anticipated to be limited.

Notwithstanding the above, Board Staff note that Glyphosate (Roundup©) has toxic effects in water and around amphibians (p.App.D-120, 121), with a corresponding increase in general toxicity with an increase in temperature and acidity (low pH) of the

water it is released into. Although Board staff conventionally understand that Rodeo© is more compatible with aquatic use than Roundup©, the p. App.D-121 discussion of Roundup Biactive© indicates that this Australian formulation is less toxic to rainbow trout than Rodeo©. Further, P.D-123 indicates that Rodeo© is far more toxic at a pH of 8.0 than at a normal 6.5. We note that this more basic pH may occur where formations are naturally releasing salts into ponds and streams. Therefore, this information leads to our request to consider the use of Roundup Biactive© outside of the proposed aquatic buffers instead of Rodeo©.

Nonylphenol (NP) is an herbicide surfactant highly toxic to aquatic organisms (EPA finding, App.D-136) and its use, even outside of aquatic buffers, should be reconsidered.

5. Prescribed burns would be conducted in a mosaic pattern to maintain old and new growth, and when burn intensities are low to moderate during the spring season (p.4-241). If vegetation is to be thinned or burned such that sediment is more likely to be washed into a subwatershed's drainage, then p.4-122 and/or an appropriate page should state what "Standard Project Requirements (SPRs), or Best Management Practices (BMPs) will be used to retain soil and nutrients.

6. Water drafting (p.4-158; Mitigation Measure BIO-10) is taken to mean the pumping of water from streams for temporary uses such as controlling burns. Screens would be used at pump intakes to keep out egg masses and small fauna. Board staff suggests the vertical insertion of slotted polyvinyl chloride pipe into soft streambeds, in order to create mobile temporary wells that may harvest underflow and pose little impact to surface waters. The general use of this water and streambed should be discussed with the SWRCB Division of Water Rights and the California Department of Fish and Wildlife.

If you have any questions regarding our comments, please contact Glenn Robertson at (951) 782-3259 or Glenn.Robertson@Waterboards.ca.gov ,
or me, at (951) 782-4468 or Wanda.Cross@Waterboards.ca.gov

Sincerely,

Glenn Robertson, for

Wanda M. Cross, Chief
Regional Planning Programs Section

cc: California Board of Forestry and Fire Protection – VegetationTreatment@bof.ca.gov
State Clearinghouse
State Water Resources Control Board, Division of Clean Water Programs – Clifford Harvey
Clifford.Harvey@waterboards.ca.gov
California Department of Fish and Wildlife, Ontario office - Jeff Brandt , jbrandt@Wildlife.ca.gov
U.S. Fish and Wildlife Service, Palm Springs office – Karin Cleary-Rose, Karin_Cleary-Rose@fws.gov

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