Scope of Work
Vegetation Treatment Program Environmental Impact Report (VTPEIR) Peer Review

Goal
Complete a peer review of the VTPEIR by fire science and other expert professionals to ensure the VTPEIR is based on the best available scientific information. This goal is based on a statutory requirement in the FY 2013 Budget Act. The specific language of the Budget Act is shown below:

> "Notwithstanding any other provisions of law, prior to certification of the Environmental Impact Report for the Vegetation Treatment Program, the State Board of Forestry and Fire Protection shall submit a final draft to peer review by a group of fire science professionals selected by the California Fire Science Consortium. The peer review panel shall be selected in a manner that accounts for the breadth and scope of the Vegetation Treatment Program's potential activities and impacts. The panel shall include, at a minimum, representatives from both fire behavior science and fire ecology to ensure that the draft is based on the best available scientific information and that both the benefits and impacts are effectively evaluated for their scientific rigor….."

VTPEIR Background
One objective of the VTPEIR is to lower the risk from wildfires on nonfederal lands by modifying vegetative fuels to enhance suppression actions through changes in fire behavior and increase tactical opportunities for fire suppression actions; reduce costs for fighting fires; and increase opportunities for firefighter and public safety. The VTPEIR is intended to be consistent with the 2010 Strategic Fire Plan for California available, on the Board of Forestry and Fire Protection website.

A theme that crosses both goals and objectives in the Fire Plan is reducing fuels and taking related management steps that improve ecosystem resilience and lessen the risk of damage from wildfire. One critical action to carrying out this objective is treatment of vegetation.

In addition to goals set out in the Fire Plan, other resource objectives include control of unwanted vegetation elements (e.g., invasive species), improvement of rangeland for livestock grazing, improvement of fish and wildlife habitat, enhancement and protection of riparian areas and wetlands, and improvement of water quality and quantity. These goals are tied to other programs under the Department's administrative responsibilities including the California Forest Improvement Program, Proposition 40 vegetation treatment grants, and the Vegetation Management Program.

Tasks and other information
1. The California Fire Science Consortium (CFSC) shall select a group of fire science and other expert professionals to conduct the peer review. The panel of experts conducting the review shall be referred to as the Peer Review Panel (Panel). Panel members shall at a minimum include persons with expertise in areas of fire behavior science, fire ecology, and the role of fire supporting resilient ecosystems. Suitable experts should be determined based on their academic qualifications, experience in publishing scientific peer reviewed reports, experience in conducting peer reviews, and standing in the field of their expertise.

2. The Panel shall complete the peer review of the VTPEIR by responding to a series of global and specific questions included below. Responses for each question should include whether the VTPEIR appropriately incorporates scientific findings from current peer reviewed literature to evaluate potential benefits or impacts from the proposed program. The Panel should identify areas that are either deficient or need to incorporate additional current peer reviewed scientific studies (current science).The peer review should focus and prioritize their review and responses to the specific questions related to fire behavior science, fire ecology and the role of vegetation management in supporting resilient ecosystems. Focus should also be on those questions which were raised by substantive public comments. To the extent possible given time and financial limits of the contract, the peer review should also include scientific review of other resource aspects of the VTPEIR such as cumulative watershed effects, herbicide use and invasive species management.

3. The purpose of the peer review is to ensure that the project description and environmental review is adequate, and that the project alternative ultimately selected is consistent with the best available science. The Peer Review must address whether the project objectives are scientifically defensible and whether the way that these goals will be met is described in sufficient detail to permit reasoned evaluation particularly in light of the issues raised by the commenters. The Reviewers must also address whether the document adequately addresses whether alternative means of achieving these goals exist that might reflect a better balance of achieving key project goals in an environmentally superior way. Finally, the Peer Reviewers must evaluate whether the process outlined in the document governing subsequent activities undertaken in reliance on the VTP PEIR provides the sufficient oversight and control to ensure that they will be adequately monitored, assessed, and mitigated.

4 The CFSC representative(s) and Peer Review Panel representative(s) shall meet at least three times with CAL FIRE representatives and other stakeholders (at the discretion of the Panel) at times and locations by mutual agreement during the period of the contract to review progress, discuss further instructions/clarifications, and review interim peer review results.

5. The review of the VTPEIR shall be completed and the final report submitted by XXXXX XX, 2014.

Deliverables

A scientific peer review report of the VTPEIR formatted as responses to a series of global and specific questions. The report shall be delivered in three paper copies and in electronic format.

Peer Review Questions

The following are questions to be addressed by the Peer Review Panel. The questions are intended to focus the peer review but not materially limit the scope of the scientific review of other aspects of the VTPEIR.

Global Questions:

1. Are VTPEIR vegetation management activities and goals clearly stated? Are the goals and activities the appropriate ones?

2. Is the Program (the intended activities under the VTPEIR) stated in the VTPEIR sufficiently described so as to permit a reasoned determination whether it will achieve the proper goals and objectives? Is it based on the best available scientific information? ? If not, provide suggested changes to the Program that would meet the goals and objectives.

3. The Program goals, as laid out in the Executive Summary of the VTPEIR, include improving forest health, reducing the severity and intensity of wildfires, modifying wildland fire behavior to help reduce catastrophic losses to life and property, safeguarding watershed health, and improving wildlife habitat. Does the VTPEIR document adequately address whether alternative means of achieving the Program goals exist that might reflect a better balance of achieving key project goals in an environmentally superior way and at less cost?

4. Do potential impacts from vegetation management activities proposed in the VTPEIR exist that are not addressed? Impacts identified should be supported by current science.

5. Are the identified benefits and evaluation of potential significant adverse impacts of the proposed vegetation treatment activities consistent with current science?

6. Were fire behavior, fire ecology, and the role of fire in supporting resilient ecosystems in relation to fuel load and fuel treatments evaluated consistent with the current science?

7. The landscape constraints, minimum management requirements and mitigation measures in the VTPEIR are intended to mitigate the potential significant adverse impacts from projects and prevent substantial degradation of the environment from vegetation management activities. Does the current science support this conclusion, considering the landscape constraints, minimum management requirements and mitigation measures provided in the VTPEIR?

8. Are the objectives of fuel treatments for public safety clear in the VTPEIR? If not, what should be added or deleted to these objectives for clarification? How should prioritization of potential treatments occur? Under what conditions are such treatments effective?

Specific Questions:

1. Does the VTPEIR adequately explain the role of fuels treatments in maintaining a vegetative pattern over a chaparral landscape that would contribute to a resilient ecosystem? If not, what changes should be made to the VTPEIR to assist in achieving

that outcome?

2. The VTPEIR proposes treated acre targets for each of the bioregions (California Biodiversity Council classification) in the state. Are the targets for bioregions where chaparral ecosystems are predominant consistent with the maintenance and promotion of ecosystem resilience? If not, what is a range of treated acres that would support maintenance of a resilient chaparral ecosystem or what other substitute metric should be proposed that is based on the best available scientific information?

3. Does the process outlined in the document governing subsequent activities undertaken in reliance on the VTPEIR provide sufficient oversight and control to ensure that they will be adequately monitored, assessed, and mitigated? Does the proposed monitoring approach in Chapter 7 (Monitoring) provide information and direction consistent with current science to enable the program to evaluate ecological performance and fuel treatment effectiveness over time? Given current science, what is the appropriate scale of evaluation?

4. Are the mitigations within the VTPEIR to prevent the spread of invasive species that can be expected to result from vegetation treatment activities addressed in a manner consistent with current science?

5. Is there evidence to support the conclusion that fuel treatments can effectively assist fire suppression efforts on the head, flanks, or heel of the fire over a range of fire weather conditions in chaparral dominated landscapes?

6. Does the content of the environmental checklist reflect sufficient scientific rigor to identify and address environmental issues at a local project scale to ensure individual projects are within the scope of the VTPEIR?

End