

Highway 168 Fire Safe Council
Po Box 639 Prather, CA. 93651
(559) 841-3194



July 19, 2019

To: Whom it may concern

Concerning: Letter of support for the proposed California Vegetation Treatment Program (CalVTP).

I am writing this letter on behalf of the Highway 168 Fire Safe Council, as its president, to express our support for the proposed Cal VTP. The Highway 168 Fire Safe Council's territory is located in eastern Fresno County traveling from the Sierra foothills east of the Friant Kern Canal to the Sierra crest at the Mono County Line. It is bounded by the Mono County line to the north and Highway 180 to the south. A century of fire suppression and poor management practices has steered our forest and foothill ecosystems toward an unhealthy and volatile condition. The level of neglected overcrowded stands, dense vegetation, and tree mortality within our territory is overwhelming. Consequently, the majority of our region is ranked as a Cal Fire Tier 1 or Tier 2 High Hazard Zone. The threat of catastrophic wildfire and devastation to our ecosystems, residents, and communities is very real.

O1-1

The Board of Forestry (BOF) and CAL Fire's proposed CalVTP takes a critical step in extending treatment beyond roadside hazard tree corridors and fuel breaks. It provides a solid mechanism for pursuing prescribed burn and "non-merchantable" treatments our private lands have long needed to promote a healthy and resilient forest.

O1-2

The communities, forests, and resources within the Highway 168 Fire Safe Council territory will benefit directly from future Cal VTP projects. We support the proposed CalVTP and sincerely hope you will approve it as proposed.

O1-3

Please contact me if you have any questions.

Sincerely,

Howard Hendrix
President, Highway 168 Fire Safe Council
559-841-2582

Southern California Edison Forestry
42696 Tollhouse Rd
Shaver Lake, CA
93664



Letter
O2

July 22, 2019

To: Whom it may concern

Concerning: Letter of support for the proposed California Vegetation Treatment Program (CalVTP).

I am writing this letter on behalf of Southern California Edison (SCE) Forestry to express our support for the proposed Cal VTP. SCE Forestry manages 20,000 acres of mixed conifer forestland in eastern Fresno County. For almost 40 years, our management has conducted annual prescribe burns covering an average of 450 acres per year. As a result, the majority of our managed forest has high diversity and low density. The drought mortality affected our entire area, however the SCE forests lower density, mixed species stands weathered the storm much better than surrounding USFS lands overall. As forest managers, we have been fortunate enough to witness firsthand the benefits of utilizing applied fire as a management tool.

O2-1

A century of fire suppression and poor management practices have steered the forest and foothill ecosystems in Eastern Fresno County toward an unhealthy and volatile condition. The level of neglected overcrowded stands, dense vegetation, and tree mortality throughout the area is overwhelming. Consequently, the majority of the region is ranked as a Cal Fire Tier 1 or Tier 2 High Hazard Zone. A wildfire starting on neighboring lands and spreading into SCEs Forest is a very real threat that concerns us greatly as land managers. The recent rapid spread of insect mortality and "mega fires" have underlined the need for landscape scale forest management as opposed to managing individual parcels and ownerships.

O2-2

The Board of Forestry (BOF) and CAL Fires proposed CalVTP takes a critical step in treating beyond roadside hazard tree corridors and fuel breaks. It provides a solid mechanism for pursuing the much needed prescribe burn and "non-merchantable" treatments our private lands have long needed to promote healthy and resilient forests and watersheds.

O2-3

The communities, forests, and resources throughout California will benefit directly from future Cal VTP projects. We support the proposed CalVTP and sincerely hope you will approve it as proposed.

Please contact me if you have any questions.

Sincerely,

Ryan Stewart
Senior Supervisor, SCE Forestry
RPF# 2924
559-500-9122



RURAL COUNTY REPRESENTATIVES
OF CALIFORNIA

Letter
03

July 25, 2019

Mr. Matt Dias
Executive Officer
California Board of Forestry and Fire Protection
1416 9th Street, Room 1506-14
Sacramento, CA 95814

RE: California Vegetation Treatment Program Draft Programmatic Environmental Impact Report

Dear Mr. Dias:

On behalf of the Rural County Representatives of California (RCRC), I am writing to offer our support along with some recommendations on the California Vegetation Treatment Program (CalVTP) Draft Programmatic Environmental Impact Report (PEIR). RCRC is an association of thirty-six rural California counties, and the RCRC Board of Directors is comprised of elected supervisors from those member counties.

RCRC member counties contain much of California’s forested lands and recognizes that wildfire risk is no longer just a concern in our remote, rural areas, but is becoming a wider public safety concern as the wildland urban interface spreads over larger areas of the State and beyond forested areas. California’s forests and wildlands are in dire need of fuels treatment and enhanced management to improve resilience and mitigate the type of catastrophic damage demonstrated by the Camp, Woolsey, and Carr Fires, to name just a few of the devastating wildfires we’ve seen in California in recent years.

03-1

Overall, RCRC supports the proposed CalVTP PEIR as a positive step toward reaching the state’s goals in reducing greenhouse gas emissions from wildfires, enhancing carbon sequestration in forests and wildlands, restoring and improving the health of forested watersheds, and ultimately safeguarding California’s residents from the impacts of catastrophic wildfire. RCRC would like to offer the following specific comments and looks forward to working with the Board and CAL FIRE as you implement CalVTP throughout our member counties.

03-2

Chapter 2. Program Description

RCRC appreciates the inclusion of local preemption language in Chapter 2, Section 2.7.1, SPR AD-3. Maintaining local control is extremely important to County Boards of Supervisors when making land management decisions, particularly in light of existing local

03-3

1215 K Street, Suite 1650, Sacramento, CA 95814 | www.rcrcnet.org | 916.447.4806 | Fax: 916.448.3154

plans, policies and ordinances. We also appreciate the inclusion of a notice to the County Supervisor in a given district before a prescribed burn in SPR AD-4 — local governments in wildfire-prone areas want to be partners in fuels treatment projects, and this allows counties to help educate and prepare their constituents prior to prescribed fire events. RCRC would also recommend an additional notice to the County Administrative Officer as the overseer of all county activities, including public outreach. This will better enable county governments to help educate and notify residents when a prescribed fire event is imminent and help secure better public buy-in to the practice of controlled burns.

O3-3
cont.

RCRC would also recommend addition of similar county notification requirements when a project will result in the temporary closure of a public recreation area as described in SPR REC-1. Many rural communities are heavily reliant on recreation and tourism for their economic health and vitality, and the ability for the counties to notify residents and potential visitors in advance when recreational opportunities won't be available is vital to maintaining that economic stability.

O3-4

Finally, RCRC would also like to see a stronger overall emphasis on maintenance of projects once they are completed. While we recognize that land changes ownership, management objectives or land use type, it is imperative that a mechanism be in place to ensure that future growth is repeatedly treated in order to maintain the landscape's overall health and fire resilience. Without this assurance the initial projects will be meaningless when the fuels have regrown in future years.

O3-5

Chapter 3. Environmental Setting, Impacts, and Mitigation Measures

RCRC was an active member of the Forest Climate Action Team, helping develop the state's Forest Carbon Plan, and continues to contribute to the Governor's Forest Management Task Force. Our member counties have a strong commitment to future land use and planning decisions that safeguard their communities from catastrophic wildfires, including working closely with state and federal entities on mitigation measures to increase the pace and scale of wildland restoration and community protection activities. The profound public health and safety impacts from the last decade's wildfires have irreversibly changed communities in our counties, with many of those areas still struggling to rebuild.

O3-6

While we appreciate the acknowledgement of county land use and planning authority in Section 3.12, RCRC would remind the Board that state affordable housing needs and allocations will make future planning and community safeguarding much more complex in the wildland urban interface (WUI). Zero growth simply is not a possibility anywhere in California due to housing needs assessments, even in the WUI and in high wildfire hazard severity zones. As we move forward with new development as our statewide population expands, it is imperative to acknowledge the need for project proponents, including the state, to work closely with county governments to ensure that treatment projects align closely with local land use and housing plan needs.

O3-7

Chapter 5. Significant Effects and Growth-Inducing Impacts

RCRC concurs with the analysis that the CalVTP would not induce direct or indirect substantial growth, particularly in communities that have a long history and need for vegetation treatment activities. Many of the areas in most need of vegetation treatment, including the ten high hazard tree mortality counties, have among the highest unemployment rates in California. Current residents of these communities are in need of employment opportunities, and the magnitude of treatment needed across the state will necessitate training a new workforce in order to meet the state's vegetation management goals. We would contend that the CalVTP would provide an economic boost to many struggling communities that currently rely on tourism or previously relied on timber production and could revitalize those areas across the state.

O3-8

Chapter 6. Alternatives

RCRC would strongly caution against utilizing any of the suggested alternatives to the proposed CalVTP. California's vegetation is diverse, and treatment needs across wildlands covered under the CalVTP are complex and long overdue. By approving any one of the alternatives over the proposed CalVTP, the Board would be limiting the state's ability to fully treat California's wildlands and to maximize the efforts of our vegetation management, watershed restoration and wildfire prevention experts in a variety of communities statewide.

O3-9

For example, by eliminating prescribed burning treatments in Alternative D, the state would eradicate the ability to restore the natural cycle of low-intensity fire to the landscape, which historically kept our wildlands more resilient before we began a more robust suppression regime during the last century. By eliminating the use of herbicide treatments in Alternative E, it would be much more difficult to mitigate the fire hazards presented by the spread of noxious weeds and other small undergrowth, particularly around important infrastructure such as roadways.

O3-10

We understand the concerns around some of the proposed treatments, but wholly believe that a full menu of options is necessary and the only responsible course of action to achieve the maximum long term environmental and public health goals necessary to safeguard Californians in high fire risk areas from the profound impacts of catastrophic wildfire.

O3-11

RCRC appreciates your consideration of our comments and recommendations. Please do not hesitate to contact me with any questions or concerns you may have.

Sincerely,



STACI HEATON
Senior Regulatory Affairs Advocate

Mr. Matt Dias
CalVTP Draft PEIR
July 25, 2019
Page 4

cc: Wade Crowfoot, Secretary, California Natural Resources Agency
Chief Thom Porter, Director, California Department of Forestry and Fire Protection
The Honorable Toni Atkins, President Pro Tempore, California State Senate
The Honorable Anthony Rendon, Speaker, California State Assembly



Central Sierra Environmental Resource Center
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Visit our website at: www.cserc.org or contact us at: johnb@cserc.org

July 30, 2019

Board of Forestry and Fire Protection
Attn: CalVTP
PO Box 944246
Sacramento, CA 94244-2460
CalVTP@bof.ca.gov

Board of Forestry and Fire Protection California Vegetation Treatment Program and Draft Program Environmental Impact Report

Our non-profit environmental organization, the Central Sierra Environmental Resource Center (CSERC), submits the following comments in response to the Board of Forestry and Fire Protection’s (Board) Draft Program Environmental Impact Report (PEIR) for the proposed California Vegetation Treatment Program (CalVTP).

For decades CSERC has been a strong advocate for the protection of wildlife and ecosystems affected by various management activities in the Central Sierra Nevada region. These comments are based on more than two decades of reviewing and commenting on local, state and federal vegetation management plans and practices in the region. Our staff emphasizes that these comments and recommendations pertaining to the Board’s CalVTP and PEIR are specifically submitted for proposed activities that may be planned within the Sierra Nevada region. We defer to other environmental groups to provide specific recommendations for vegetative treatments in other regions within the state.

O4-1

Our Center agrees that the state’s current vegetation management fails to adequately reduce the risk of hazardous vegetative fuels that promote extreme wildland fire events and that pose a significant risk to life, property and natural resources. Although our Center agrees that the pace and scale of hazardous vegetative fuel treatments needs to increase across the state, **On principle, our Center opposes the “streamlined CEQA review approach”, whereby CAL FIRE and any local, regional, and state agencies with land ownership or land management responsibilities within the State Responsibility Area (SRA) can be programmatically entitled to implement future vegetation treatment activities and to use this PEIR to suffice for CEQA compliance.** This approach undercuts public involvement and site specific CEQA.

O4-2

The programmatic planning process as currently presented cuts the public out of any meaningful opportunity to give input, or learn about projects prior to initiation, or oppose the inclusion of projects under programmatic approval if specific individual projects are not honestly consistent with the PEIR analysis.

Put most simply, while the CalVTP is an improvement over past planning, the current “conditional” approval process completely shuts out public participation once the CALVTP is approved. It fails to provide any transparency because there is no clear strategy to inform the public about projects that are planned in their local regions.

And it fails to identify any process for a concerned citizen or organization to be able to submit timely input to identify why a particular proposed project should NOT be entitled to broad, programmatic approval because it is unique or because it poses significant risks that will not be mitigated. For these reasons, CSERC opposes the CalVTP (as now designed) unless meaningful modifications are made due to public input (such as these comments).

O4-2
cont.

THERE IS A CLEAR NEED FOR PUBLIC NOTICE AND FOR TIMELY INPUT

CSERC strongly recommends that the final approved CalVTP provide a defined process for public notice and a defined opportunity for at least a minimal opportunity for public comment for any proposed vegetation treatment projects tied to this planning process.

It is critical that the public has a legitimate and timely opportunity to provide input in the project planning process and be able to provide comments on whether activities and mitigation measures proposed in future proposed vegetation treatment projects actually comply with the CalVTP and associated PEIR. Such a public notification process and brief time period for public comment can be provided while still achieving the goals to speed up planning and increase project implementation.

Our Center urges that:

- **CALFIRE (as well as any other agency/entity that is relying upon the CalVTP planning process for a project) should be required to post online on a State-hosted website timely public notice describing the proposed project, the proposed treatments, a description of the project area, and other basic pertinent information that is related to the proposed project.**

O4-3

- **As part of the online posting of a description of the project, a “public input timeline” should be described, allowing 20 days for public input, with contact details.**

- **CALFIRE should provide a CalVTP “public input coordinator” to accept and review public input for any projects posted on the website that aim for programmatic approval based upon the CalVTP.**

O4-4

• **A clear process should be set up so that issues, concerns, or legal matters raised during the public input period are communicated by the CalVTP public input coordinator to the project proponent, and to the appropriate deciding official.**

O4-5

• **In the final CalVTP, the document should identify clearly WHO is the deciding official with authority to determine whether or not a project with a completed Project Specific Analysis does or doesn't actually qualify for approval based on the CalVTP.** At the present time, nowhere in the CalVTP or PEIR do we find any description of WHO is actually the deciding official for judging whether or not a project is or is not consistent with the Cal VTP.

O4-6

CSERC strongly urges that the final CalVTP spell out WHO will determine whether or not a project is judged to be consistent with the CalVTP or whether it should go through normal CEQA.

• If public input effectively identifies why a specific project should not be judged to be consistent with the programmatic analysis provided by CalVTP, then the project proponent should at least be required to respond to the public concerns in a manner that the State judges to be appropriate. **IT IS NOT THE INTENT OF THIS REQUEST TO ALLOW PUBLIC INPUT TO DELAY TIMELY ACTION ON THE PROPOSED PROJECT.** It is highly likely that few projects will spark any public input or concern, but **if the State desires to gain public trust, transparency is important.**

O4-7

If public input convincingly supports a claim that a specific project should not be approved programmatically due to unique circumstances or due to a significant impact risk, then such a project could then progress through a normal CEQA process.

The recommendations above include an a recommendation for an online listing of projects (by region, project type, etc.) to at least allow the interested public to know which projects are planned and which project proponents are intending to gain programmatic approval for a project. It would also enable agency officials to hear from their constituents and to judge whether a specific project is unique or would pose a significant risk despite mitigation measures that would be applied if approved as consistent with the CalVTP.

O4-8

Our Center recommends that the CalVTP be modified to require reasonable public notification and a brief, streamlined opportunity for public input for planned projects.

In addition to our concerns related to the proposed CEQA process, our Center is also concerned with some of the proposed treatment activities, environmental impacts and mitigation measures outlined in the PEIR. Below are our Center's specific concerns related to the CalVTP and PEIR, and below we also reiterate our recommendations for the proposed action.

O4-9

Specific Comments for CalVTP and PEIR

Proposed CalVTP Program Description, Vegetation Treatments & Vegetation Treatment Activities

There are three proposed categories of treatments (Wildland-Urban Interface Fuel Reduction, Fuel Breaks, and Ecological Restoration). However, it is not clear how these treatments will be prioritized. Our staff understands that CAL FIRE's Fire and Resource Assessment Program (FRGAP) has modeled and prioritized the treatable landscape into condition classes, but it is unclear how the three treatment activities will be prioritized under the CalVTP.

O4-10

Our Center accepts, without strong concerns, four of the five proposed vegetation treatment activities -- prescribed burning, mechanical treatment, manual treatment and prescribed herbivory. **When it comes to this programmatic plan, our Center opposes broadscale programmatic approval for the use of herbicides.** Herbicide applications can directly and significantly affects/harm sensitive plant and animal populations and can also directly impact water quality. **Since the proposed annual target of 250,000 acres of treatment could still be obtained without the use of herbicides by increasing the extent of mechanical and manual treatments (PEIR p. 6-36), herbicides are not essential to meet the program objectives of the CalVTP (PEIR p. 6-38).** Our Center understands that ground-level herbicide application may be the most cost-effective treatment activity to combat invasive weeds in many circumstances, which may be a reasonable use amidst a wide range of chemical treatment project uses. **That is a targeted, reasonable, acceptable use.**

O4-11

We urge that there be language in the CalVTP that explicitly prohibits herbicide treatments in riparian areas, that sets a no-herbicide buffer zone at a minimum of 50 feet from wetlands, wet areas, rivers, streams, or lakes, or no closer than 75 feet from listed or sensitive plant populations. In all of the riparian areas or recommended buffer zones adjacent to water, wetlands, or sensitive plant population, manual vegetation treatment should be used. Furthermore, we recommend that there be language in the CalVTP that explicitly prohibits herbicide treatments as an acceptable activity for vegetation treatment maintenance; herbicides should only be allowed as an initial treatment option, and subsequent treatments should be any of the other proposed treatment activities instead of herbicide use.

Adaptive Management Framework

Our Center supports a framework that would require assessment of the effectiveness of vegetation treatments and provide feedback for future adaptive decision-making through (a) the introduction of independent science into CalVTP activities, (b) creation of a geodatabase to track vegetation treatment activities, (c) monitoring and document of mitigation measures and SPRs to ensure compliance, and (d) monitoring of the effectiveness of project activities. These required elements of the CalVTP Adaptive Management Framework are essential to ensure environmental resource protection and overall effectiveness of this proposed program, especially if the proposed streamlined CEQA process is approved and there is no opportunity for public recommendations

O4-12

prior to individual projects. Our Center asks that the data and information collected from this framework be made publicly available. This will allow concerned agencies and organizations, like CSERC, to review the results of project-specific monitoring of vegetation treatments and verify that environmental resources were protected or are recovering from treatments. Our Center urges the Board to make the geodatabase mentioned above publicly available so there is an added level of scrutiny in order to ensure compliance.

O4-12
cont.

Alternatives

No Program Alternative

Our Center agrees with the Board that the pace and scale of hazardous vegetative fuel treatments needs to increase across the state, and that the current management of hazardous vegetative fuels is not enough.

O4-13

Proposed Alternative

Our Center is opposed to the Proposed Alternative mainly because of the proposed “streamlined CEQA review approach” that would basically eliminate any meaningful opportunity for public input for individual projects deemed to be consistent with the CalVTP programmatic plan. CSERC strongly recommends that there still be opportunity for public comment for any future proposed vegetation treatment project, whether or not the project falls within the scope of the CalVTP. It is critical for the public to have the opportunity to provide input in this process and the opportunity to provide comments on whether activities and mitigation measures proposed in future proposed vegetation treatment projects actually comply with the CalVTP and associated PEIR.

O4-14

Alternative A: Reduced Scale of Treatments

Our Center is not opposed to treating less acreage each year (60,000 acres per year instead of the 250,000 acres per year outlined in the Proposed Alternative). This would equate to less impacts to sensitive species and natural ecosystems. However, to be realistically in compliance with the State’s objective to increase pace and scale, a “Reduce Scale of Treatments” alternative that is feasible as an option should be realistic – such as 100,000 or 150,000 acres per year rather than just 60,000 acres. _

O4-15

Alternative B: WUI Fuel Reduction Only

This alternative would equate to the same amount of area being treated each year as the Proposed Alternative (250,000 acres), but in only half of the treatable landscape (WUI makes up 10.1 million acres of the treatable landscape). It would appear that this alternative would increase the level of effectiveness of vegetation treatment, since the same amount of vegetation treatment would occur in a much smaller area. And this alternative would seem to meet CalVTP Objective 1 more so than the Proposed Alternative in terms of reducing the risk to life and property, but not necessarily the risk of wildfire events to natural resources.

O4-16

Alternative C: Modified WUI Fuel Reduction and Fuel Breaks

This alternative would remove Ecological Restoration as a vegetation treatment. Ecological restoration should be a component of successfully creating fire-resilient and healthy landscapes under this program; therefore, our Center opposes Alternative C. It is puzzling why the State would not include Ecological Restoration treatments in the modified WUI zone.

O4-17

Alternative D: No Prescribed Burning Treatments

Prescribed burning is an essential component of restoring many of California’s landscapes to a more resilient and healthy state. In actuality, prescribed burning is the most cost effective, and most effective in achieving fuel reduction objectives of any of the treatment options. Because of this, our Center opposes Alternative D.

O4-18

Alternative E: No Herbicide Treatments

Our Center strongly favors an alternative where no herbicides will be allowed as a programmatic vegetation treatment activity option under the CalVTP (except perhaps for spot treatments to treat invasive plant infestations). Herbicide application can significantly impact sensitive plant and animal populations and water quality. Since the proposed annual target of 250,000 acres of treatment could still be obtained without the use of herbicides by increasing the extent of mechanical and manual treatments (PEIR p. 6-36), herbicides are not essential to meet the program objectives of the CalVTP (PEIR p. 6-38). In addition, as stated in the PEIR (p. 6-38), Alternative E is the only alternative (besides the Proposed Alternative) that would attain all five of the program objectives. However, if Alternative E is not selected we request that modifications be made to the preferred alternative regarding herbicides to better protect sensitive habitats and at risk botanical resources (see our specific recommendations above in these comments).

O4-19

Environmentally Superior Alternative

Our Center agrees with the statement that all of the alternatives have, to some degree, significant impacts to the environment, and therefore, there is no clear environmentally superior alternative. **Nevertheless, the No Herbicide Treatments alternative has lower risk of chemical contamination, lower risk of killing sensitive plants, and lower risk of health effects to people. Our Center believes that the No Herbicide Treatment alternative is the Environmentally Superior Alternative.**

O4-20

No matter which alternative ends up being rated as environmentally superior, it is vital that the mitigation measures tied to this programmatic plan contain strong, clear, and specific directives to ensure that biological and other environmental resources affected by the proposed activities are given the greatest level of protections possible. And, as we have previously emphasized in these comments, without a project-specific public review process that at least allows for public notification and a period of public input, the “streamlined CEQA approach” cannot guarantee that needed mitigation measures will be considered

O4-21

and implemented in future projects to ensure proper safeguards for environmental resources.

O4-21
cont.

The next section outlines our Center’s recommendations on how to bolster environmental resources protections through stronger SPRs and mitigation measures.

Standard Project Requirements (SPRs)

O4-22

SPR BIO-1: Review & Survey Project-Specific Biological Resources

Our Center agrees that extensive review and surveys for project-specific biological resources need to be conducted prior to any project-related activities. In addition, if sensitive species are detected, if there is suitable habitat present, **or if there is information of historical occupancy or historic use of the project-area by a sensitive wildlife species**, then our Center urges that a qualified RPF or biologist do SPR BIO-7 or SPR BIO-10 (see below).

SPR BIO-2: Require Biological Resource Training of Workers

It is essential to the protection of biological resources that every employee or contractor conducting vegetation treatment activities is properly trained on how to identify species, is trained in life history information of species, is trained in how to avoid special-status species, and understands reporting requirements.

O4-23

SPR BIO-3: Survey Sensitive Natural Communities and Other Sensitive Habitats

Surveys for sensitive natural communities and other sensitive habitats are a critical step prior to project implementation.

O4-24

SPR BIO-4: Design Treatment to Avoid Loss or Degradation of Riparian Habitat Function

Great care and consideration of impacts to biological resources in riparian corridors needs to be addressed in this CalVTP and PEIR. As written, under this SPR there are conflicting goals – one is to reduce ladder fuels; and the other is to restore densities that are more characteristic of healthy stands of the riparian vegetation. However, many riparian habitats have naturally high levels of understory and overstory canopy and an essential component for the aquatic habitat (moderating water temperature). If project activities pose any potential to significantly impact riparian habitat, not only should appropriate “no treatment” buffers be required along streams and rivers or along bodies of water such as lakes and ponds; there should also be clear programmatic requirements to minimize habitat diminishment such as could occur from aggressive treatments solely focused on fuel reduction.

O4-25

SPR BIO-6: Prevent Spread of Plant Pathogens

Our Center is in agreement with SPR BIO-6. It is essential that everyone involved with project implementation be required to take special measures to conduct best management practices on the ground in order to prevent the spread of plant pathogens, especially in sensitive natural communities or oak woodlands.

O4-26

SPR BIO-7: Survey for Special-Status Plant Species

In addition to the essential need to survey for special-status plant species, the CalVTP should have language added to be specific that if herbicides will be used in proximity to sensitive plant populations, the buffer zone will be increased to a minimum of 75ft.

O4-27

SPR BIO-9: Prevent Spread of Invasive Plants and Noxious Weeds

Every precaution must be required to prevent project-related activities from spreading invasive plants and noxious weeds. It must also be a component of the Adaptive Management Framework, to monitor specific project footprints to locate, document and during project activities and after project activities are complete.

O4-28

SPR BIO-10: Survey for Special-Status Wildlife and Nursery Sites

This is an essential project requirement. If suitable habitat for special-status wildlife species or if nurseries of any wildlife species are present, there needs to be protocol-level surveys conducted. Please see the next section for our comments related to the mitigation measures that are to follow this SPR.

O4-29

SPR BIO-11: Install Wildlife-Friendly Fencing (Prescribed Herbivory)

Our Center is in full agreement with SPR BIO-11. It is essential that any fencing used for the herbivory as a vegetation treatment tool needs to be constructed in a way that minimizes wildlife entanglement, that uses intermittent (not continuous) electrical output chargers, that fence height requirements allow deer/other wildlife to easily jump over without injury, and that the fencing is highly visible to wildlife.

O4-30

Mitigation Measures

Special Status Plant Species (BIO-1a – BIO-1c)

Mitigation measure BIO-1b in the CalVTP states that if sensitive plant populations are located, a 50’ buffer will be established by a qualified RPF or botanist and may be adjusted to greater or less than 50’ as determined appropriate. However, the impact analysis of BIO 1 states that some herbicides can drift up to 68’ from the target at wind speeds of 15 mph. The CalVTP be specific that if herbicides will be used in proximity to sensitive plant populations, the no-treatment buffer zone will be increased to a minimum of 75’. Buffer zones for riparian areas should clearly be defined consistent with the recommendations we provided previously above.

O4-31

Mitigation measure BIO-1c is designed to compensate for “unavoidable loss” of special-status plants. Within the CALVTP, it is not clear how unavoidability will be determined and the extent to which “take” of sensitive plants may be permitted. Our Center urges that avoidance be the priority, rather than acceptance of “unavoidable loss.”

O4-32

Special Status Wildlife Species (BIO-2a – BIO-2h)

Our Center supports the proposed mitigation measures aimed at avoiding mortality, injury or disturbance to listed and California fully protected wildlife species and the intent to maintain habitat function for listed species and California fully protected wildlife species (BIO-2a), and also to avoid mortality, injury or disturbance to special-status wildlife species and to maintain habitat function for special-status wildlife species (BIO-2b). **However, it is critical that the qualified RPF or biologist use the most current and commonly accepted science to determine how to best avoid mortality, injury or disturbance or how to best maintain habitat function for a particular wildlife species that may be impacted by any given treatment.** The risk of significant impacts to vulnerable wildlife species is one of the most pivotal concerns from the proposed CalVTP programmatic approach.

O4-33

While an arbitrary no-disturbance buffer zone of 100 feet from an “occupied site” (such as a nest, den, etc.) for all special-status wildlife species is better than nothing, it’s important to emphasize that a buffer zone may need to be much wider depending upon the wildlife species. For example, consideration of a 300’ or more no-disturbance buffer area around a CA spotted owl nest tree would be consistent with federal agency requirements. A different, yet also important requirement, would be to maintain a certain canopy cover density in territories of the Northern goshawk. Much care needs to be taken before treatment activities commence to ensure no-disturbance buffer zones or habitat protection measures are providing the highest level of protection for any given listed or California fully protected wildlife species. Furthermore, since many special status wildlife species depend upon critical habitat elements, rather than a single tree, den, cave, etc., the real need to assure minimal disturbance of rare wildlife due to project activities is to assure that adequate pre-project surveys are done, appropriate protections are required for critical habitat elements, and that project treatments are required to halt for periods when fledglings are on nests or other wildlife needs must be given priority.

O4-34

Sensitive Natural Communities, Oak Woodlands & Riparian Habitat (BIO-3a – BIO-3c)

As addressed previously in these comments, our Center is concerned that the CalVTP as now written does not adequately discuss the need for broad buffers from herbicides applied adjacent to sensitive habitats such as riparian areas. Sufficiently broad no-treatment buffer zones for riparian areas should clearly be defined.

O4-35

The CalVTP fails to clearly define operations adjacent to sensitive plant species habitat areas such as lava caps. It is logical that some desired fuel breaks may be constructed along ridge tops where lava caps are often located, and where it may be beneficial to tie fuel breaks into naturally occurring open areas. The CalVTP needs to clearly state that no herbicide use or mechanical treatments adjacent to lava caps will occur wherever there is risk to sensitive plant populations unless all surveys and protective measures have been implemented. Similarly, our Center urges that no heavy machinery be allowed to enter or cross a lava cap area unless a biologist or soil scientist has fully assessed the risk of damage and has minimized such risk through the application of mitigation requirements.

O4-36

Wetlands (BIO-4)

The CalVTP does not currently provide scientific rationale to justify the proposed minimum no-disturbance buffer zone of only 25 feet from wetlands (e.g., seasonal wetland, wet meadow, freshwater marsh, vernal pool). As previously shared in these comments, based upon years of engaging in herbicide treatment plans and projects on federal lands, our Center urges that there be language in the CalVTP that explicitly prohibits herbicide treatments in riparian areas, and that sets a no-herbicide buffer zone at a minimum of 50 feet from wetlands, wet areas, rivers, streams, or lakes.

O4-37

Nursery Habitat (BIO-5)

Our Center strongly recommends that every effort should be taken to survey for and protect wildlife nursery habitat from negative impacts associated with project implementation.

O4-38

Common Wildlife (Impact BIO-6)

Although our Center agrees that any individual vegetation treatment will occur within a relatively small proportion of a “common wildlife species” range, the fact that up to 250,000 acres of treatments are to occur annually for an unclear amount of time into the future will result in vast, significant cumulative impacts over just a few years of projects. This could presumably equate to long-term impacts to some “common wildlife species”. Therefore, our Center recommends that in any area that is targeted for multiple project treatments, that no more than 30% of a sub-watershed area be allowed to be approved for vegetation-disturbing treatments within a 10-year period.

O4-39

Use of Herbicides (Impact HAZ 2)

Our Center strongly opposes the approval of herbicide use through a programmatic approval process. While herbicide use may be appropriate when considered narrowly at a specific project site for a very specific project purpose, herbicide use on a broad scale can often end up being the “cheap and quick” proposed solution to eliminate vegetation or minimize vegetative cover. As mentioned previously, herbicide applications can directly impact sensitive plant and animal populations, and directly impact water quality. Since the proposed annual target of 250,000 acres of treatment could still be obtained without the use of herbicides, through increasing the extent of mechanical and manual treatments (PEIR p. 6-36), herbicides are not essential to meet the program objectives of the CalVTP (PEIR p. 6-38). Our Center opposes programmatic approval of herbicide use at the scale of which the CalVTP plan would allow application.

O4-40

Hydrology and Water Quality (Impact HYD 1-5)

Our Center supports that measures will be taken during vegetation treatment activities to aim to reduce the likelihood of sediment loading, hazardous materials entering waterways, and direct disturbance to waterways from treatment operations and outcomes. However, we reiterate the need to minimize the likelihood of herbicides entering waterways. We urge that there be

O4-41

language in the CalVTP that explicitly prohibits herbicide treatments in riparian areas and that sets a no-herbicide buffer at a minimum of 50' from wetlands, rivers, streams, and lakes.

O4-41
cont.

Closing summary

Although our Center agrees that the pace and scale of hazardous vegetative fuel treatments needs to increase across the state, our Center nevertheless opposes the “streamlined CEQA review approach” that eliminates all timely public input, whereby CAL FIRE or any local, regional, and state agencies with land ownership or land management responsibilities within the State Responsibility Area (SRA) would be entitled to implement vegetation treatment activities and to use this PEIR for CEQA compliance. Such incredibly broad and widespread programmatic approvals undermine the true intent of CEQA.

O4-42

At a minimum, CSERC strongly recommends that there still be a public notification process posted online and that there be a streamlined public comment period for each proposed individual vegetation treatment project, whether or not the project falls within the scope of the CalVTP. It is critical that there be public engagement in this process, and that the public have the opportunity to comment on whether the activities and mitigation measures proposed in a vegetation treatment project actually comply with the PEIR.

For emphasis, we also again urge that there be language in the CalVTP that explicitly prohibits herbicide treatments in riparian areas, that sets a no-herbicide buffer at a minimum of 50' from wetlands, wet areas, rivers streams and lakes, or within 75' of listed or sensitive plant species. Within such no-herbicide use areas, manual vegetation treatments should be used. Furthermore, herbicides should only be allowed as an initial treatment option, and subsequent treatments should be any of the other proposed treatment activities besides herbicide.

O4-43



John Buckley
CSERC, Executive Director
johnb@cserc.org
209-586-7440

August 4, 2019

Board of Forestry and Fire Protection
Attn: CalVTP
PO Box 944246
Sacramento, CA 94244-2460

RE: American Forest comments pertaining to California Vegetation Treatment Program filed under State Clearinghouse number 2019012052

To Whom It May Concern,

American Forests would like to commend the Board of Forestry and Fire Protection for taking this important step in increasing the pace and scale of landscape restoration on State Responsibility Area lands. Achieving 250,000 acres of vegetation treatment annually will increase wildfire resiliency, forest health, and public safety.

American Forests is the oldest national nonprofit conservation organization in the U.S. and has been a catalyst for many key milestones in national forest policy and practices, from the founding of the U.S. Forest Service and the national forest system to public education efforts. American Forests' mission is to create healthy and resilient forests from cities to wilderness, in order to deliver essential benefits to climate, people, water and wildlife. Therefore, having reviewed the CalVTP Draft Program Environmental Impact Report (PEIR) with these goals and interests in mind, American Forests would like to provide the following comments and/or recommendations:

- **American Forests supports the increase the use of prescribed fire as a treatment tool.** Prescribed fire is known to be one of the best ways to increase large landscape vegetation management and is a common tool in eastern forests. This CalVTP draft PEIR will result in up to 125,000 acres of prescribed fire to be implemented annually, a significant increase from current implementation which will restore fire as a natural process to the landscape. Prescribed fire is a lower cost alternative to manual treatment where mechanical treatment cannot be implemented due to site conditions. Although prescribed fire has significant impacts to air quality and GHG emissions, fuel

treatments can avoid the much higher costs associated with a catastrophic wildfire¹. Studies have also shown that prescribed fire has 3 times less harmful particulates than wildfire,² resulting in an overall lower air quality impact.

- **Support the expansion of use of mechanical treatments on forested lands.** As mentioned in the CalVTP draft PEIR, the current Vegetation Management Program does not include the use of mechanized treatments on forested lands. Mechanical treatments are a low-cost tool that can address large landscape restoration needs for fuel breaks and other safety measures. The expansion of mechanical treatments also allows for low cost treatment options during fire season, when burn restrictions prohibit prescribed fire utilization

O5-1
cont.

- **Prioritize alternatives that increase carbon storage, forest restoration, and wildfire resiliency by achieving objectives 4 and/or 5.** Objectives 4 and 5 of the CalVTP draft PEIR most closely reflect the goals and values of American Forest’s American ReLeaf program. Furthermore, these objectives will promote not just the proximate safety of communities, but also the long-term resilience of communities and forests. The alternatives that achieve these objectives according to the PEIR are Alternatives A, D, and E. American Forest’s does not support Alternative A because the reduced acreage per year does not sufficiently increase pace and scale of restoration and as mentioned in the alternative, could slow progress in later years. Alternative D will not sufficiently address forest restoration because it does not increase the use of prescribed fire. In many areas pile and broadcast burning are the only economic ways to reduce fuel loads and dead trees, unless major investments are made into expanding woody biomass utilization opportunities.

O5-2

- **Of the 6 alternatives, alternative E: No Herbicide Treatments is the environmentally superior alternative.** Compared to the other alternatives, Alternative E will result in most WUI fuel reduction, forest management, and ecological restoration. This alternative retains prescribed fire as a treatment option, which is critical for achieving landscape scale effects quickly. Furthermore, selecting this alternative will provide maximum coverage in both acreage and treatment types for streamlining environmental review processes. The inclusion of ecological restoration in this Draft PEIR will allow

O5-3

¹ Mokelumne Watershed Avoided Cost Analysis, <https://sierranevada.ca.gov/mokelumne-watershed-analysis/>

² Liu et al 2017. Airborne measurements of western U.S. wildfire emissions: Comparison with prescribed burning and air quality implications. 6108–6129. Retrieved from <https://doi.org/10.1002/2016JD026315>

local and state organizations that focus on ecological restoration to implement projects through CAL FIRE, increasing collaboration and capacity throughout California. While it is unfortunate that herbicide treatment is not included as a tool, this CalVTP also does not preclude separate CEQA documents being prepared for inclusion of herbicide treatment for some specific projects.

O5-3
cont.

- **American Forests would like to also voice some support for alternative C: Modified WUI Fuel Reduction and Fuel Breaks.** While alternative C does not achieve objectives 4 and 5, American Forests applauds a science-based rationale of where and when to apply prescribed fire to mitigate habitat type change in high risk areas, such as chaparral. This alternative also retains most treatment types and focuses on highest risk and protection for communities. Additionally, it allows for the use of all treatment types, including herbicide treatment. Perhaps the rationale for application of prescribed fire could be incorporated into alternative E.

O5-4

In conclusion, American Forests supports the CalVTP Draft PEIR and urges the Board of Forestry and Fire Protection to adopt alternative E, in order to maximize forest restoration opportunities while reducing fire threat to communities.

Respectfully,



Brittany Dyer
CA State Director
American Forests



August 5, 2019

Chairman Guilless and members of the
Board of Forestry and Fire Protection,

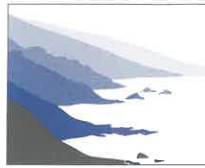
The California Licensed Foresters Association would like to express support for the California Vegetation Treatment Program Programmatic EIR (CalVTP). This document is integral in meeting the Governor's Executive Order (B-52-18) to "increase pace and scale" of fuels treatments. The CalVTP would provide an avenue for CALFIRE, as well as SRA land ownerships, to meet the goals of the Governor's order, and provide much needed vegetation treatments across a landscape that has seen over 100 years of fire suppression. In addition, it provides a valuable tool for CALFIRE and other agencies to conduct WUI treatments, as well as providing much needed support and oversight of these projects by the Registered Professional Forester community. The program objectives serve as an outline and pathway to meeting multiple management goals, as well as providing avenues for the protection of communities and our natural resources. The California Licensed Foresters Association is in full support of the CalVTP and its components, and is encouraged to see the broad landscape wide vegetation treatments that are proposed to be included as part of this program. Thank you for the opportunity to comment on an invaluable tool to the land owners that fall within the scope of this document, as well as the involvement of the RPF community.

O6-1

Sincerely,

A handwritten signature in black ink that reads "C.D.-".

Christopher Dow
CLFA President



Draft Program Environmental Impact Report
California Vegetation Treatment Program - State Clearing House # 2019012052

California Board of Forestry and Fire Protection, Sent Via Email To: CalVTP@bof.ca.gov

P.O. Box 944246
Sacramento, CA 94244-2460

August 6, 2019

The Big Sur Land Trust (BSLT) has a 40-year history of conservation work in Monterey County's iconic and fire-prone lands. Three of our flagship properties burned during the massive 2008 Basin-Complex Fire and the equally vast 2016 Soberanes Fire. Conserved natural resources, as well as historic structures were lost by BSLT due to these wildland fires and we are acutely aware of the trauma and hardship wildfire has brought to the communities we serve on the Central Coast of California.

BSLT is currently negotiating with Calfire representatives over prescriptions that will be followed on the Land Trust's properties during the present phase of fuel reduction work currently underway in and around our lands. We have first-hand knowledge of the level of vegetation modification that is occurring in the northern Santa Lucia Range and we offer these observations:

- There is very little opportunity to customize the work of masticating equipment, or even hand crews when the scope of work directing fuel modification is overly general.
- Communicating the location and nature of sensitive resources is challenging. Maps of sensitive resources are often not available or consulted, avoidance flagging is missed by operators in the field or removed by wildlife, and training for field crews is lacking.
- It is profoundly difficult to understand how linear fuel treatment zones will protect permanent residential and commercial districts from the wildland fires of the future.

BSLT has concerns regarding the broad programmatic goals described in the CalVTP. BSLT also has concerns about the validity of the sweeping generalizations and conclusions drawn in the assessment of potential environmental impacts that could result from the implementation of fuel reduction activities proposed in the PEIR.

We respectfully offer the following general comments on the Draft Program Environmental Impact Report (PEIR) for the proposed California Vegetation Treatment Program (CalVTP).

1. The broad, far-reaching conclusions regarding the level of impacts to resources that the PEIR could impact are not based on realistic project implementation. There is not enough specificity as to where projects will be located or how extensive each will be. No specific geographic locations, acreages or project parameters are described. As proposed, the CalVTP is simply too

07-1

07-2

07-3

07-4



vague to draw conclusions that support findings of *No Impact*, or *Less Than Significant Impact with Mitigation* on most, if not all, of the potential impacts that are identified in the programmatic document. Without more project-specific information, program impacts cannot be adequately assessed. Therefore, the conclusions drawn in the CalVTP analysis are speculative.

O7-4
cont.

2. The VTP will not reduce the size and severity of wildland fires, thus will not reduce fire risks to communities in fire-prone areas. Reducing fire risk is stated as a fundamental program goal, however is not realistic or based on sound scientific analysis. While strategically reducing fuels in defensible space around developments has proven successful in most cases, the wholesale removal or modification of vegetation in broad, often linear swaths may not reduce fire hazards. Linear fuel treatments will also not accomplish the program goal of preparing for a more natural fire regime.

O7-5

3. The CalVTP does not adequately address the planning and zoning, or building code ordinances that contribute greatly to the increase of community fire risk. A combination of appropriate construction materials, fire-safe planning that emphasizes development away from fire-prone vegetation, and defensible space maintenance should have been considered as among the primary alternatives in the impact analysis. Categorically changing California building practices, rather than wholesale modification of the state's vegetation should be a focus of any program designed to reduce fire risk.

O7-6

4. The wholesale modification of understory vegetation in forested habitats and the conversion of vast areas of shrub-dominated communities leads to disturbance conditions that favor non-native, often weedy and invasive, fire-prone species. The intentional habitat modifications proposed in the CalVTP could ultimately lead to an increase in flammable fuels, particularly in the absence of follow-up treatments, regular monitoring and adaptive management strategies, which are not considered or addressed in the PEIR.

O7-7

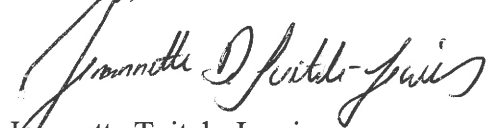
5. Finally, we believe that to effectively reduce fire risk and hazards in developed areas, the Board of Forestry should fund assistance programs that support fire-safe structure upgrades and the creation of defensible space around improvements in fire-prone areas.

We understand that the CalVTP will not stop wildfires and that it is extremely difficult to prepare a programmatic analysis of impacts that could result from the far-reaching proposal in the CalVTP. However, BSLT advocates for an alternative approach to the wholesale modification of vegetation proposed in the CalVTP. BSLT supports a comprehensive statewide program that helps communities and their residents protect their property and themselves from fire.

O7-8

Thank you for the opportunity to provide these comments.

Sincerely,



Jeannette Tuitele-Lewis
President/CEO



August 7, 2019

Board of Forestry and Fire Protection
Attn: CalVTP
PO Box 944246
Sacramento, CA 94244-2460

Sent via email to CalVTP@bof.ca.gov

RE: CalVTP Programmatic Environmental Impact Report, State Clearinghouse number 2019012052

To the members of California Board of Forestry and Fire Protection:

The California Oaks program of California Wildlife Foundation (CWF/CO) works to conserve oak ecosystems because of their critical role in sequestering carbon, maintaining healthy watersheds, providing wildlife habitat, and sustaining cultural values. The comments below on the Draft Programmatic Environmental Impact Report (PEIR) for the proposed California Vegetation Treatment Program (CalVTP) focus on oak ecosystems.

1) The PEIR lacks sufficient detail to properly assess impacts on an estimated 20.3 million acres of land. CWF/CO appreciates that the PEIR is responding to a set of unprecedented environmental challenges. CWF/CO also appreciates that there is a desire to respond in a timely fashion. Nonetheless, an undertaking of such scope and scale needs adequate site-specific environmental analysis, adequate training and supervision of work crews, and adequate evaluation on an ongoing basis to guard against degrading environmental conditions (e.g., invasive annual grass incursion on sensitive landscapes). Such an undertaking also needs a much greater level of certainty and full analysis of its impacts.

CWF/CO recommends that stakeholders provide input on the type of expertise needed for site-specific analysis. Botanist and Registered Professional Forester (RPF), discussed in 2-35, *Qualifications*, inappropriately assumes an equivalency of skill and knowledge. Further, the level of detail in Standard Program Requirement (SPR) BIO-2: *Require Biological Resource Training for Workers*, needs to be greatly expanded, with input from key stakeholders, to ensure that the programmatic goals of CalVTP are advanced.

The importance of site-specific expertise was highlighted when Los Angeles Department of Water and Power bulldozed hundreds of federally-listed endangered plants (Braunton's milk vetch, *Astragalus brauntonii*) while conducting activities to advance wildfire safety at Topanga State Park in July of this year (see: <https://www.latimes.com/environment/story/2019-07-31/endangered-plants-bulldozed-state-park-city-crews>). Unfortunately, such incidents are all-too common and they point to the need for proper expertise, training, guidance, and supervision at all stages of projects.

O8-1

O8-2

The section titled *Long-Term Effects of Treatment Types*, which starts on page 3.6-179, is illustrative of the inadequacy of the PEIR in assessing project impacts. The authors note: “Although fuel treatment is intended to restore ecosystem resiliency under the CalVTP in many areas, the potential benefits to special-status wildlife species are uncertain and therefore not considered in determining the significance of this impact under CEQA.” An important purpose of environmental analysis is to understand potential impacts of actions. The PEIR cannot function as streamlined CEQA documentation with such a high level of uncertainty about impacts on species that the state recognizes as needing special management consideration.

O8-3

Lastly, the greenhouse gas (GHG) emissions analysis is incomplete. Note 5 in the chart titled “Emissions Per Acre Treated” in Appendix AQ-1, *Treatment Activity Emissions*, states: “The emissions estimates do not include fugitive PM₁₀ and PM₂₅ emissions associated with ground disturbance and other activity by off-road equipment.” Additional to fugitive PM deficiencies, it is unclear if the GHG analysis includes carbon and other GHG emissions from soil disturbance associated with tree and vegetation removal.

Note 4 on the same page states: “These emission estimates do not account for any emissions associated with the removal of vegetative biomass from treatment sites and any processing activity that may occur thereafter, including potential use as feed stock for a biomass power facility, composting, or chipping and mulching applications.”

O8-4

California law requires that GHG impacts of proposed projects be fully assessed. The PEIR GHG analysis is preliminary, and thus insufficient to assess progress in advancing CalVTP objective #4: “to contribute to meeting California’s GHG emission goals by managing forests and other natural and working lands as a net carbon sink, consistent with the *California Forest Carbon Plan*, *California’s 2017 Climate Change Scoping Plan*, *Fire on the Mountain: Rethinking Forest Management in the Sierra Nevada*, and *California 2030 Natural and Working Lands Climate Change Implementation Plan*.” All GHG emissions must be analyzed in the environmental documentation.

2) Vegetative composition of restored ecosystems may be more resilient if the species composition is informed by considerations of the changing climate. The discussion in section 2.5.1, *Description of Treatment Types*, provides the following description of Ecological Restoration: “Generally, outside of the WUI in areas that have departed from the natural fire regime as a result of fire exclusion, ecological restoration would focus on restoring ecosystem processes, conditions, and resiliency by moderating uncharacteristic wildland fuel conditions to reflect historic vegetative composition, structure, and habitat values.” CWF/CO suggests that historic vegetative composition may not be appropriate in all environments. Climate change effects must be taken into account in considering restoration potential and goals, and the pace and scale of restoration actions. Further, even though the CalVTP is not designed for wind-driven fires, it is important the CalVTP impacts do not exacerbate wind-driven fire danger.

O8-5

3) The VTP needs numeric targets against which ecosystem restoration goals are measured. The discussion under section 2.6.1, *Adaptive Management—Framework Development and Monitoring*, needs a discussion of the ecological potential of treatments for fire and climate resilience. Using oak woodlands as an example, the treatment area encompasses 3,786,501 acres of oak woodlands and blue oak foothill pine woodlands—a

O8-6

figure that does not include potential impacts on montane or chaparral oaks. What are the Board of Forestry and Fire Protection’s (Board) goals, against which success will be measured for improving ecosystem health in oak woodlands, oak-forested lands, and oak chaparral ecosystems? Can the Board commit to a standard of no net loss for acreage figures for mature oak ecosystems resulting from VTP actions? Does the Board wish to restore the extent of oaks in California’s landscape because of their relative fire-resilience, their ecosystem services, and their cultural importance? If so, is there a numeric goal that can be used to assess programmatic success? These questions should be answered in the environmental documentation.

O8-6
cont.

Similarly, the PEIR discusses a number of the ecosystem problems caused by invasive annual grasses. What are the Board’s goals for restoring and enhancing native grasslands? These questions should be answered in the environmental documentation.

O8-7

4) Recognize the importance of oaks to WUI communities. It is concerning to CWF/CO that much of the proposed WUI treatment has the potential to negatively impact oak woodlands and the ecosystem services that they provide, given the large extent of oak landscapes that are within the CalVTP treatment area.

CWF/CO joins with many of the member organizations that form the California Oaks Coalition in recognizing that an improved CalVTP is only part of the solution for adapting to a new fire regime.¹ Other important components are that the state must devote resources to help ensure that homeowners—especially those living in the Wildland Urban Interface (WUI)—take steps to harden their homes against ember ignition, create and maintain appropriate defensible space, and understand and practice behaviors to reduce unintentional ignitions. Communities must have effective alert systems and the means to evacuate residents to safety. Land-use decision-makers must have the wherewithal to not approve indiscriminant development in high fire-hazard areas. We commend the Board for recognizing that CalVTP is one facet of the solution and suggest that consideration of the importance of oaks in sustaining watersheds, providing habitat, sequestering carbon, and enhancing communities in the WUI be included in the analysis of WUI treatments.

O8-8

¹ Amah Mutsun Land Trust; American River Conservancy; American River Watershed Institute; Butte Environmental Council; California Invasive Plant Council (Cal-IPC); California Native Plant Society (CNPS), including CNPS San Diego Restoration Committee and CNPS Sanhedrin Chapter; California Water Impact Network (C-WIN); California Wilderness Coalition (CalWild); Californians *for* Western Wilderness (Cal *U* Wild); Carpe Diem West; Center for Biological Diversity; Chimineas Ranch Foundation; Clover Valley Foundation; Dumbarton Oaks Park Conservancy; Elder Creek Oak Sanctuary; Endangered Habits Conservancy; Endangered Habitats League; Environmental Defense Center; Environmental Protection Information Center (EPIC); Environmental Water Caucus; Foothill Conservancy; Forests Forever; Friends of the Richmond Hills; Friends of Spenceville; Hills For Everyone; Los Padres ForestWatch; Lower Kings River Association; Napa County Water, Forest and Oak Woodland Protection Committee; Northern California Regional Land Trust; Planning and Conservation League; Redlands Conservancy; Resource Conservation District of Santa Monica Mountains; Rural Communities United; Sacramento Tree Foundation; Santa Clarita Organization for Planning and the Environment (SCOPE); Shasta Environmental Alliance; Sierra Club Placer County; Sierra Foothill Conservancy; Tejon Ranch Conservancy; Tuleyome; Tuolumne River Trust; and University of California Los Angeles Botanical Garden are among the groups partnering with California Oaks to conserve oak woodlands and oak-forested lands for future generations.

The proposed WUI treatment type is described on page 2-7 of the PEIR: “fuel reduction would generally consist of strategic removal of vegetation to prevent or slow the spread of non-wind driven wildfire between structures and wildlands, and vice versa.” Page 2-9 describes the estimated proportion of the WUI within CalVTP: “The modeled WUI fuel reduction treatment areas within the treatable landscape...encompass approximately 10.1 million acres, which is approximately half of the treatable landscape for the CalVTP.”

Impact BIO-1: Substantially Affect Special-Status Plant Species Either Directly or Through Habitat Modifications, which starts on page 3.6-129, includes discussion of WUI treatments:

... WUI fuel reduction treatments, however, are primarily focused on strategic reduction of vegetation density for direct protection of communities and assets at risk...Therefore, there is less focus on ecological enhancement and the risk of direct removal or eventual death of special-status plants is greater in the WUI treatment type than in the ecological restoration treatment type.

O8-8
cont.

Section 2.5.1, *Description of Treatment Types*, describes Ecological Restoration:

Generally, outside of the WUI in areas that have departed from the natural fire regime as a result of fire exclusion, ecological restoration would focus on restoring ecosystem processes, conditions, and resiliency by moderating uncharacteristic wildland fuel conditions to reflect historic vegetative composition, structure, and habitat values.

Rigorous site-specific scientific analysis must inform the implementation of CalVTP in WUI areas. To the extent possible, treatments in the WUI should seek to restore and adapt ecosystems to achieve greater resilience. During this time of increasing heat, WUI community residents with adequate tree cover will fare better, as will the ecosystem.

5) The scale of the proposed program is so large that the feasibility and permanence of mitigation become untenable. The PEIR provides assurances that the conditions of lands set aside through Habitat Conservation Plans and other conservation covenants will be upheld although those lands are subject to treatment. Using the example of oak woodlands that will be treated and subject to mitigation as detailed in Mitigation Measure BIO 3B, copied below, what are the assurances that the conservation values of the lands that are placed under conservation easements as mitigation for CalVTP will be conserved *in perpetuity*? Further, what are the assurances that the areas where mitigation restoration actions take place will not be disrupted by VTP treatments? And, how will the ratio of mitigation be set? These questions should be answered in the environmental documentation.

O8-9

(Starts on 3.6-147) *Mitigation Measure BIO-3b: Compensate for Loss of Sensitive Natural Communities and Oak Woodlands* If significant impacts on sensitive natural communities or oak woodlands cannot feasibly be avoided or reduced as specified under Mitigation Measure BIO-3a, the project proponent will implement the following actions:

Compensate for unavoidable losses of sensitive natural community and oak woodland acreage and function by:

- restoring sensitive natural community or oak woodland functions and acreage within the treatment area;
- restoring degraded sensitive natural communities or oak woodlands outside of the treatment area at a sufficient ratio to offset the loss of acreage and habitat function; or
- preserving existing sensitive natural communities or oak woodlands of equal or better value to the sensitive natural community lost through a conservation easement at a sufficient ratio to offset the loss of acreage and habitat function.

The project proponent will prepare a Compensatory Mitigation Plan that identifies the residual significant effects on sensitive natural communities or oak woodlands that require compensatory mitigation and describes the compensatory mitigation strategy being implemented to reduce residual effects, and:

For preserving existing habitat outside of the treatment area in perpetuity, the Compensatory Mitigation Plan will include a summary of the proposed compensation lands (e.g., the number and type of credits, location of mitigation bank or easement), parties responsible for the long-term management of the land, and the legal and funding mechanism for long-term conservation (e.g., holder of conservation easement or fee title). The project proponent will submit evidence that the necessary mitigation has been implemented or that the project proponent has entered into a legal agreement to implement it.

For restoring or enhancing habitat within the treatment area or outside of the treatment area, the Compensatory Mitigation Plan will include a description of the proposed habitat improvements, success criteria that demonstrate the performance standard of maintained habitat function has been met, legal and funding mechanisms, and parties responsible for long-term management and monitoring of the restored habitat.

O8-9
cont.

6) VTP needs to provide mapping at a fine scale for key stakeholders and the public to understand where treatments are occurring, how the restoration goals are being met, and to communicate how program goals and objectives are being met.

O8-10

7) Fuel Breaks should not be located in sensitive communities. The proposal that no more than 20% of a stand of sensitive natural community or oak woodland vegetation will be removed, in combination with the scale of the estimated 3.1 million acres, or an estimated 15%, of the treatable landscape for fuel break treatment areas, could have devastating impacts on oak woodland communities, many of which are already negatively impacted by water-diversion, drought, disease, over-grazing, browsing, development pressures, and other stressors. CWF/CO recommends that Mitigation Measure BIO-3a: *Design Treatments to Avoid Loss of Sensitive Natural Communities and Oak Woodlands* include a prohibition of fuel break locations in sensitive communities rather than simply retaining 80% of the stand. CWF/CO recommends that very specific protocols be determined for situations when this approach is not tenable. (See discussion starting on page 3.6-146.) Additionally, CWF/CO suggests that 1) native herbaceous

O8-11

vegetation be retained as a measure to limit type conversion to weed fuels, and 2) habitat-supporting native shrubs that do not pose a significant fuel risk be retained. Within oak woodlands, habitat-supporting native shrubs should be retained that do not pose a significant fuel ladder risk after oak limbing.

O8-11
cont.

Fuel break locations should be areas that are already disturbed (such as at roadsides and at community edges), where they will directly protect communities, and where there is low potential for disturbance-facilitated weed spread.

8) Treatments in oak landscapes should be timed after acorn production to not disrupt critical bird and wildlife food sources, negatively impact natural regeneration, or negatively impact uses of acorns by tribal members. Mitigation Measure BIO-3a: Design Treatments to Avoid Loss of Sensitive Natural Communities and Oak Woodlands has recommendations on timing of herbivory, but not pertaining to other treatments.

O8-12

9) Treatments should be designed to retain as many oaks of all classes and ages as possible. Restoration of oak ecosystems is challenging due to lack of rainfall and over-drafted aquifers, predation, over-grazing, and other factors. Treatment regimes should be developed in consultation with a range of stakeholders and should focus on both keeping trees standing and improving natural oak regeneration across the treatment areas.

O8-13

10) SPR BIO-6: Prevent Spread of Plant Pathogen, should be expanded and subject to stakeholder review. Please review: <http://www.suddenoakdeath.org/wp-content/uploads/2014/12/forestry-08-10-with-new-2014-map.pdf>, please change the first bullet to add precautionary language as notated in boldfaced text: *clean and sanitize vehicles, equipment, tools, footwear, and clothes before arriving at a treatment site and when leaving a contaminated site, or a site in a county where contamination is a risk*, and please provide much more rigor in developing SPRs for each region in consultation with key stakeholders to ensure VTP actions do not spread plant pathogens.

O8-14

11) SPR Bio-5, in its current iteration, will degrade ecosystem health. The use of prescribed burning as a treatment tool is not appropriate for Southern California's chaparral environments.

O8-15

12) Herbicide use should not be included if local tribes or communities, or downstream tribes or communities request that they not be used.

O8-16

13) Maintenance treatments that follow initial treatments should not include broadcast herbicide application to suppress regrowth.

O8-17

Thank you for your consideration of our comments. We would be happy to provide additional input, should it be helpful in the process of improving the CalVTP.

Sincerely,

Janet Cobb
Executive Officer

Angela Moskow
Manager, California Oaks Coalition



August 7, 2019

Board of Forestry and Fire Protection
Attn: CalVTP
P.O. Box 944246
Sacramento, CA 94244-2460

Re: Comments on Draft PEIR for the California Vegetation Treatment Program
State Clearinghouse #2019012052

CalVTP Committee,


Sonoma Land Trust and five other state and county public park agencies and private conservation organizations are undertaking a joint effort to collaboratively manage fire and vegetation on a landscape scale in the north Bay Area. Our goal is to reduce risks to life and property from wildfire within the wildland-urban interface (WUI), implement priority elements of state and local fire safety and watershed recovery plans, and prepare for future wildfire suppression responses to help safeguard firefighters and the public. Our primary means to reach these goals are prescribed fire, fuel reduction, and vegetation management projects that will reduce hazardous fuel loadings, enhance habitat for native plants and wildlife, and maintain water quality. Sonoma Land Trust believes that the proposed California Vegetation Treatment Program (VTP) will facilitate our efforts, and those like it, to achieve greater ecological benefit and community safety.

Fire is a critical natural process in the development and maintenance of many, if not most, of California's ecosystems. Fire is an obligate or facultative process in the persistence of many plant species, helps shape plant community structure, invigorates forest regeneration, and produces a mosaic of habitats that foster robust wildlife diversity. Given past decades of fire suppression, an increase in prescribed burning is vital to conserving our natural resources and promoting resilience to wildfire. The benefits of burning play out over time and implementing a burning regime is costly for private conservation organizations, even when partnering with CALFIRE. The VTP will aid in justifying costs by facilitating regulatory approvals and providing a measure of certainty that efforts can be fruitful over the long term while establishing the framework for conducting fuel management efforts that avoid significant negative impacts.

The scale of the need for fire fuels reduction and vegetation management is massive. Targeting the treatment of 250,000 acres a year may sound like a lot, but this is only 1.2% of the treatable acres and is, if anything, too conservative to get ahead of the deferred need. We believe it is, however, an appropriate increase during the term of the proposed VTP given funding constraints and the need to build public confidence and support.

We believe the VPT is a necessary and welcome step in the management of our natural resources for ecological benefit and community safety. We applaud CALFIRE and all of the contributors for a comprehensive and reasoned PEIR for the VTP.

Sincerely,


Anthony Nelson
Sonoma Valley Program Manager

09-1



August 8, 2019

Submitted via email to CalVTP@bof.ca.gov

Board of Forestry and Fire Protection
ATTN: CalVTP
P.O. Box 944246
Sacramento, CA 94244-2460

Re: Notice of Availability of Draft Program Environmental Impact Report Regarding a Proposed Statewide Vegetation Treatment Program

Dear Members of the Board:

The California Wool Growers Association (CWGA) appreciates the opportunity to provide comments for the Draft Program Environmental Impact Report (EIR) related to the California Vegetation Treatment Program (CalVTP). Our members strive to be responsible stewards of California's diverse natural resources as integrating sheep and goat grazing in plant agriculture and forestry management allows for greater utilization of resources, while improving the function and appearance of a wide variety of landscapes. As California's forests are comprised of both public and private ownership, our association has been engaged in addressing the State's needs for improving landscapes and reducing the risk of catastrophic wildfire.

The CalVTP is a well-overdue and much needed statewide strategy that will help private landowners and local communities undertake fuel reduction projects without the need for duplicative, costly and time-consuming environmental reviews. Conditions in California's treatable landscapes are changing at a rapid rate and experiencing a wildfire crisis. It can be debated that a combination of manmade and natural factors has contributed to the State's current treatable landscape conditions, it can also be said the State's current practices and policies regarding vegetation management are inadequate to accommodate the environmental changes that are said to be occurring. Nonetheless, there is an evident buildup of fire fuel not only to ensure that California's treatable landscapes remain resilient but also lower the risk of potential wildfire.

It is vital to for the Board of Forestry and Fire Protection (Board) to move expeditiously in the implementation of the CalVTP. In response to the Draft Program EIR we offer the following comments:

Chapter 2: Program Description

2.5.2 Description of Treatment Activities

We appreciate the Board recognizing grazing (or prescribed herbivory) as a viable vegetation management solution for reducing fire fuels int the CalVTP. This long-time practice has proven to reduce the severity of fires, promote healthy forests by grazing the vegetation that crowds out and competes with trees, improve wildlife habitat and can be utilized in areas that are too steep for machinery, or too close in proximity to residential areas that may have concerns with chemical treatments of the landscape.

President
Dan Macon
Auburn, CA

Vice President
Ed Anchoroguy
Sebastopol, CA

Treasurer
Andrée Soares
Los Banos, CA

Executive Director
Erica Sanko
Sacramento, CA

O10-1

O10-2

As reported in Table 2-4, *Relative Likelihood of Implementing Treatment Activities by Fuel Type for each Treatment Type*, prescribed herbivory is listed as low likelihood for six categories and medium likelihood for three categories. We believe prescribed herbivory is being underestimated and depending on the vegetation type and Wildland-Urban Interface designated area, prescribed herbivory is a medium to high likelihood. It is often assumed that prescribed herbivory works similarly to other fuel load reduction treatment activities, specifically mechanical treatment or chemical application. However, prescribed herbivory is designed to be part of an overall management plan that addresses lack of proper vegetation management on treatable landscapes. The successful practice of prescribed herbivory requires site-specific knowledge of plant growth, animal nutrition and grazing behavior, ecosystem function, and public relations.¹ This distinction between what and how prescribed herbivory is to be utilized in each specific management program determines whether or not it is a low, medium or high likelihood option for reducing fuel loads on treatable landscape.

O10-2
cont.

Of concern is the inclusion of cost per acre estimates for each treatment activity. We realize such material is intended to present all available information on each treatment activity. However, by including such, it implies the cost per acre of each method is static which is misleading. Our producers operate in a dynamic business environment, all costs (direct, indirect, fixed, variable) incurred in carrying out prescribed herbivory are ever-changing in response to demand and supply factors. To further add, similar to any service in which the nature of the work is ever-changing, so will the cost per acre of the project. For example, utilizing prescribed herbivory for fuel load reduction on topography that is flat vs. sloping or on treatable landscapes with no prior vegetation management vs. prior treatment activity, will all entail different requirements and subsequently vary in cost per acre. While our comments reference prescribe herbivory, the dynamic nature and costs per acre also apply to the other treatment activities listed. Therefore, we recommend the cost per acre estimates be removed from the description of treatment activities or be replaced with information that infers the relative cost among the different treatment activities.

O10-3

2.7.5 Biological Resource Standard Project Requirements - WILDLIFE - SPR BIO-11. Install Wildlife-Friendly Fencing (Prescribed Herbivory)

Do not have any concerns with the conditions set forth that if temporary fencing is required for prescribed herbivory treatment, a wildlife-friendly fencing design will be used. Electric fencing is a critical component of prescribed herbivory for all vegetation treatment projects. Fencing is beneficial not only to allow for movement of wildlife but also for predator protection. Research has shown grazing impacts can include enhancement of wildlife, including endangered and threatened species while performing a vital role in reducing fuel loads and landscape restoration following a fire.

O10-4

2.7.9 Hydrology and Water Quality Standard Project Requirements - SPR HYD-3 Water Quality Protections for Prescribed Herbivory:

Do not have any concerns with the conditions set forth that environmentally sensitive areas such as waterbodies, wetlands, or riparian areas will be identified and excluded from prescribed herbivory project areas using temporary fencing or active herding. Because sheep and goats are actively herded (rather than dispersed over large landscapes), sheep and goats can be an effective tool for achieving specific resource management goals.

O10-5

Our members take great pride in the care they provide for their animals and are committed to making sure their animals are treated humanely. Not only is that the right thing to do, but anything less would be self-defeating. Water will and must always be provided for grazing animals in the

¹ Macon, D. 2019. The Art and Science of Targeted Grazing. October 2014

form of an on-site stock pond or a portable water source located outside of environmentally sensitive areas.

O10-5
cont.

Chapter 3: Environmental Setting, Impacts and Mitigation Measures

3.4 Air Quality

Prescribed Herbivory is an environmentally friendly activity that improves treatable landscape and rangeland quality by recycling nutrients back into the soil and sequestering carbon emissions. Recent research by the University of California, Davis, suggests grasslands can sequester more carbon than forests. A well-managed program of prescribed herbivory by sheep, goats, and livestock can enhance carbon sequestration by stimulating root growth which contains the carbon emissions in the underlying soil system. Prescribed herbivory with sheep and goats specifically when applied as a vegetation management activity to treatable landscapes reduces air emissions by converting carbon into food (lamb) and fiber (wool). Thus, prescribed herbivory as a treatment activity in the proposed CalVTP will be beneficial to overall air quality.

O10-6

3.11 Hydrology and Water Quality

Because sheep and goats are actively herded (rather than dispersed over large landscapes), sheep and goats are an effective tool for managing landscapes for fuel reduction projects. Sheep and goats can be excluded from environmentally sensitive areas such as waterbodies, wetlands, or riparian areas. because unlike other livestock, since sheep and goats are actively herded by on-site herders in a well-managed prescribed herbivory program. On large landscapes such as public and private forest lands, herders will move a band of sheep or goats out to graze a specific location, allowing the on-site herders to closely monitor resource conditions.² This allows for sheep and goats to be herded away from sensitive areas such as streambanks generally without requiring fences or other infrastructure improvements. Potential impacts of the prescribed herbivory as a treatment activity in the proposed CalVTP are expected to be minimal.

O10-7

Concluding Comments

CWGA appreciates the Board recognizing prescribed herbivory as a viable treatment activity for reducing fire fuels. This long-time practice has proven to prevent wildfires by reducing fuel loads on all forms of treatable landscapes. We are committed to working with the Board and other state agencies in implementing a comprehensive CalVTP that includes prescribed herbivory to prevent wildfire and improve the State's landscapes.

Respectfully,



Dan Macon, President
California Wool Growers Association

² A band of sheep/goats is a very large group that can range from 500 to 5,000 head.



California Women In Timber

State Board

c/o North Coast Chapter of California Women in Timber
P.O. Box 5246
Eureka, CA 95501

Board of Forestry and Fire Protection
Attn: CalVTP
P.O. Box 944246
Sacramento, CA 94244-2460

August 8th, 2019

It is the mission of California Women in Timber to promote positive and necessary education, communication, and legislation that supports the forest products industry and sound forest management in California. We strive to serve as an informed voice on natural resource issues critical to our community and the state at large. Legislation remains a valuable tool in accomplishing these goals.

Thus, we are submitting our support for the California Vegetation Treatment Program EIR (CalVTP). This piece of legislation meets the goal of the Governor’s Executive Order (B-52-18) goal to “increase pace and scale” of fuels treatment by allowing CALFIRE and SRA landownerships the opportunity to provide needed vegetation treatments in an expedited manner. California has a history of fire suppression, resulting in a buildup of up fuels across the landscape. Providing more tools to help address this buildup is integral in the process of reducing potential fire risk and severity. Additionally, the fact that it is a program EIR allows for projects within the scope to move at this increased “pace and scale”, providing protection of our communities and natural resources.

O11-1

California Women in Timber therefore supports the CalVTP.

Sincerely,

Sophia Lemmo
Legislative Chair, State Board of California Women in Timber

To: Dept Of Forestry
From: Patt Healy on behalf of Malibu Coalition for Slow Growth
Date: August 8 2019
Re: Comments on Draft Program Environmental Impact Report Regarding a Proposed Statewide Vegetation Treatment Program (SCH 2019012052)

To Whom it may Concern.

The Malibu Coalition for Slow Growth understands the above-mentioned Draft EIR addresses a project consisting of the destruction of 250,000 acres per year of environmentally sensitive habit throughout the State until 20,000,000 acres are valuable habitat is harmed/destroyed irreversibly. This destruction is being done to allegedly prevent non wind driven fires.

Admittedly, the science not support this type of destructive action in wind driven fires so please tell us how it be supported in non wind driven fires?

The proposed project makes no sense. Common sense says this amount and of destruction is totally unwarranted, irreversible and unconscionable.

Supporting our position are 3 recent examples of non wind driven fires in the Malibu area. A fire in Topanga on July 26, 2019 which burned no more than 3 acres, one in Newbury Park on the same day that burned a couple of acres and one in Malibou Lake on August 2, 2019 where one acre burned. All three were quickly contained and no property was lost and no humans harmed.

Please analyze all the non wind driven fires in the state of California and the numbers of acres burned in each of them in the past 3 years.

Thank you.

|

O12-1



August 8, 2019

Board of Forestry and Fire Protection
Attn: CalVTP
PO Box 944246
Sacramento, CA 94244-2460

Associated California Loggers represents the logging companies, log trucking companies, and log road building companies of California. Our members are on the front lines of the current emergency in California that takes in wildfires, dead and dying trees and the need to protect human lives, animals, homes, and habitat.

We would like to express support for the California Vegetation Treatment Program Programmatic EIR (CalVTP). This document is integral in meeting the Governor's Executive Order (B-52-18) to "increase pace and scale" of fuels treatments. The CalVTP would provide an avenue for CALFIRE, as well as SRA land ownerships, to meet the goals of the Governor's order, and provide much needed vegetation treatments across a landscape that has seen over 100 years of fire suppression. In addition, it provides a valuable tool for CALFIRE and other agencies to conduct WUI treatments, as well as providing much needed support and oversight of these projects. The program objectives serve as an outline and pathway to meeting multiple management goals, as well as providing avenues for the protection of communities and our natural resources.

The EIR, because it is a programmatic EIR, will allow projects that are within its scope to move forward expeditiously and without unnecessary and costly duplicative review. This will greatly assist in the timing of projects and reduce the financial burden to the state.

Associated California Loggers fully supports the CalVTP and is encouraged to see the full spectrum of potential vegetation treatments are included as part of this program. Thank you for the opportunity to comment on an invaluable tool to all the landowners that fall within the scope of this document.

Sincerely,

ERIC CARLESON
Executive Director
Associated California Loggers

O13-1



**Forest Landowners
OF CALIFORNIA**

950 Glenn Drive, Suite 150

Folsom CA 95630

Telephone: 877.326.3778

info@forestlandowners.org

www.forestlandowners.org

August 8, 2019

Chairman J. Keith Gilles
Members of the Board of Forestry and Fire Protection
Board of Forestry and Fire Protection
Attn: CalVTP
PO Box 944246
Sacramento, CA 94244-2460

RE: Support Letter for CalVPT EIR

The Forest Landowners of California (FLC) are writing to express support for the California Vegetation Treatment Program Programmatic EIR (CalVTP). This document is integral in meeting the Governor's Executive Order (B-52-18) to "increase pace and scale" of fuels treatments and Governor Newsom's Executive Order N-05-19. The CalVTP provides an avenue for CALFIRE and other state agencies involved with managing forest and other wildland resources, as well as private ownerships, to meet the goals of the Governor's orders, and provide much needed vegetation treatments across a landscape that has seen more than 100 years of fire suppression.

In addition, it provides a valuable tool for CALFIRE and other agencies to conduct vegetation treatments for unimproved lands in or adjacent to the wildland-urban interface (WUI). The program objectives serve as an outline and pathway to meeting multiple management goals, as well as providing avenues for the protection of communities and our natural resources.

FLC is in full support of the CalVTP program and its components, and is encouraged to see the broad landscape wide vegetation treatments that are proposed to be included as part of this program. The programmatic EIR is one of the first steps in implementing this far reaching and innovative approach to dealing with fire hazard on the landscapes of California.

Thank you for the opportunity to comment on a valuable tool for private landowners that falls within the scope of this document.

Respectfully,

Claire McAdams
President
Forest Landowners of California

O14-1



1215 K Street
Sacramento

Letter
O15

0
4
2

August 8, 2019

Board of Forestry and Fire Protection
Attn: CalVTP
PO Box 944246
Sacramento, CA 94244-2460

The California Forestry Association (Calforests) represents the forest products industry of the state of California. Our members own and manage over 4 million acres of timberland in the state. Our membership have been leaders in proactive vegetation management to improve forest health and fire resiliency.

We would like to express support for the California Vegetation Treatment Program Programmatic EIR (CalVTP). This document is integral in meeting the Governor’s Executive Order (B-52-18) to “increase pace and scale” of fuels treatments. The CalVTP would provide an avenue for CALFIRE, as well as SRA land ownerships, to meet the goals of the Governor’s order, and provide much needed vegetation treatments across a landscape that has seen over 100 years of fire suppression. In addition, it provides a valuable tool for CALFIRE and other agencies to conduct WUI treatments, as well as providing much needed support and oversight of these projects. The program objectives serve as an outline and pathway to meeting multiple management goals, as well as providing avenues for the protection of communities and our natural resources.

O15-1

The EIR, because it is a program EIR, will allow projects that are within its scope to move forward expeditiously and without unnecessary and costly duplicative review. This will greatly assist in the timing of projects and reduce the financial burden to the state. The Calforests fully supports the CalVTP and is encouraged to see the full spectrum of potential vegetation treatments are included as part of this program. Thank you for the opportunity to comment on an invaluable tool to all the landowners that fall within the scope of this document.

George D. Gentry

Senior Vice President
California Forestry Association



August 8, 2019

California Board of Forestry and Fire Protection
Attention: Edith Hannigan, Land Use Planning Program Manager
PO Box 944246
Sacramento, CA 94244-2460
CalVTP@bof.ca.gov

RE: Support for the California Vegetation Treatment Program Programmatic Environmental Impact Report, 2019 update

Dear Ms. Hannigan:

The California Landscape Stewardship Network (CA Network) is pleased to express support for the California Vegetation Treatment Program (CalVTP) Draft Program EIR (Program).

The CA Network is a statewide network currently led by seven cross-boundary collaboratives comprised of ~200 organizations and an additional 75-100 collaborators across the state. The CA Network promotes policies and practices that activate and advance collaboration across boundaries and sectors to increase the pace and scale of environmentally beneficial actions for California's natural resources to meet the challenges of our changing environment. More information about the CA Network is available at our website, www.calandscapestewardshipnetwork.org.

O16-1

The CA Network is supportive of the Program's intent to implement the CalVTP to reduce wildfire risks and avoid or diminish the harmful effects of wildfire on the people, property, and natural resources in the State of California. The CA Network believes the Program can increase the pace and scale of environmentally beneficial vegetation treatments and is specifically supportive of the following components of the Program:

- Inclusion of a variety of vegetation treatment tools providing flexibility to accommodate regional differences in land management policies, communities, fire regimes, and vegetation and fuel loading characteristics
- Potential for increased pace and scale of vegetation treatments using the PEIR's "within the scope" finding during project approvals
- Opportunity to increase the pace and efficient use of grant funds available through CalFire, the Greenhouse Gas Reduction Fund, and other sources as an outcome of CalVTP implementation
- Acknowledgement of the need to complement other sectors not addressed in the PEIR to holistically address the threat of fire on resources and communities- defensible space, building codes, land use decisions, timber harvesting, and other fire prevention programs

O16-2

The CA Network supports efforts by CalFire staff to work across sectors and at the state, regional, and local levels to address the threat of fire. The CalVTP further emphasizes the need for collaboration by CalFire staff by stating that vegetation treatments covered by the Program are only part of the solution, and that the CalVTP will extensively support work funded on lands not directly managed by CalFire and therefore require a collaborative approach at the local and regional level. The CA Network and its participants are here to support the practice of landscape-level collaboration and are available to work with CalFire staff to promote and engage in effective collaboration across the state.

O16-2
cont.

The CA Network encourages the California Board of Forestry and Fire Protection and CalFire to consider these additional recommendations when implementing the CalVTP:

O16-3

- Federal agencies own and manage almost 60% of the forested land in California and coordination with Federal land managers is necessary to achieve program goals. Work closely with Federal land managers to ensure that vegetation treatments adjacent to federal lands complement Federal forest management actions.
- Utilize and invest in existing regional partnerships when implementing the Program to coordinate, fund, and implement regional multi-faceted fire and forest management strategies that leverage the expertise and resources of multiple and diverse stakeholders.
- Prioritize a strong regional scientific foundation to inform fire and forest management practices and utilize the latest scientific research and adaptive management to inform the most cost-effective treatments at regional and local scales.
- Promote widespread public education efforts to increase regional support for forest thinning, prescribed burning, and other fire and forest management strategies.
- Respond to California's environment of patchwork land ownership and the need for cross-sector and cross-jurisdictional partnerships by investing in effective regional collaboration through additional staff, technical assistance, and policy mandates.

O16-4

O16-5

O16-6

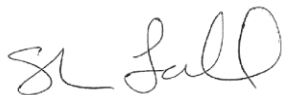
O16-7

CA Network members look forward to partnering with state and local CalFire staff to plan, fund, and implement local and regional vegetation treatments that complement other efforts to address the threat of wildfire to California resources and communities.

Sincerely,



Kevin Wright
Chair, Funding and Legislation Working Group of the CA Network
Government and External Affairs Manager, Marin County Parks



Sharon Farrell
Network Facilitator, CA Network
Executive Vice President, Projects, Stewardship, & Science, Golden Gate National Parks
Conservancy

Cc: CA Network Steering Committee
Christy Brigham, Sequoia and Kings Canyon National Parks
Darcie Collins, League to Save Lake Tahoe
Shawn Johnson, University of Montana and Network for Landscape Conservation
Matt Leffert, Golden Gate National Parks Conservancy
Michael O'Connell, Irvine Ranch Conservancy
Michelle O'Herron, O'Herron & Company
Dylan Skybrook, Santa Cruz Mountains Stewardship Network



August 8, 2019

VIA ELECTRONIC MAIL

Board of Forestry and Fire Protection
ATTN: CalVTP
PO Box 944246
Sacramento CA 94244-2460
CalVTP@bof.ca.gov

**RE: Draft Program Environmental Impact Report Regarding a Proposed
Statewide Vegetation Treatment Program (SCH 2019012052)**

Gentlepersons;

Endangered Habitats League (EHL) appreciates the opportunity to provide comments to supplement those submitted on our behalf under separate cover. EHL is a Southern California regional conservation group dedicated to ecosystem protection and sustainable land use. We wish to submit two examples of alternative approaches to the proposed VTP which show the inadequacy of the alternative analysis in the Draft PEIR. These alternatives are practical options that fully address the need for fire safety in California shrublands.

The Santa Monica Mountains National Recreation Area Fire Management Plan, Updated June 2016, protects one of the most historically wildfire-prone parts of the state, an area with extensive urban-wildland interface. Yet, its approach is profoundly different from that of the proposed CalFire VTP. The Santa Monica plan is grounded in sound and up-to-date fire science and ecology, as well as long experience. It excludes the inefficacious and counterproductive landscape-level treatments upon which the VTP unwise relies, and instead focuses on the documented need for 100-foot of defensible space around structures. However, it does selectively employ fuel reduction in highly flammable non-native grasslands. Besides lack of efficacy, another reason the Santa Monica Mountains plan *avoids* the removal and thinning of scrub vegetation and the accompanying soil disturbance – which is the centerpiece of the CalFire VTP – is the adverse consequence of invasion by flammable weeds. Strategic fuel breaks for access purposes are recognized but the plan calls for the use of existing roadways. Set forth below is an important excerpt from the Santa Monica Mountains plan:

3.4 Fuels Management

Large, intense wildfires, between 5,000 -25,000 acres occur approximately every 3-7 years in the SMMNRA. With the extensive wildland-urban intermix of homes and natural areas, lives and property are at risk from wildfire. Fire adapted

O17-1

native plant communities are also at risk from short fire return intervals and increased fire frequency due to excessive human ignitions.

The NPS works in partnership with local agencies and communities to plan and implement the most effective fuels treatment actions to protect the public, communities and infrastructure, conserve natural and cultural resources, and restore and maintain ecological integrity (RM 18, 2014).

The current Fuels Management program goals for **NPS park lands** are to:

- Provide defensible space for park structures or for homes on adjacent private parcels to prevent structure loss and provide for human safety during wildfires.
- Manage fuels in annual grasslands to reduce the rate and intensity of fire spread to provide for safer evacuation or strategic opportunities to control fire spread.

The Fuels Management program goals for other **co-operatively managed park lands** are to:

- Manage fuels in annual grasslands to reduce the rate and intensity of fire spread to provide for safer evacuation or strategic opportunities to control fire spread.

The Fuels Management program goals for **non-NPS lands** within the recreation area are to:

- Support community-driven efforts to create and maintain fire adapted communities, and fire safe neighborhoods.

The current fuel management program of work is based on work identified in the 2005 FEIS for the FMP. Several small expansions of the defensible space program were added in 2007, 2008, 2009, and strategic fuel modification mowing added in 2007. The last programmatic CatEx review was 2011

Fuels management actions, including community education, are tied to specific goals of the federal fire cohesive strategy goals as follows:

1. Restore and Maintain Landscapes: Landscapes across all jurisdictions are resilient to fire-related disturbances in accordance with management objectives.

- Focus on fine fuels management and ignition prevention to reduce wildfire risk and extend fire return intervals
- Maintain maximum shrub canopy cover and minimize soil disturbance to reduce establishment of invasive, non-native fine fuels, but recognize that shrub fuels need to be managed when they threaten safety.
- Reduce annual clearing in fuel modification zones that extend beyond 100' if fire behavior modeling demonstrates that safety zone guild lines are met with less than 100' clearance.
- Utilize existing roads, trails and hardscape to create defensible or strategic space • Coordinate fuel modification with invasive species control
- Work to create ignition resistance at strategic locations and collaborate on prevention of fire starts

- Work with communities on appropriate fuel modification techniques and standards

2. Create Fire-Adapted Communities: Human populations and infrastructure can withstand a wildfire without loss of life and property

- Work with communities to educate them on the importance of house-out defensible space, structural ignition resistance, and the hazard of “urban” fuels
- Work with communities on evacuation planning and emergency shelter-in-place for high risk locations
- Work with communities to implement fuel reduction projects that exceed the ability of individual community members to carry out

O17-1
cont.

3. Respond to Wildfire: All jurisdictions participate in making and implementing safe, effective, efficient risk-based wildfire management decisions.

- Minimize area burned while providing for firefighter safety and avoiding damaging suppression tactics
- Use suppression tactics that are consistent with fire behavior (e.g. do not bulldoze lines that cannot be used for backfire operations or will be jumped by spotting)
- Work with county fire collaboratives on early detection technology and response in critical locations.

The second alternative approach to CalFire’s VTP is a “Decision Tree for Prioritizing Vegetation Treatments To Reduce Fire Risks to Structures In California Shrublands,” 2013. This Decision Tree was submitted by EHL to the Board for an earlier iteration of the VTP and it remains a viable alternative to the proposed VTP. The Decision Tree is based upon input from fire ecologists and is a way for CalFire to prioritize vegetation treatments based on likelihood of benefit. It is labeled a “draft” as it was intended as a basis for collaborative discussion with CalFire. However, both CalFire and the Board of Forestry rejected EHL’s request for collaboration prior to release of the latest VTP proposal.

O17-2

We request that the Board evaluate these alternatives as they would allow for better and more informed decisions with less destructive environmental consequences.

O17-3

Yours truly,



Dan Silver
Executive Director

Enclosures

Santa Monica Mountains National Recreation Area Fire Management Plan, Updated June 2016

Decision Tree for Prioritizing Vegetation Treatments To Reduce Fire Risks to Structures In California Shrublands, 2013

O17-4

Review and Update History

Annual review of the Fire Management Plan (FMP) is a requirement of NPS *Reference Manual 18, Wildland Fire Management*, to ensure that “the FMP continues to conform to current laws, objectives, procedures, and strategies.” In addition, the Interagency Standards for Fire and Fire Aviation Operations states that the park superintendent will “identify resource management objectives to maintain a current FMP that identifies an accurate and defensible normal year readiness of funding and personnel”.

2005	EIS/FONSI completed in 2005
2006	Fire Management Plan approved
2007	Update
2009	Update
2010	Update
2012	Update checklist
2013	Update checklist, Appendix O
2015	Update checklist
2016	Revised June 2016

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1.0 INTRODUCTION, LAND MANAGEMENT PLANNING and COMMUNICATION

All Department of Interior (DOI) agencies with vegetation capable of sustaining wildland fire are required by the 2008 National Park Service (NPS) Director's Order 18 (DO-18) to prepare fire management plans. The lands within the Santa Monica Mountains National Recreation Area (SMMNRA) have been marked by frequent, large, and in many cases, destructive wildfires. Despite the apparent damage caused by fires, fire plays an important role in the natural ecological processes of the chaparral environment that dominates the Santa Monica Mountains.

The fire management plan is a fundamental strategic document that guides the full range of fire management related activities. It provides a framework for the management of wildland fire to safely accomplish the resource protection and management objectives of the Santa Monica Mountains National Recreation Area as described in the General Management Plan (GMP) and the Resource Management Plan (RMP) and the Foundation Document.

Setting and Background

SMMNRA is located in one of the nation's fastest growing and diverse urban areas. More than 18 million people live within an hour's drive of the National Recreation Area. The mountains rise out of the heart of Los Angeles and follow the Pacific coast some 50 miles west to Point Mugu in Ventura County. SMMNRA is the nation's largest urban national park, comprises a vast and varied California landscape, including 21 miles of marine shoreline, in and around the greater Los Angeles metropolitan area. Totalling 153,250 acres of rugged mountains, narrow canyons, chaparral, and ocean surf, the Santa Monica Mountains embody coastal southern California. The mild climate allows visitors to enjoy its scenic, natural, and cultural resources throughout the year.

Figure 1.1 Santa Monica Mountains National Recreation Area

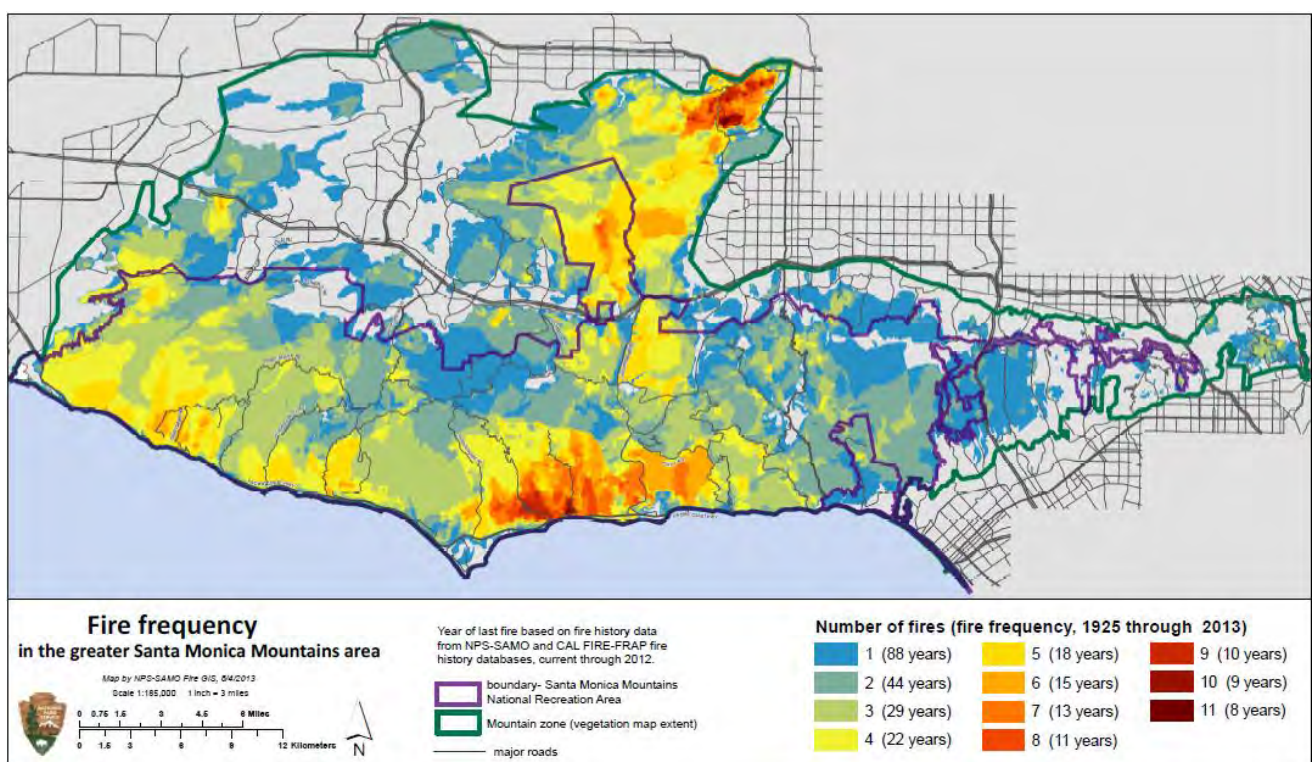


Santa Monica Mountains National Recreation Area features some of the best remaining examples of the Mediterranean biome, a land type that is among the rarest on earth. The mild and pleasant climate makes this biome ideal for human occupation, a significant reason why only 20% of the world's Mediterranean biomes remain intact. With one of the highest concentrations of rare species in the United States, the Santa Monica Mountains' ecosystems provide habitat for hundreds of species of plants and wildlife.

Native vegetation is affected by changes in fire frequency, the introduction of invasive species, pollutants from urban runoff, and ground disturbance from development and fire break clearance. Human-caused fires are increasing the natural fire frequency in what may be the most complex park for wildland-urban interface fire in the National Park Service (**Figure 1-1** and **Figure 1-2**). Unless fire frequencies are reduced, many populations already stressed from the cumulative effects of fragmentation, urbanization and climate change will decline or be extirpated.

There is an even greater need to manage wildland fire so that threats to life, property, and park resources are reduced, than when this plan was first adopted in 2006. This update provides an opportunity for Santa Monica Mountains National Recreation Area to address regional scale wildfire threats and community protection standards.

Figure 1.2 Fire Frequency in the Santa Monica Mountains Ecological Zone



Need for Action

Fire management actions are guided by fire management plans. Fire management plans are fundamental strategic documents that guide the full range of fire management activities. They are required by the *NPS Director's Order 18* (NPS,2008) which states:

“Every park area with burnable vegetation must have a fire management plan approved by the superintendent,”

and the 2009 Modification of Federal Wildland Fire Management Policy (hereafter, 2009 Federal Fire Policy), which reiterates:

“Complete, or update, Fire Management Plans for all areas with burnable vegetation.”

In 2009 the 2001 Federal Wildland Fire Management Policy was reviewed for all federal wildland fire agencies and subsequently will be referred to as the Guiding Principles and 2009 Federal Fire

Policy. The review and recommendations took place in the context of the September 8, 2000 report to the President by the Secretaries of the Interior and Agriculture, *Managing the Impact of Wildfires on Communities and the Environment: a Report to the President in Response to the Wildfires of 2000* and the *Fiscal Year 2001 Interior and Related Agencies Appropriation Act*.

The review found the 2001 policy generally sound, although the 2009 version contains some changes and updates. In addition to emphasis placed on ecosystem sustainability, restoration, science, education and communication, and program evaluation, programs will also need to consider operational and implementation aspects as a result of issues raised in the *Cerro Grande Prescribed Fire Investigation Report* and the subsequent independent review report. The revised fire management policy for the NPS has been expressed in NPS Director's Order 18 and Reference Manual 18. The revision of the fire management plan will reflect these changes in policy.

This plan will document how the park plans to accomplish land and resource objectives and to reduce the risk of fire to development adjacent to the park. The Final Environmental Impact Statement presented four alternatives for the fire management program of the SMMNRA. The alternatives were based on park values, effective fire management strategies, NPS policy applicable law, and the primary issues of concern raised during the internal and public EIS scoping sessions. Updates to the FMP incorporate new wildland fire policy initiatives, wildfire experiences and lessons learned during fires in the park since the FMP was adopted in 2006, and finally, emerging wildfire science applicable to our region.

1.1 Program Organization and Responsibilities

The Superintendent has the overall responsibility for the execution of the fire management program at Santa Monica Mountains National Recreation Area. Duties for the Superintendent and others are as follows:

Superintendent

- Approve the park's Fire Management Plan and any proposed revisions.
- Be apprised of the daily fire situation during fire season.
- Be the sole authority to approve any prescribed burn plans.
- Provide direction to Type I and Type II Incident Commanders working in the park, or designate a representative to do so.

Deputy or Acting Superintendent

- Delegated all decision making responsibility when the Superintendent is absent from the park.

Chief Ranger

- Carry out fire activities called for in this plan.
- Manage wildland fire plan implementation, review, and revision.
- Approve filling vacant fire management staff positions.
- Make at least an annual inspection, with the FMO, of fire suppression, detection, dispatch, and training facilities and procedures.
- Direct the park fire suppression and preparedness program.

Fire Management Officer

- Has immediate responsibility for overseeing all aspects of the fire management program.
- Implements science and research to policy and fire management practices.
- Develops short and long-range plans for network parks' wildland fire management programs.
- Establish liaison with cooperating agencies, and coordinate and maintain cooperative agreements.

- Prepares and/or revises annually, cooperative agreements concerning wildfire management, prescribed fire, smoke management, and cross-agency fiscal matters.
- Formulates and directs the budget accountability program for preparedness, hazard fuels operations, emergency fire accounts and approves all FIREPRO expenditures.
- Responds to regional and national office information requests.
- Maintain fire weather/fire records and Fire Program Analysis data.
- Coordinate park-wide fire training and equipment acquisition.
- Maintain park-wide crew lists and equipment records.
- Maintain Weather Information Management System (WIMS) and FPA data input.
- Advise the Angeles EOC Center Manager on fire dispatch and reporting responsibilities.
- Coordinate annual review of this plan.
- *Perform administrative duties, i.e., approving work hours, completing fire reports for command period, maintaining property accountability, providing or obtaining medical treatment and evaluating performance of subordinates.*
- Ensure fire reports (DI-1202) are properly prepared and submitted to the Pacific West Regional Office and/or entered into FPA.
- Maintain qualification and training records.
- Evaluate prescribed fire prescriptions.

Incident Commander

Use strategies and tactics that are as resource sensitive as possible while maintaining the first priority of firefighter and public safety. Major duties of the Incident Commander are given in the NWCG Fireline Handbook and include:

- *Brief subordinates, direct their actions and provide work tools.*
- *Ensure that safety standards identified in the Fire Orders and agency policies are followed at all times.*
- *Personally scout and communicate with others to be knowledgeable of fire conditions, fire weather, tactical progress, safety concerns and hazards, condition of personnel, and needs for additional resources.*
- *Order resources to implement the management objectives for the fire.*
- *Inform appropriate dispatch of current situation and expected needs.*
- *Coordinate mobilization and demobilization with dispatch and FMO, or designee.*

1.1.1 Funding

The FMO is responsible for the development of an annual operating budget for the fire management program. Budget development occurs in Fire Program Analysis (FPA), with budget data entry only available during certain times of the year.

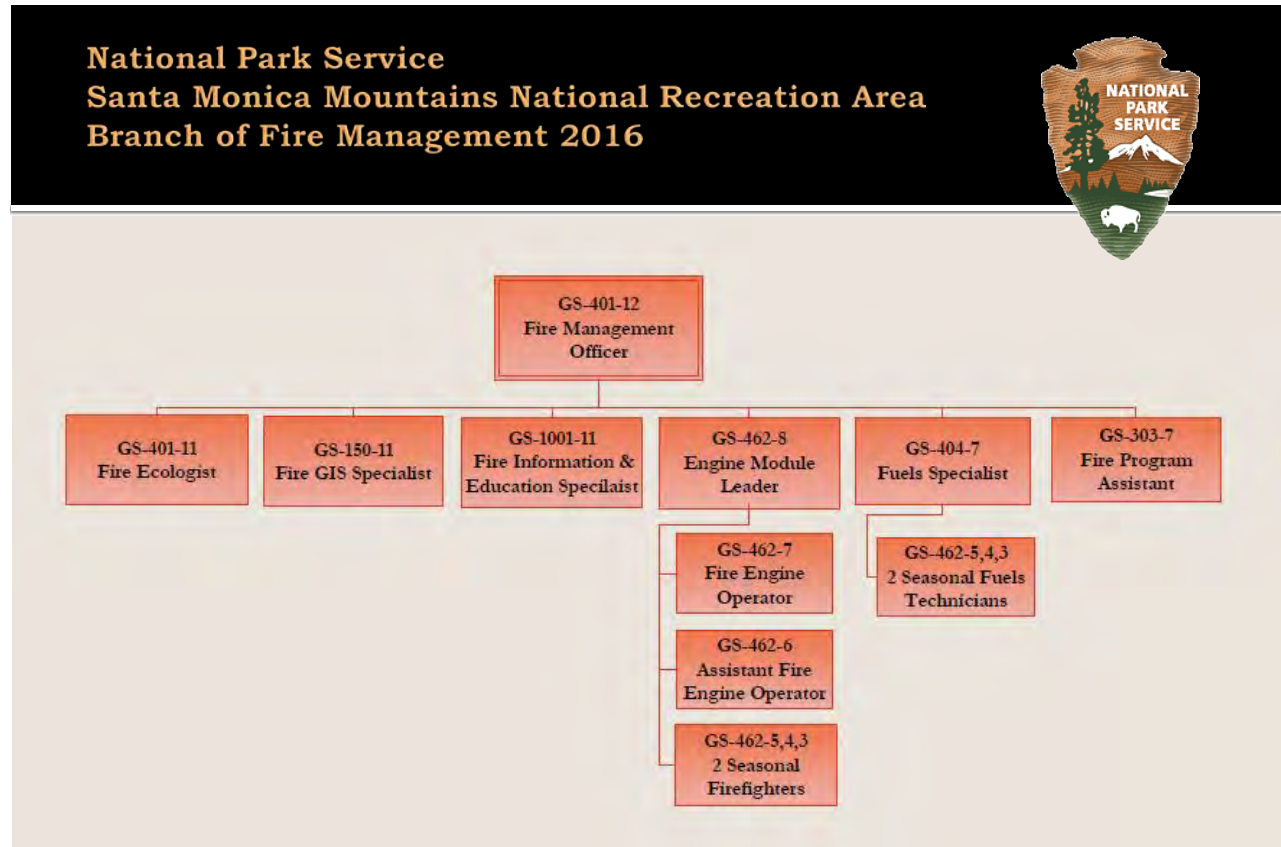
Hazardous Fuels, and Wildland-Urban Interface projects are currently funded based on inputs to the National Fire Program Operations System (NFPORS). The schedule for inputs into NFPORS for project funding does not coincide with the FIREPRO schedule. The Regional Wildland Fire Specialist provides an annual call letter for inputs. The FMO, FMPA, Fuels Technician and the Fire GIS specialist currently have access to the program. Requests for additional access can be made from the NFPORS website at: <https://www.nfpors.gov/>

The fire management program at SMMNRA is a branch within the Division of Visitor and Resource Protection and is supervised by the Chief Ranger. The current Fire Management organization includes nine permanent-full-time or subject-to-furlough employees. Four temporary positions are approved in the organization and are funded for 13 pay periods each. These positions provide augmented staffing to the Type III engine during the designated fire season.

Fire Management staffing and Organization

Branch of Fire Management
 Santa Monica Mountains NRA
 Organizational Chart-Division of Visitor Protection
 June, 2016

FTE Total	9.5
FTE Permanent	6.0
FTE Perm Seasonal	1.5
Temporary	2.0



The fire management program maintains two Department of Interior Vehicles, a Type 3 engine (2005) and a Type 6 engine (2011). The fire management branch also maintains five GSA fleet vehicles.

The program receives its budget in four primary “project work elements” (PWE’s), preparedness, (P11), hazardous fuels (H11), and wildland/urban interface (W11). The park also receives W12 and W22 funding for specific hazardous fuels treatment projects. A breakout of the funding structure is shown in Table 1.1

Table 1.1 Fire Management Funding Structure

Position	PWE	Pay Periods	Comment
Fire Management Officer	P11	26	
Engine Module Leader	P11	26	
Fire Engine Operator	P11	26	
Asst. Fire Engine Operator	P11	20	
Fire Management Program Assistant	P11	26	
Fuels Technician	W11	25	
Fire GIS specialist	W11	26	
Fire Ecologist	W11	26	
Fire Communication & Education, Specialist	W11	26	
Temporary Firefighters	P11	13	

1.1.2 Agreements

The park maintains fire protection agreements with the City of Los Angeles Fire Department, Los Angeles County Fire Department and the Ventura County Fire Protection District. Each of the agreements is an “*Assistance by Hire*” agreement. The park maintains an agreement with the Angeles National Forest to provide for fire and law enforcement dispatching. A Fairshare agreement is in place to pay for the dispatching service. Fire management currently contributes \$26,000 as their portion of the Fairshare.

Each agency will bill the SMMNRA for services provided during the suppression response to wildland fires involving the direct protection area of the park. Billing rates are provided by the agencies annually and are the basis for payment. A list of resources utilized by the agencies during suppression actions is available through the Command and Control Centers of the departments and should be reviewed prior to approving final payment.

On multi-jurisdictional incidents, the Unified Incident Commander has the authority to enter into cost sharing or apportionment agreements with the local fire agencies. This agreement must be signed by the Unified Incident Commanders and should enumerate the quantity and duration of resources used. The cost share agreement is the basis of the final bill for the protection of National Park Service lands.

1.2 Interagency Coordination and Collaborative Planning

SMMNRA is dependent on the support of other federal and local agencies to support the fire response at the park. In addition to the support from the fire department during wildland fire suppression responses, the counties provide a substantial workforce in the form of camp crews to assist in implementing labor intensive projects. Los Angeles County Fire Department maintains as many as 55 crews countywide. Camp 13, located within the SMMNRA boundary, fields four crews on a daily basis. Ventura County Fire Department acts as a broker for the park, providing access to the crews from the California Department of Forestry & Fire Protection, Ventura Camp.

The Angeles National Forest provides dispatching services through a Fairshare agreement with the park. The forest, through its dispatching procedures assures that the park engine is integrated into the engine strike team rotation. With limited initial action activity inside the SMMNRA it is important for employee development that the park receives a fair portion of the assignments for Type 3

modules. The FMO should meet annually with the manager of the ECC to assure that local resources are in status and available for dispatch.

The Angeles NF also provides training opportunities for SMMNRA employees. is the primary mechanism by which SMMNRA personnel obtain crew boss trainee assignments. The helicopter program has traditionally provided the annual basic aviation class for park personnel and has made aviation detail opportunities available as well.

1.2.1 Key Contacts

The park maintains close working relations with the three primary fire agencies, the Angeles National Forest and California Department of Parks and Recreation. There are many more local contacts that are important to the operations of the fire management program. The FMPA and FMO maintain this information. **Table 1.2** includes the primary fire cooperators and the current contacts.

Table 1.2 Key Fire Management Contacts

Contact	Position	Office Location
Los Angeles County Fire Department		
Anthony Whittle	Deputy Fire Chief	Station 70
Anthony Williams	Battalion Chief	Station 70
J Lopez	Assistant Chief, Forestry Division	Pacoima, CA
Frank Vidalis	Chief, Forestry Division	Commerce, CA
Ventura County Fire Department		
Ted Smith	Division Chief	Station 30
Scott Schuster	Battalion Chief	Station 30
Brendan Ripley	Captain – Pre-Fire Planning	Camarillo, CA
Los Angeles City Fire Department		
Trevor Richmond	Assistant Chief	Encino, CA
Angeles National Forest		
Bobby Garcia	Forest FMO	Arcadia, CA
Tracy McGuff	Training Officer	Arcadia, CA
Eddie Hesbol	EOC Manager	Lancaster, CA
Mountains Recreation & Conservation Authority		
Fernando Gomez	Chief Ranger	Calabasas, CA
Ken Nelson	Fire Management	Calabasas, CA

1.3 Public Safety

The first priority consideration in any fire management action is firefighter and public safety. Safety of visitors, employees, residents and incident personnel will be the number one responsibility given to any supervisors acting on behalf of Fire Management.

An essential element in protecting human lives and property is creating defensible space in the urban interface around structures. Creating defensible space requires careful planning along with prudent applications of mechanical fuel reduction. All proposed actions on federal lands must comply with the National Environment Protection Act (NEPA). This includes evaluating proposed projects for potential long-term, irreversible environmental impacts and may require public scoping.

1.4.1 Issues and Concerns

- Wildfires pose a significant threat to human life including residents, employees and visitors, especially under severe weather conditions. Hazards throughout the SMMNRA are highly flammable vegetation, extremely fast rates of spread with long range spotting, easily ignitable structures, and steep canyons and narrow roads that constrain evacuation and fire-fighting access.
- Suppression of wildland fires is hazardous. Minimizing personnel exposure to hazards associated with suppression actions and other fire management operations requires training, on-site hazard analysis and mitigation measures followed by effective communications.

1.4.2 Mitigating Actions

The following program elements will be followed, with the intention of mitigating safety concerns:

- NPS and other federal fire personnel will comply with NWCG and NPS personal protective equipment standards while assigned to fire incidents. Mutual aid cooperators, responding to NPS fires under agreement, will meet their respective personal protective equipment and qualification standards during initial action and extended operations.
- All wildland fire incidents which result in entrapment, injuries or fatalities, or the potential for injury or fatality, will be reported and investigated and appropriate administrative follow up actions taken.
- Continue analysis and implementation of the fuels program and community outreach and support designed to meet defensible space and public safety protection objectives in the recreation area.
- A program of public education will be implemented to inform private property owners about defensible space, hazardous vegetation characteristics, and the importance of structure ignition resistance, personal evacuation procedures, and other Firewise recommendations.
- All fire personnel shall meet appropriate qualifications, including physical fitness and medical requirements, for all fire assignments per NPS DO-18 and the companion RM18.
- All safety standards and guidelines identified within the Interagency Standards for Fire and Fire Aviation Operations will be followed; all wildland fire incidents will comply with interagency risk management standards.
- Interagency coordination will continue to assure an appropriate response to National Park Service incidents.
- Close cooperation local agencies, with Firesafe Councils and emergency preparedness groups will continue,
- An interagency approach will be utilized to manage wildland fuels on NPS land and adjacent jurisdictional areas. The agencies will seek common ground to meet the fire safety needs of local residents and the visiting public, while protecting natural and cultural resources.

1.4 Fire Communication and Education

Fire Communication and Education are cornerstones of a successful fire management program. An informed and supportive agency staff, local and visiting public, recreationists, partner organizations and neighbors will contribute greatly to the success of the fire program and the resources that it is designed to benefit.

The park's Fire Communication and Education Specialist is tasked with coordinating many of these communication efforts. By utilizing existing methods (park publications, websites, and ranger-led presentations) and developing new programs that provide park neighbors, homeowners and developers with the crucial tools they need to protect their homes and property, many of the goals of this plan will be met. Close coordination with other park divisions, especially the Education Branch of the Division of Interpretation, is essential.

Goals: The goals of the Fire Communication and Education program are to:

- Inform the public and employees about NPS fire management concepts and practices, including our cooperation with the local fire departments and coordination with the other park agencies in the Santa Monica Mountains. Promote the Santa Monica Mountains CWPP.
- Educate the public on homeowner safety and private property protection by describing the mission of the NPS, the purpose of National Environmental Policy Act, the goals of the National Fire Plan, and the responsibility of the residents in the Santa Monica Mountains.
- Educate the public on the Mediterranean ecosystem and the role of wildland fire within it, reinforcing the importance of fire prevention planning.
- Integrate fire prevention information and public education into other park programs (such as Interpretation and Education)

Objectives: In order to obtain these goals the park will:

- Provide critical information on the role of fire in ecosystems, the need for hazardous fuel reduction, and the resources available to individuals and communities to meet their responsibilities to reduce threats from wildland fire to human lives and homes. Utilize the Santa Monica Mountains CWPP as a guide to work with communities on projects that will help them become safer from wildfire.
- Provide increased opportunities for dialogue between the NPS and residents living in the wildland-urban interface.
- Provide tools for public contact personnel to explain to all audiences the purpose, findings and recommendations of the Fire Management Plan.
- Provide employees with regular, concise, informative and timely updates on fire program developments, information on fire education, reports on wildland and prescribed fires, and other such information deemed necessary to keep them current on fire management issues.

Actions: Joint strategies for the Fire Communication and Education program include the following:

- Develop public information programs that promote the benefits of Firewise community planning, defensible space, and mechanical fuel reduction
- Develop and establish a proactive process that disseminates current and accurate fire information to a network of contacts in agency staffs, the local community, and the general public and media outlets.
- Continue to incorporate the principles of fire's role in the Santa Monica Mountains ecosystem and the importance of fire as a resource management tool into park interpretive programs, exhibits, videos, periodicals, brochures and civic group presentations.
- Forward all fire-related press releases to the Fire Communication and Education Specialist and/or the Superintendent and keep members of the headquarters staff well informed of fire activity. Work with the Public Affairs Officer on consistent messaging.

- Utilize both permanent and temporary roadside exhibits to transmit key messages.
- Establish rapport with local press and media representatives and accommodate all interview requests that will benefit the park by promoting the fire program.
- Inform all audiences that the NPS continues to stress that public and firefighter safety is the agency's number one priority.
- Continue to support the National Park Labs: Studies of Wildland Fire Ecology program, a curriculum-based education program for high school students.
- Develop prevention plans to reduce number of human-caused ignitions.

Audiences: An audience is any segment of the public (internal or external) that has an interest in or is affected by the activities or management actions of a unit of the NPS. Information should be appropriate to the particular audiences; for example, in languages other than English or tailored for school children. The following is a general listing of suggested audiences that should be considered in disseminating fire information. The list is not intended to be all inclusive.

- Internal
 - Park staff, at all levels and disciplines
 - Concessionaires, permittees and contractors
 - Park partners: cooperating associations, schools, friends groups, government agencies within the NRA boundary
- External
 - Park visitors/the general public
 - In-holders, neighbors
 - Adjacent government agencies, emergency services, etc.

“Step-Up” Public Information Activities and Capabilities

All times of the year:

- Include basic fire information on the park's website.
- Assist SMMNRA and California State Parks public contact personnel with fire management exhibits, educational bulletins and brochures and visitor program information.
- Coordinate requests from park neighbors who want fuel modification on NPS land to protect private property; conduct an evaluation meeting in spring of each year to plan for additional hazard fuel reduction projects, funding, and compliance.
- Continue outreach and educational activities which emphasize the importance of fire prevention planning.

During annual fire season:

- Post/maintain appropriate signs, bulletins and other literature at trailheads, visitor use areas, visitor centers and ranger stations.
- Conduct wildfire prevention class for NPS staff, with occasional repeats for new employees/volunteers and other public contact personnel.
- Fire prevention will be discussed at each park safety meeting during the fire season.
- Keep park informed on Fire Weather Watches and Red Flag Warnings.

During extreme fire danger conditions:

- Include current fire information on the park's website and, stressing that additional precautions must be taken by visitors.
- Use local radio, TIC, public access channels and the park website for briefing and updating the public on fire information as needed (“High, Very High, Extreme” adjective ratings)
- Prepare and distribute flyers with appropriate fire safe messages to neighbors and partners.

- Coordinate with the Chief Ranger and the Superintendent to curtail visitor activities, ranging from smoking or front-country fires bans to park site closures.

During an active fire:

- Include daily fire updates on the park's website.
- Forward to the superintendent all press releases/media information for review and approval.
- Consider holding a public information meeting to update the public on facts to date, suppression efforts for the future, and precautions they should take for their own safety. Coordinate efforts with any assigned Incident Management Team and/or local cooperators.
- Forward all media requests for information to the Fire Communication and Education Specialist and/or the Superintendent.
- Work closely with Park Public Affairs Officer.

Before/during a prescribed fire:

- Include the appropriate fire information related to the plan on the park's website.
- Assist NPS, Mountains Recreation Conservation Authority (MRCA) and California State Parks public contact personnel with fire management exhibits and visitor program information.
- Use local radio, public access channels and TIC for briefing and updating prescribed fire information as needed.
- Forward to the Superintendent all press releases/media information for review and approval.
- Consider holding a public information meeting to update the public on safety and planning efforts, guidelines that regulate whether or not to ignite, and precautions they should take for their own safety.
- Forward all media requests for information to the Fire Communication and Education Specialist and/or the Superintendent.
- Work closely with Park Public Affairs Officer.

1.5 Decision to Prepare an Environmental Impact Statement

The decision to prepare an Environmental Impact Statement (EIS) on the Fire Management Plan was made by the Superintendent of SMMNRA after considering the scope, complexity, and public interest related to issues being addressed in the plan. Fire ecology and management are certainly among the most pervasive and complex influences on ecosystem processes and the human environment of the Santa Monica Mountains. The role of fire has implications for park use, ecosystem structure and function, and human activities throughout the region. This complexity and associated public interest suggested a level of analysis commensurate with an EIS. By completing an EIS for the Fire Management Plan, sufficient analysis can be undertaken to assess the effects of particular alternatives and to ensure adequate involvement by the public and interested agencies.

The Draft EIS was prepared to comply with the requirements of the National Environmental Policy Act (NEPA) and National Historic Preservation Act (NHPA) as well as the Endangered Species Act and the Wild and Scenic Rivers Act. The legal authority for preparing and implementing the SMMNRA Fire Management Plan is codified in 16 USC 1 through 4, which is the 1916 Organic Act for the NPS. This document will screen each proposed alternative for compliance with these policies, plans, and laws.

Following the public comment period on the Draft EIS and any necessary consultations for actions that may affect natural or cultural resources, the Final EIS was prepared and distributed to the public. At the conclusion of a 30-day waiting period, the NPS prepared a Record of Decision. Following the Record of Decision, the recommendations of the new plan can begin to be implemented and the plan will become the working document guiding fire management programs across the SMMNRA.

With this plan, the fire management program would employ fire management activities to accomplish land and resource management objectives and reduce the risk of wildfire in and adjacent to the recreation area. Depending on the outcome of risk assessments, fire management staff will use different strategies to manage hazardous vegetation near urban areas and identify suppression actions appropriate to protect human life and private property. Strategies for implementation would be based on knowledge gained from fire and fuels research and suppression experience from NPS personnel and cooperating fire agencies.

1.6 Relationship of Land Management Planning and Fire Policy

The National Park Service Management Policies (2006) , Director’s Order 18 (2008), and the Guiding Principles of the 2009 Federal Fire Policy provide the requirements for national park units to build a program consistent with stated land and resource goals and objectives while ensuring firefighter and public safety. These requirements for the fire management program are listed in **Table 2.1** and **Table 2.2**. The Final Environmental Impact Statement for a Fire Management Plan is in compliance with these policies.

National Park Service Management Policies

National Park Service Management Policies, Section 4.5 – Fire Management, as revised in 2006, states the following:

“Parks with vegetation capable of burning will prepare a fire management plan that is consistent with federal law and departmental fire management policies, and that includes addressing the need for adequate funding and staffing to support the planned fire management program.”

Table 1.3 National Park Service Fire Management Program Requirements

National Park Service Policy Directing Development of Fire Management Plans— Director’s Order 18: Wildland Fire Management
Section 5: Program Requirements
<p>Every park area with burnable vegetation must have a fire management plan approved by the superintendent.</p>
<p>All approved fire management plans will:</p> <ul style="list-style-type: none"> • Reinforce the commitment that firefighter and public safety is the first priority. • Describe wildland fire management objectives, which are derived from land, natural and cultural resource management plans and address public health issues and values to be protected. • Address all potential wildland fire occurrences and consider the full range of wildland fire management actions. • Promote an interagency approach to managing fires on an ecosystem basis across agency boundaries and in conformance with the natural ecological processes and conditions characteristic of the ecosystem. • Include a description of rehabilitation techniques and standards that comply with resource management plan objectives and mitigate immediate safety threats. • Be developed with internal and external interdisciplinary input and reviewed by appropriate subject matter experts and all pertinent interested parties, and approved by the park superintendent. • Comply with the National Environmental Policy Act (NEPA) and any other applicable regulatory requirements. • Include a wildland fire prevention analysis and plan. • Include fuels management analyses and plan. • Include procedures for short and long term monitoring to document that overall programmatic objectives are being met and undesired effects are not occurring.
<p>Until a Fire Management Plan is approved, park areas must take an aggressive suppression action on all wildland fires, taking into account firefighter and public safety and resources to be protected within and outside the park.</p>
<p>Although resource impacts of suppression alternatives must always be considered in selecting a fire management strategy, resource benefits may not be the primary consideration unless there is an approved Fire Management Plan.</p>

“Park and local fire personnel will be advised of the locations and characteristics of cultural resources threatened by fire, and of any priorities for protecting them during any planned or unplanned fire incident. At parks with cultural resources, park fire personnel will receive cultural resource protection training. At parks that have wildland or structural fire programs, cultural resource management specialists will receive fire prevention and suppression training and, when appropriate, will be certified for incident management positions commensurate with their individual qualifications.”

Federal Wildland Fire Management Policy

The Interagency Federal Wildland Fire Policy Review Working Group revised the Federal Wildland Fire Management Policy in 2009. Main elements of the policy are listed in Table 2.2.

Table 1.4 2001 Federal Wildland Fire Management Policy

POLICY	2001 FEDERAL WILDLAND FIRE MANAGEMENT POLICY
Safety	Firefighter and public safety is the first priority. All Fire Management Plans and activities must reflect this commitment.
Ecosystem Sustainability	The full range of fire management activities will be used to help achieve ecosystem sustainability including its interrelated ecological, economic, and social components.
Response to Wildland Fire	Fire, as a critical natural process, will be integrated into land and resource management plans and activities on a landscape scale, and across agency boundaries. Response to wildland fire is based on ecological, social, and legal consequences of the fire. The circumstances under which a fire occurs, and the likely consequences on firefighter and public safety and welfare, natural and cultural resources, and values to be protected dictate the management response to the fire.
Use of Wildland Fire	Wildland fire will be used to protect, maintain, and enhance resources and, as nearly as possible, be allowed to function in its natural ecological role. Use of fire will be based on approved Fire Management Plans and will follow specific prescriptions described in operational plans.
Rehabilitation and Restoration	Rehabilitation and restoration efforts will be undertaken to protect and sustain ecosystems, public health, and safety, and to help communities protect infrastructure.
Protection Priorities	The protection of human life is the single, overriding priority. Setting priorities among protecting human communities and community infrastructure, other property and improvements, and natural and cultural resources will be based on the values to be protected, human health and safety, and the costs of protection. Once people have committed to an incident, these human resources become the highest value to be protected.
Wildland Urban Interface	The operational roles of federal agencies as partners in the Wildland Urban Interface are wildland firefighting, hazardous fuel reduction, cooperative prevention and education, and technical assistance. Federal agencies may assist with exterior structural protection activities under formal Fire Protection Agreements that specify mutual responsibilities of the partners, including funding. (Some federal agencies have full structural protection authority for their facilities on lands they administer; they may also enter into formal agreements to assist state and local governments with full structural protection.)
POLICY	2009 FEDERAL WILDLAND FIRE MANAGEMENT POLICY
Planning	Every area with burnable vegetation must have an approved Fire Management Plan. Fire Management Plans are strategic plans that define a program to manage wildland and prescribed fires based on the area's approved land management plan. Fire Management Plans must provide for firefighter and public safety; include fire management strategies, tactics, and alternatives; address values to be protected and public health issues; and be consistent with resource management objectives, activities of the area, and environmental laws and regulations.
Science	Fire Management Plans and programs will be based on a foundation of sound science. Research will support ongoing efforts to increase our

Science continued	scientific knowledge of biological, physical, and sociological factors. Information needed to support fire management will be developed through an integrated interagency fire science program. Scientific results must be made available to managers in a timely manner and must be used in the development of land management plans, Fire Management Plans, and implementation plans.
Preparedness	Agencies will ensure their capability to provide safe, cost-effective fire management programs in support of land and resource management plans through appropriate planning, staffing, training, equipment, and management oversight.
Suppression	Fires are suppressed at minimum cost, considering firefighter and public safety, benefits, and values to be protected, consistent with resource objectives.
Prevention	Agencies will work together and with their partners and other affected groups and individuals to prevent unauthorized ignition of wildland fires.
Standardization	Agencies will use compatible planning process, funding mechanisms, training and qualification requirements, operational procedures, values-to-be-protected methodologies, and public education programs for all fire management activities.
Interagency Cooperation and Coordination	Fire management planning, preparedness, prevention, suppression, fire use, restoration and rehabilitation, monitoring research, and education will be conducted on an interagency basis with the involvement of cooperators and partners.
Communication and Education	Agencies will enhance knowledge and understanding of wildland fire management policies and practices through internal and external communication and education programs. These programs will be continuously improved through the timely and effective exchange of information among all affected agencies and organizations.
Agency Administrator and Employee Roles	Agency administrators will ensure that their employees are trained, certified, and made available to participate in the wildland fire program locally, regionally, and nationally as the situation demands. Employees with operational, administrative, or other skills will support the wildland fire program as necessary. Agency administrators are responsible and will be held accountable for making employees available.
Evaluation	Agencies will develop and implement a systematic method of evaluation to determine effectiveness of projects begun under the 2001 Federal Fire Policy. The evaluation will assure accountability, facilitate resolution of areas of conflict, and identify resource shortages and agency priorities.

Enabling Legislation for SMMNRA

Congress established the SMMNRA in November 1978 to protect the largest expanse of mainland Mediterranean ecosystem in the national park system. This extraordinarily diverse ecosystem is home to 26 distinct natural communities, from freshwater aquatic habitats and coastal lagoons to oak woodlands, valley oak savanna and chaparral. Situated in densely populated southern California, the recreation area is a critical haven for more than 450 animal species, including mountain lions, bobcats and golden eagles. It is also home to more than ten threatened or endangered plants and animals. More than 1,000 archeological sites are located within the park boundary, one of the highest densities of archeological resources found in any mountain range in the world. The 26 known Chumash pictograph sites, sacred to traditional Native American Indians, are among the most spectacular found anywhere. Nearly every major prehistoric and historic theme associated with human interaction and development of the Western United States is represented here. No other national park features such a diverse assemblage of natural, cultural, scenic and

recreational resources within easy reach of more than 12 million Americans, nearly 5% of the nation's total population (GMP 2003).

Based on the nature of the resources of the Santa Monica Mountains, the park was established by Congress. Section 507(a) of the enabling legislation (PL 95-625) states:

“The Congress finds that –

- (1) there are significant scenic, recreational, educational, scientific, natural, archeological, and public health benefits provided by the Santa Monica Mountains and the adjacent coastline;*
- (2) there is a national interest in protecting and preserving these benefits for the residents of and visitors to the area; and*
- (3) The State of California and its local units of government have authority to prevent or minimize adverse uses of the Santa Monica Mountains and adjacent coastline area and can, to a great extent, protect the health, safety, and general welfare by the use of such authority.*

In accordance with the enabling legislation, the SMMNRA must be managed in a manner to preserve and enhance its scenic, natural, and historical setting and its public health value as an airshed for the Southern California metropolitan area while providing for the recreational and educational needs of the visiting public.

The recreation area is a unit of the National Park System and is administered by the National Park Service. There are many different public and private agencies managing land within the Santa Monica Mountains because the 1978 legislation recognized that the recreation area would be a partnership among federal and state parks agencies, local governments and private landowners. The National Park Service and the Santa Monica Mountains Conservancy are the only agencies specifically charged with protecting resources within the entire recreation area; all other state and local agencies are limited to their jurisdictional boundaries.

General Management Plan and Resource Management Plan

The [General Management Plan](#) (GMP) mission goals are those goals that incorporate the mission, law, core values and policies of the three principal park agencies to manage the recreation area (GMP, p. 38-44). Fire management will be consistent with the mission goals and include strategies to support and implement those goals.

- *Protect and enhance species, habitat diversity and natural processes within the SMMNRA.*
- *Protect and restore native plant species and plant communities, such as coastal sage scrub, coastal live oak woodland, and valley oak savannas.*
- *Enact programs to combat and remove the encroachment of exotic flora and fauna into natural ecosystems when possible.*
- *Manage fire throughout the recreation area to mimic natural fire regimes as much as possible and reduce the threat of wildfires.*
- *Maintain or improve water quality throughout the SMMNRA. Manage riparian communities, natural stream characteristics, estuaries and coastal waters for their significant ecological value.*
- *Implement collaborative scientific research and innovative resource management programs among federal, state and local agencies to manage, restore, and maintain natural processes.*

National Park Service policies, with respect to fire and fire management in the SMMNRA, are described in the General Management Plan (2003) and the Resource Management Plan (1999).

The General Management Plan states:

It is the policy of the Santa Monica Mountains National Recreation Area to manage natural areas in a manner that maintains and enhances ecological values while at the same time assuring public safety. The goal is to implement a fire management program that helps to maintain a fire regime that sustains natural biotic associations and ecosystem functions while providing effective and strategic defenses against wildfire.

The park's prescribed burning program would be revised to reflect an increased understanding of the potential ecological impacts of prescribed burning, a new understanding of extreme-weather fire behavior, and recognition of the limited capacity of government agencies to implement prescribed burning. To this end, ecological management zones would be defined and established where vegetation is managed for ecological values, and dynamic fuel management zones for hazard reduction at the wildland-urban interface.

The [Resource Management Plan](#) identified the need to develop an ecologically based fire management program as a top priority conservation and restoration project as follows:

“Recent information on the effects of fire frequency, intensity, and extent on ecological communities in southern California, and new data on the effectiveness of prescribed fire programs to reduce wildfire risk, has led to a reassessment of fire management in the park. Currently the park is working to update its fire management program to reflect the most up-to-date scientific information. Ideally, an interagency fire management program implemented throughout the SMMNRA and surrounding region can be developed.”

The RMP identified fire as “an important ecological tool that resource managers can employ to achieve specific conservation or restoration objectives.” Specific examples are identified as top priority conservation and restoration projects (1999).

- 1) *Restoration of Valley Oak Savanna: Explore the use of fire management for control of exotic annual grasses and the direct and indirect benefits and impacts of prescribed burning on oak establishment.*
- 2) *Restoration of Native Grasslands: Use fire to remove exotics and promote native species response.*

Prescribed burns in 2002 and 2005 and a wildfire in 2005 showed that fire in disturbed grasslands promotes non-native species and was ineffective at restoring disturbed annual grasslands without intensive active restoration (Moyes et al, 2005; Keeley et al, 2009).

Park Foundation Statement

The [Foundation Document](#) for the Santa Monica Mountains National Recreation Area was completed in May 2015. This 2016 FMP update is in response to the need identified in the foundation document to update the 2006 FMP. The foundation document identifies increased wildfire frequency as one of a complex of cascading ecological effects that pose a threat to the natural and cultural resources of the SMMNRA. This FMP is part of the stewardship strategy to provide guidance on fire management activities related to reducing threats associated with type conversion and changes in fire regime.

Proximity to a large and growing metropolitan area poses challenges to the protection of nationally significant resources at Santa Monica Mountains National Recreation Area.

Regional growth and subsequent increased development affects a host of interrelated ecosystem processes with cascading effects throughout the system, affecting water quality, fire frequency, wildlife, and vegetation.

Native vegetation is affected by changes in fire frequency, the introduction of invasive species, pollutants from urban runoff, and ground disturbance from development and fire break clearance. Human-caused fires are increasing the natural fire frequency in what may be the most complex park for wildland-urban interface fire in the National Park Service. Nonnative species affect native habitat through competition, predation, and indirect effects such as altered ecosystem function.

Neither the Santa Monica Mountains National Recreation Area resource management plan (1999), nor the general management plan (2003), contain specific management guidance for natural and cultural resource management. A resource stewardship strategy would provide a condition assessment of the recreation area’s fundamental and other important resources and identify comprehensive strategies to achieve and maintain desired conditions for those resources. The resource stewardship strategy would provide guidance to address primary threats to fundamental resources which include vegetation type conversion, urbanization, air pollution, vandalism, climate change, recreation impacts, and changes in the fire regime.

Data Needs and Studies	Priority
Fire frequency monitoring (ongoing)	M
Fire ignition – locations and causes	M
Structural fire management plan – Need defensible space and a plan to protect structures and contents (some irreplaceable) from fire damage	L

Fire Management Plan

The Fire Management Plan (FMP) is a detailed program of action to implement fire management policies and objectives. National Park Service planning documents affecting the FMP include the General Management Plan and Environmental Impact Statement, the Resource Management Plan and the Foundation Statement.

1.7 Resource Management Planning

1.7.1 Cultural Resources

Cultural resources in the Santa Monica Mountains on National Park Service lands fall into three main categories:

- Historic structures
- Archaeological sites and features
- Curated museum objects and archive records.

Unique fire protection considerations apply to each respective category. These will be described and discussed in turn.

Historic Structures

Historic features and structures have for the most part been identified. The following is a list of structures that have potential historic significance on NPS and State Park lands.:

- Circle X Ranch structures and associated features
- Diamond X Ranch structures
- Franklin Canyon houses and structures

- Morrison Ranch House and associated features
- Paramount Ranch complex
- Peter Strauss Ranch buildings and features
- Solstice Canyon structures, including the Keller House, the ruins, remaining structures, and shrine at Tropical Terrace.
- Other historic features in Solstice Canyon such as the abandoned stone cabin in upper Solstice Canyon.
- Rancho Sierra Vista houses, barn and stables

The fire protection requirements of these buildings are significantly different from each other. Some of these buildings are along main highways, have unimpeded access and are highly visible. In contrast, some of the historic structures are relatively remote, otherwise hidden, and highly susceptible to damage and/or destruction by wildfire. In particular, the Morrison Ranch House is situated in an area of moderately dense natural vegetation and is located a considerable distance from the nearest paved road. Measures such as annual clearing of brush and grass immediately adjacent to the structures is required. The other structures, situated near paved roads either have fire-resistant landscaping or have vegetation removed by maintenance or fire staff.

Curated Museum Objects

SMMNRA maintains a significant collection of historical, ethnographic, archeological and natural history specimens. Presently, of the numerous objects found in the collection, the majority are archives which include important photographic and other documentation. These materials can contribute significantly to the understanding of history in the Santa Monica Mountains, and offer an excellent opportunity for education and future research. Uncatalogued items include the majority of the archival materials associated with the cultural history of the Santa Monica Mountains, and archaeological specimens significant in prehistory, including natural and cultural resources management and research. In all likelihood, the SMMNRA collections will continue to grow as a result of current and future management and research related projects.

In addition to the Museum Research building at Rocky Oaks, other buildings and facilities that house or contain National Park Service museum objects are found at the following locations

- Satwiwa Cultural Center
- Tack Room at Rancho Sierra Vista
- Wagon Storage Area at Rancho Sierra Vista

Prehistoric Archaeological Resources

The other main category of cultural resources on National Park Service land is prehistoric archaeological sites and features. There are hundreds of documented and recorded prehistoric archaeological sites on NPS property in the Santa Monica Mountains. A baseline archaeological map denoting the location of sensitive resources is anticipated for completion in during 2017.

Archaeological sites are a truly unique and non-renewable resource. Once destroyed by whatever means, they can never be replaced or duplicated, and the cultural heritage and scientific data they represent is lost forever. With this in mind, the utmost effort must be expended in protecting archaeological resources from inadvertent destruction by fire-related activities.

Archaeological sites are also unique in the sense that they are more or less invisible to the casual observer. This invisibility is an advantage in that, during the normal course of events, most people are unaware of archaeological sites, and subsequently they largely remain undisturbed by human activity or vandalism. Their relative invisibility is a liability because it makes archaeological sites

vulnerable to inadvertent and unintentional damage or destruction during the course of fire suppression efforts. The idea of “*out of sight, out of mind*” (or “benign neglect”) can unfortunately be one of the greatest liabilities to archaeological sites during a wildland fire.

Any fire on NPS property requires a READ with expertise in cultural resources to provide information on the location and sensitivity of cultural resources and to provide recommendations to the ICT. Because many areas of the Santa Monica Mountains have never been surveyed for cultural resources, it is certain that not all of the archaeological sites in the Santa Monica Mountains have been previously identified and recorded. Therefore it is important to provide REAF advisors to the fireline to identify whether unknown sites could be impacted by suppression activities.

After a fire, emergency stabilization funding can be used to assess fire damage to known cultural resource sites and provide emergency stabilization treatments and monitoring if necessary. The park will also do expanded surveying because following a fire is one of the best times to conduct a pedestrian survey because ground visibility is generally very good after the vegetation has burned off. A post-fire surveying program will help to identify additional cultural resources and archaeological sites within National Park Service owned properties. Combined, the actions outlined above will further the mandate to preserve, protect, and manage cultural resources in the Santa Monica Mountains.

Mitigation

The Cultural Sites Inventory is intended to "describe and document the location, significance, threats, and management requirements for known park ethnographic and archeological resources" (NPS 1992). The park is completing such an inventory of NPS parcels and should have GIS and baseline data available in 2017 to incorporate into cultural resource protection protocols for wildfire situations.

A GIS map of known site location is available and continues to be updated. These data are available to National Park Service initial action Incident Commanders and READ staff to ensure that information on the location of cultural resources is available during the initial action phase of a fire. The sensitive resources map does not replace the role of a Resource Advisor, who will work with the Command Staff during the course of an incident.

Cultural Landscape Inventories have been performed at Peter Strauss Ranch, Rancho Sierra Vista, and Paramount Ranch. These sources of information are periodically updated for use during resource avoidance, including wildfire emergencies.

1.7.2 Biological Resources

The most sensitive plant and animal species in the SMMNRA are listed below. **Table 1.5** summarizes the location of sensitive animal species for all federally owned parcels, while **Table 1.6** summarizes the location of sensitive plant resources. Many of the wildlife species are transitory in their utilization of the recreation area and will move in and out of the park.

Mitigation for these sensitive resources should consist of avoiding the habitats where feasible during suppression actions. A Resource Advisor should be present at Incident Command Post during suppression incidents. READs will provide spatial data to the ICT with the locations of sensitive resources in order to advise alternate strategies in these areas.

While it is generally assumed that plant and animal species are adapted to wildfire and that suppression impacts represent a greater threat of resource damage than from fire itself, changing fire regimes have shown that wildfire in combination with drought and the spread of invasive species are creating previously unknown fire impacts whose outcomes are unknown, e.g. *Dudleya verityi* fire

and drought mortality, Springs Fire in May fire during bird breeding season; and shrub recruitment failure due to pre- and post-fire drought.

Table 1.5 Sensitive Animals

Name	Location (Parcel)
Southwest pond turtle, <i>Clemmys marmorata pallida</i>	Agoura-Westlake, Malibu-Topanga, Zuma-Trancas
Monarch butterfly, <i>Danaus plexippus</i>	Southwest units
San Diego Mountain kingsnake, <i>Lampropeltis zonata pulchra</i>	Malibu-Topanga
Southern steelhead, <i>Onchorynchus mykiss irideus</i>	Circle X
San Diego horned lizard, <i>Phrynosoma coronatum blainvillei</i>	Agoura-Westlake, Castro Crest, Franklin-Fryman, Malibu-Topanga, Zuma-Trancas

Table 1.6 Sensitive Plants

Name	Location (Parcel)
Braunton's milk vetch, <i>Astragalus brauntonii</i>	Simi Hills, Zuma Trancas
Malibu baccharis, <i>Baccharis malibuensis</i>	Agoura
California Walnut Woodland	Malibu-Topanga, Simi Hills
Plummer's mariposa lily, <i>Calochortus plummerae</i>	Southwest units
Santa Susanna tarplant, <i>Dienandra minthornii</i>	Agoura-Westlake, Castro Crest, Simi Hills, Zuma-Trancas
Marcescent dudleya, <i>Dudleya cymosa marcescens</i>	Agoura-Westlake, Circle X,
Santa Monica Mountains dudleya, <i>Dudleya cymosa ovatifolia</i>	Circle X
Large leaved erodium, <i>Erodium macrophyllum</i>	Agoura-Westlake, Castro Crest
Fragrant pitcher sage, <i>Lepechinia fragrans</i>	Circle X
Ocellated Humboldt lily, <i>Lilium humboldtii osellatum</i>	Circle X
California beargrass, <i>Nolina cismontana</i>	Simi Hills
Lyon's pentachaeta, <i>Pentachaeta lyonii</i>	Agoura-Westlake, Solstice Canyon
Wrinkled rush, <i>Juncus rugulosus</i>	Circle X, Simi Hills
Fish milkwort, <i>Polygala cornuta</i>	Malibu-Topanga
Dolores campion, <i>Silene verecunda platyota</i>	Simi Hills
Southern live oak riparian forest	Circle X, Simi Hills, Southwest units.
Southern sycamore alder riparian woodland	Agoura-Westlake, Malibu-Topanga, Rancho Sierra Vista
Valley oak woodland	Circle X, Simi Hills

2.0 FIRE MANAGEMENT GOALS AND OBJECTIVES

2.1 General Management Considerations

All wildland fires in the Santa Monica Mountains will be suppressed by the local suppression agencies, including the Los Angeles (City) Fire Department, Los Angeles County Fire Department, and Ventura County Fire Department, with support from the National Park Service, California Department of Parks and Recreation and the Mountains Recreation and Conservation Authority. Prescribed fires on federal lands will be managed in cooperation with Los Angeles County Fire Department, Ventura County Fire Department, South Coast Air Quality Management District, and Ventura County Air Pollution Control District.

2.2 Goals and Objectives

The fire management goals below are taken from the applicable policies and resource objectives in the approved plans described above. The objectives and strategies are those actions that support the accomplishment of the stated goals.

2.2.1 Goal: *The first priority during all fire management activities is firefighter and public safety.*

Objectives/Strategies:

- All fire personnel will comply with the National Wildfire Coordinating Group (NWCG) fitness and medical requirements and will have personal protective equipment appropriate to the job or assignment.
- All Fire personnel will have qualifications and training appropriate to the job or assignment .
- All safety standards and guidelines identified within the Interagency Fire and Fire Aviation Operations handbook will be followed.
- The Job Hazard Analysis (JHA) process will be used for all potentially hazardous fire management activities.

2.2.2 Goal: *All SMMNRA fire management activities will be performed in accordance with the principles, policies, and recommendations of the following: Modification of Federal Wildland Fire Policy Guidance (2008), Implementation of Federal Wildland Fire Management Policy (2009); Departmental Manual (parts 350-354, 620); [NPS Management Policies](#) (2006); [DO-18 Wildland Fire Management](#) (2014) and [DO-60, Aviation Management](#) (2012), [National Cohesive Strategy](#) (accessed June 2016).*

Objectives/Strategies

- The following key themes from the Final Report of the Federal Wildland Fire Management Policy and Program Reviews will be implemented by the park Fire Management Officer into all fire management activities:
- Ecosystem sustainability to recognize the role of fire in sustaining healthy ecosystems, restoration, rehabilitation of burned lands, and the importance of sound science in fire management activities.
- Fire planning with timely reviews of the park's fire management plan and related planning documents.
- Fire operations with emphasis on safety, protection priorities, appropriate preparedness, appropriate suppression actions, use prescribed fire, prevention activities, and roles and responsibilities in the wildland urban interface.
- Interagency coordination and cooperation to include federal land management agencies with supporting or related programs as full partners in wildland fire management activities and programs

- Communication and education programs to enhance understanding of the fire management mission for both internal and external audiences.
- All aviation policies and practices will be followed during SMMNRA fire management activities, should air operations become necessary, as described in the Department of Interior Departmental Manual (part 350-354, 620) and DO60, Aviation Management. The park Fire Management Officer or designee will stay abreast of aviation policy changes by maintaining periodic contact with the regional aviation manager.

2.2.3. Goal: *Identify acceptable strategic areas for fire suppression responses, mechanical hazard fuel reduction, and prescribed fire to achieve maximum benefit with the least impact.*

Objectives/Strategies

- Use vegetation map, fire history map, and other tools to develop risk assessments which will identify and prioritize appropriate treatments.

2.2.4. Goal: Fire Communication and Education. Educate employees and the public about the scope and effect of wildland fire management, including fuels management, resource protection, prevention, hazard/risk assessment, mitigation and rehabilitation, and fire's role in ecosystem management by cooperating with the SMMNRA Division of Interpretation to develop fire education and interpretation programs.

Objectives/Strategies

- Participate with local fire departments in the development of evacuation plans for the wildland urban interface communities.
- Develop and distribute trailhead brochures on fire safety.
- Increase fire ecology and safety programs in schools.
- Encourage Fire Safe Councils and FIREWISE communities.
- Increase public meetings and homeowner group presentations.
- Emphasize fuels reduction on private property.
- Explore grants for fire-safe construction.
- Establish and maintain an Internet site with fire safety information.
- Encourage and assist in developing more interpretive programs on fire safety and ecology.
- Develop prevention plans to reduce number of human-caused ignitions.

2.2.5. Goal: *Stabilize and prevent degradation of natural and cultural resources lost in and/or damaged by impacts of wildland fires, fire suppression tactics and/or fire management activities.*

Objectives/Strategies

- Employ Minimum Impact Suppression Tactics (MIST), including adjusting tactics to avoid sensitive natural resources and cultural resources where tactical feasible, minimize the construction of fireline using mechanical equipment, and use cold trail techniques and natural barriers instead of line construction. Other implementation guidelines can be found in Reference Manual (RM)-18, Chapter 9, Exhibit 5.
- Use of MIST will not compromise firefighter or public safety or overtly impact overall strategic plans and tactical operations. NPS Resources Advisors will provide input concerning sensitive habitats through the Incident Commander/Unified Incident Commanders or the NPS Agency Representative. This information will be incorporated into the operational decision making process to assure use of appropriate tactics on the incident.
- Provide local [MIST pocket cards](#) and [resources briefing guides](#) for the IC.
- Post-fire rehabilitation would be initiated through the Emergency Stabilization and Rehabilitation Policy (ESR) funding request process to mitigate a broad range of threats to natural and cultural resources critical to the SMMNRA mission and resource protection

mandates. See RM18, Chapter 12 for guidelines to implement BAER. Policy regarding ESR is outline in the June 6, 2003 Memorandum, “*Wildland Fire Emergency Stabilization and Rehabilitation Policy and Procedures*” and the [Interagency Burned Area Emergency Response Guidebook](#) (2006).

2.2.6 Goal: *Maintain the highest standards of professional and technical expertise in planning and safely implementing an effective wildland fire management program through annual program reviews, attending training, conducting training, maintaining fireline qualifications, pursuing diversified experience, and keeping abreast of latest developments and technology available to fire management.*

Objectives/Strategies

- Implement annual program reviews.
- Implement training plans for each operational employee to reach target qualifications for the positions in the fire management organization.
- Planning and science staff will embrace a collaborative approach with partners and other park divisions, the science community and interagency colleagues and stay abreast of current wildfire science
- Conduct annual training appropriate to instructor qualifications.
- Attend conferences to keep abreast of the latest developments and technology applicable to fire management.

2.2.7 Goal: *Integrate fire management with all other aspects of park management.*

Objectives/Strategies

- Develop a fire management program that helps meet the goals of the park’s General Management Plan, RMP, and the park’s foundation statement within the five-year life of the fire management plan.

Goal 2.2.7: *Manage wildland fire incidents in accordance with accepted interagency standards using appropriate management strategies and tactics and maximize efficiencies through interagency coordination and cooperation.*

Objectives/Strategies

- Recognize appropriate and acceptable interagency management strategies and tactics for incidents by using MIST wherever possible.
- Attend interagency planning meetings prior to each fire season to enhance coordination and cooperation to maximize efficiency to manage wildland fire incidents.

Goal 2.2.8: *Develop a scientific fire management program using the best available knowledge and technology to protect communities from wildfire, while restoring and protecting native ecosystems and native biodiversity.*

Objectives/Strategies

Use information gained through inventory, monitoring, park research and review of research by others to evaluate and improve the program; translate scientific knowledge into policy and management practices, including but not limited to:

- non-biological drivers of the southern California fire regime and the impacts of altered regimes on native plant communities
- the role of exotic plants on altered fire regimes, native seed banks and biodiversity
- fire effects on wildlife populations
- effective fire prevention and community protection strategies in the southern California WUI

3.0 WILDLAND FIRE OPERATIONAL GUIDANCE

The mission of the SMMNRA is to “protect and enhance, on a sustainable basis, one of the world’s last remaining examples of a Mediterranean ecosystem and to maintain the area’s unique natural, cultural, and scenic resources, unimpaired for future generations” (GMP 2002). Any fire management strategies, including suppression actions or fuel reduction projects should factor in the protection of natural and cultural resources, while maintaining that safety of employees and private citizens is the highest priority in any activity. On all wildland fire management actions, use of minimum impact tactics is the policy of the National Park Service. MIST is defined as the application of those techniques that effectively accomplish wildland fire management objectives with the least cultural and environmental impact, commensurate with public and firefighter safety (RM18, 2014).

3.1 General Implementation Procedures

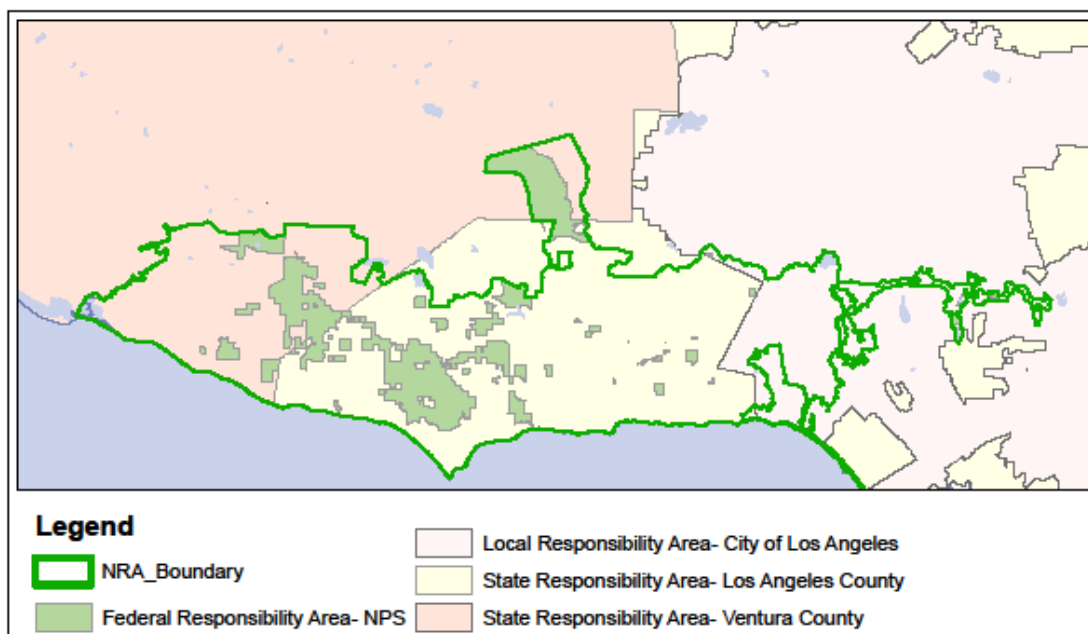
All suppression activities on federal lands will be managed with single Incident Commander (IC) or Unified Command. The Angeles Emergency Operations Center (EOC) is responsible to contact the Fire Management Duty Officer to respond to the report of a wildland fire. Typically the Fire Management Duty Officer responds to the Incident Command Post and serves as a single or Unified Incident Commander or Agency Representative.

The National Park Service Incident Commander or Agency Representative is responsible for requesting a Resource Advisor through the Angeles EOC. A qualified Resource Advisor will be requested to proceed to all fires on SMMNRA lands or to fires that have potential to spread on these lands. The Resource Advisor will assist in identifying sensitive resources and provide input on appropriate actions to minimize the impacts to these resources.

3.2 Spatial Management Planning

The park is in the process of transitioning to a spatial FMP from this 2016 update. The previous FMU’s have been replaced with the SMMNRA as a single unit for its primary strategic objectives (section 3.2). The primary management requirement is that all suppression activities be accomplished in conjunction with the local fire agencies (**Figure 3.1**).

Figure 3.1 Jurisdictional boundaries for cooperating fire agencies



3.3 Fire Suppression Program

The objective of the wildland fire suppression program, as an integral part of wildland fire management in the National Park Service, is to manage wildland fires safely and efficiently to accomplish protection objectives. It will be integrated into land and resource management plans and activities on a landscape scale, across agency boundaries, and will be based on best available science. Protection priorities are (1) human life and (2) property and natural/cultural resources (RM18 2014).

All wildfires in the Santa Monica Mountains will be suppressed due to the extensive wildland urban intermix. Suppression is also important to minimize the effects of short fire intervals on the native landscape (RM18, 2014). Because the SMMNRA has limited fire management operational capacity all suppression activities will be accomplished in conjunction with the local fire agencies (Figure 3.1). Within the boundary all wildland fires will be suppressed according to federal and local government protocols as determined by the single or Unified Incident Commanders. Federal actions will be consistent with direction provided in RM 18, DO 60 and *Interagency Standards for Fire and Fire Aviation Operations*.

Initial and Extended Attack

Initial Action. Wildland fires must receive appropriate initial action (IA) by the nearest available suppression forces. Generally first on scene will be either a Los Angeles County or Ventura County engine company. National Park Service personnel will respond after notifying the Angeles EOC. As safety allows, initial action Incident Commanders will assess the complexity of the fire to determine their capacities to manage the incident utilizing the SMMNRA Complexity Guide (Appendix F). If the initial action Incident Commander (IC) is unable to initiate action due to the management complexity of the incident, forces will be staged in a safe location or modified tactics will be utilized until a fully qualified type III Incident Commander arrives on scene. Cooperating fire agencies may fill the role of IC on all type III initial actions until qualified personnel from the park arrives on scene and assumes the role of IC for fires on federal lands.

Closest Forces. Fire Protection Agreements with adjacent agencies must include the use of closest resources. The closest resource concept is a standard operating procedure for all cooperating fire protection agencies in the Santa Monica Mountains.

Extended Attack. Extended attack occurs when a fire has not been contained or controlled by initial action forces and continues into the next operational period. At a minimum, a qualified type III IC will respond to all extended attack incidents to assure adequate oversight of federal firefighting resources. Qualified IC's from cooperating agencies can fill this role until federal oversight can be provided. A transition to a higher level incident management team may be necessary as the incident grows in complexity. The Santa Monica Mountains Fire Transition Checklist, will be used to assist in making a transition determination. A Delegation of Authority will be prepared for all incidents involving federal lands which transition to a type I or II Incident Management Team.

Suppression tactics on fires will be aggressive and will be conducted with the highest regard for human safety. Furthermore, all control efforts will be evaluated for consideration of effects on resource values.

Fire control activities will follow the Incident Command System process and will use standard suppression practices. Any fire suppression strategy will first take into consideration human life and safety, then private property, natural and cultural resources. Fire suppression methods used should be those which cause minimum resource damage while accomplishing effective control.

Suppression activities will avoid disturbance of all T&E species and their habitats, as well as archeological and cultural sites, whenever reasonably possible. A qualified National Park Service

representative will be present at the Incident Command Post (ICP) during all extended attack suppression incidents. Maps of sensitive natural and cultural resources are available to representatives prior to any suppression incidents.

Minimum Impact Suppression Tactics

The goal of MIST is to minimize fire suppression impacts on the land while ensuring the actions taken are safe, timely and effective. Strategies for suppression activities and tactical operations will be planned to have the least long-term impact to the resource. All fire management activities within the SMMNRA should adhere to MIST where possible.

Wildfire Emergency Stabilization and Rehabilitation (ESR)

Every effort should be made to prevent excessive human-caused impacts during a suppression effort through careful planning and supervision, individual education and commitment, and the use of minimum impact suppression techniques.

When rehabilitation is necessary, efforts will be initiated by the Incident Commander while the fire is being suppressed and through mop-up. If performed after the incident, the Fire Management Officer will designate an employee, usually a Resource Management Specialist, to organize and direct rehabilitation efforts. The ESR program should focus only on mitigating significant damage, following the policies laid out in the Department of the Interior's ESR guidelines in 620 DM 3 and NPS RM-18. ESR plans must be submitted to the regional office within 21) calendar days following ignition of a wildfire.

If revegetation or seeding is required, only native plant species will be utilized and the park's Fire Ecologist or Plant Ecologist will be consulted. Rehabilitation planning for each fire will be the responsibility of the resource advisor or BAER coordinator. Rehabilitation of damage due to suppression actions should be performed prior to complete demobilization.

ESR is a long-term commitment to protect resources, which occurs outside of the suppression organization.

Permanent Park Records

- The following will be held as permanent historic resource records:
- Fire reports (DI-1202, supplementary reports, ICS forms).
- Fire weather records.
- Historic records of the park, including photos or maps showing vegetative cover, etc.
- Monthly reports or other records which document fire occurrence or behavior.
- Maps or records pertinent to fire management.

Situation Reports

Situation reports contain current information about fire danger, fire status, and resource availability. Parks prepare situation reports during the fire season or when (1) fire danger is very high or extreme, (2) when a fire has occurred or is in progress, (3) or when required.

Fire Report Records

Each fire of significance within the SMMNRA will be reported immediately to the Superintendent by name, location and size. An ICS-209 report will be accomplished twice daily for extended fire situations. A DI-1202 will be completed for all fires that occur inside of the designated NRA boundary or in the identified mutual threat zones with Los Angeles and Ventura County Fire Departments. The fire reporting process is a critical element within the FIREPRO analysis and must accurately reflect the fire load of the SMMNRA.

The IC will maintain a complete accountability of fire costs for each fire. A qualified cause and origin fire investigator will investigate all wildland fires within the SMMNRA. Any investigations involving potential claims against the government, trespass fires, or other illegal activities on federal lands will be immediately turned over to the Law Enforcement Branch of the Visitor and Resource Protection Division.

Completion of the Individual Fire Reports is the responsibility of the ranking National Park Service fire management employee on scene of the wildland fire. These reports will be submitted to the Fire Management Officer within 48 hours after the fire is declared out. Within 10 days individual fire reports will be entered into SACS.

An NWCG qualified fire investigator will be assigned to fires where a responsible party can be identified. A Case/Incident Record (Form 10-343) will be completed, with attachments, to document the fire activities. A case report is required when a potential suspect can be identified, if a claim for recovery of suppression costs may occur, or when resource damage has occurred to federal property.

3.4 Fuels Management

Large, intense wildfires, between 5,000 -25,000 acres occur approximately every 3-7 years in the SMMNRA. With the extensive wildland-urban intermix of homes and natural areas, lives and property are at risk from wildfire. Fire adapted native plant communities are also at risk from short fire return intervals and increased fire frequency due to excessive human ignitions.

The NPS works in partnership with local agencies and communities to plan and implement the most effective fuels treatment actions to protect the public, communities and infrastructure, conserve natural and cultural resources, and restore and maintain ecological integrity ([RM 18, 2014](#)).

The current Fuels Management program goals for **NPS park lands** are to:

- Provide defensible space for park structures or for homes on adjacent private parcels to prevent structure loss and provide for human safety during wildfires.
- Manage fuels in annual grasslands to reduce the rate and intensity of fire spread to provide for safer evacuation or strategic opportunities to control fire spread.

The Fuels Management program goals for other **co-operatively managed park lands** are to:

- Manage fuels in annual grasslands to reduce the rate and intensity of fire spread to provide for safer evacuation or strategic opportunities to control fire spread.

The Fuels Management program goals for **non-NPS lands** within the recreation area are to:

- Support community-driven efforts to create and maintain fire adapted communities, and fire safe neighborhoods.

The current fuel management program of work is based on work identified in the 2005 FEIS for the FMP. Several small expansions of the defensible space program were added in 2007, 2008, 2009, and strategic fuel modification mowing added in 2007. The last programmatic CatEx review was 2011

Fuels management actions, including community education, are tied to specific goals of the federal fire [cohesive strategy](#) goals as follows:

- 1. Restore and Maintain Landscapes: Landscapes across all jurisdictions are resilient to fire-related disturbances in accordance with management objectives.**

- Focus on fine fuels management and ignition prevention to reduce wildfire risk and extend fire return intervals
- Maintain maximum shrub canopy cover and minimize soil disturbance to reduce establishment of invasive, non-native fine fuels, but recognize that shrub fuels need to be managed when they threaten safety.
- Reduce annual clearing in fuel modification zones that extend beyond 100' if fire behavior modeling demonstrates that safety zone guild lines are met with less than 100' clearance.
- Utilize existing roads, trails and hardscape to create defensible or strategic space
- Coordinate fuel modification with invasive species control
- Work to create ignition resistance at strategic locations and collaborate on prevention of fire starts
- Work with communities on appropriate fuel modification techniques and standards

2. Create Fire-Adapted Communities: Human populations and infrastructure can withstand a wildfire without loss of life and property

- Work with communities to educate them on the importance of house-out defensible space, structural ignition resistance, and the hazard of “urban” fuels
- Work with communities on evacuation planning and emergency shelter-in-place for high risk locations
- Work with communities to implement fuel reduction projects that exceed the ability of individual community members to carry out

3. Respond to Wildfire: All jurisdictions participate in making and implementing safe, effective, efficient risk-based wildfire management decisions.

- Minimize area burned while providing for firefighter safety and avoiding damaging suppression tactics
- Use suppression tactics that are consistent with fire behavior (e.g. do not bulldoze lines that cannot be used for backfire operations or will be jumped by spotting)
- Work with county fire collaboratives on early detection technology and response in critical locations

3.4.1 Five-Year Fuels Plan (Fiscal Year Work Programs)

Prescribed Fire

The purpose of prescribed fires is the safe accomplishment of approved resource management or hazard fuel reduction goals. Secondary goals include providing training opportunities for NPS and County Fire agency personnel, and promoting interagency cooperation and trust that helps NPS serve its mission more effectively when in unified command with those same County Fire agencies on wildfire suppression incidents. Prescribed fires are planned, scheduled, organized and implemented according to a rigorous protocol to assure that desired fire behavior is attained in treatment areas, and to assure that prescribed fires do not escape containment.

The NPS has no immediate plans for prescribed fire on its properties, but is capable of implementing burns if it is determined to be necessary to meet fire management or resource objectives.

Prescribed fire was actively used in the park during the 1980's and 1990's. Grassland burns by the NPS were last conducted in 2002 and 2005 at Cheeseboro Canyon. Prescribed fire has been determined to not be the most effective method to meet the park's resource management or strategic fuel objectives (Moyes et al, 2005; SAMO FMH ANGR biomass plots; Keeley et al, 2009). Prescribed fire planning and implementation will be in accordance with the prescribed fire plan template and prescribed fire go/no go checklist according to the [Interagency Prescribed Fire Planning and Implementation Procedures Guide \(NIFC PMS 484\)](#), and local guidelines ([Appendix III-A](#)).

If the SMMNRA is asked by a cooperator to include prescribed fire treatments on federal property, a project proposal will be submitted to the park staff through the ERT. An analysis conducted by the park staff will be required for the project. Every effort will be made to provide a timely response to the project proponent concerning inclusion of federal lands. The project evaluation criteria as defined in the Final Environment Impact Statement will be the starting point for the project analysis.

Non-Fire Treatment

Mechanical treatments are the primary method used to reduce fire hazard and create defensible space in the wildland-urban interface. Mechanical mowing has been the park's preferred method for reducing flashy hazard fuels dominated by annual grasses in strategic fuel treatment areas since 2006 based on cost efficiency and the ability to implement the work.

Defensible Space

Table 3-1 lists defensible space fuels treatment areas. Detailed maps of treatment areas are in **Appendix D.2**.

The Defensible Space fuel treatments reduce the likelihood of a wildfire damaging homes or other structures by focusing on the immediate area around the structure. Defensible space is the natural and landscaped area around a structure that has been maintained and designed to reduce fire danger. Effective defensible space reduces the risk that fire will spread from the surroundings to the structure and provides a key point where firefighters can safely establish themselves to defend a structure from wildfire (Blonski et al, 2010). Firefighters in the WUI must assess many factors to determine whether a home can be safely defended during a wildfire event. The outcomes of many wildfires have demonstrated that defensible space generally helps mitigate wildfire risk to structures, especially when combined with tactics to harden structures against ignition by embers. Thus defensible space is one of the cornerstones of community fire safety programs everywhere.

Table 3.1 Five Year Mechanical Treatment Plan – Defensible Space

Name of Unit	Acres	Objectives
Arroyo Sequit	4.0	hazard fuel management for park facilities (annual)
Castro Crest	2.1	hazard fuel management for radio repeater station (annual)
Cheeseboro Cyn	10.2	hazard fuel management for neighboring homes (annual)
Circle X	6.9	hazard fuel management for park facilities (annual)
Corral Cyn Rd	0.9	hazard fuel management for one neighboring home (annual)
Decker School Road	2.5	hazard fuel management for neighboring homes (annual)
Diamond X	6.3	hazard fuel management for park facilities (annual)
Franklin Cyn	6.9	hazard fuel management for neighboring homes (annual)
Fryman Cyn	8.0	hazard fuel management for neighboring homes (annual)
King Gillette	3.4	hazard fuel management for park facilities (annual)
King Gillette East	0.5	hazard fuel management for neighboring homes (annual)
Paramount Ranch NE	1.3	hazard fuel management for neighboring homes (annual)
Paramount Ranch SE	8.0	hazard fuel management for park facilities (annual)
Rancho Sierra Vista	11.8	hazard fuel management for park facilities (annual)
Rancho Sierra Vista roadside groundskeeping	3.0	hazard fuel management, reducing ignition potential of cars
Rocky Oaks (incl. La Kretz Field Station)	4.4	hazard fuel management for park facilities (annual)
Rocky Oaks parking area groundskeeping	0.2	hazard fuel management, reduce ignition potential of cars
Shea Homes	0.3	hazard fuel management for neighboring commercial property (annual)
Solstice Cyn roadside groundskeeping	0.9	hazard fuel management, reduce ignition potential of cars
Trancas Cyn	4.3	hazard fuel management for neighboring homes (annual)
Yerba Buena Rd	0.2	hazard fuel management for neighboring homes (annual)
Zuma Cyn	8.1	hazard fuel management for neighboring homes (annual)
Total defensible space	94.2	

Strategic Fuel Modification

The goal of strategic fuel modification treatments is to create new opportunities for firefighters to practice fire suppression safely and effectively in areas where successfully limiting fire spread could substantially reduce the overall size of an expected large wildfire. The premise of strategic fuel modification is that by studying historic fire progressions and fire weather patterns, and then applying general tactical principles, discrete areas of fuel treatments can be identified that make an important difference in helping firefighters stop spread of large wildfires. It is generally easier to demonstrate the effectiveness of defensible space in protecting structures than it is to demonstrate the effectiveness of strategic fuel modification.

As applied in the SMMNRA, the objectives of strategic fuel modification projects are to manage fuels in annual grasslands on NPS and co-operatively managed park lands to reduce fire intensity and reduce the rate of fire spread under expected weather conditions to levels that allow firefighters to employ suppression tactics safely and effectively. Projects are located at potential chokepoints in historic fire corridors to create new tactical opportunities for controlling fire spread, or along important transportation routes to make access and evacuations safer.

Table 3.2 lists strategic fuels treatment areas. Detailed maps of treatment areas are in **Appendix D.3**.

Table 3-2 Five Year Mechanical Treatment Plan – Strategic Fuel Modification

Name of Unit	Acres	Objectives
Cheeseboro Cyn (NPS & MRCA land)	35.5	Create opportunities to limit fire spread
King Gillette (NPS & MRCA land)	76.5	Create opportunities to catch fire starts, limit fire spread
Las Virgenes (CA State Parks land)	70.7	Create opportunities to catch fire starts, limit fire spread, protect evacuation route
Potrero (NPS land)	37.7	Create opportunities to catch fire starts, limit fire spread
Reagan Ranch (CA State Parks land)	42.0	Create opportunities to catch fire starts, limit fire spread
Subtotal strategic treatments	262.5	

3.4.2 Implementation of the Fuels Treatment Program

The Fuels Management Team (FMT) will review project objectives and site-specific treatment methods to accomplish goals prior to the May 1 deadline for next year's NFORS requests. The Chief Ranger and Chief of PSRM will review this project list.

When project plans are developed, the FMT will ensure the FMP EIS covers project compliance. If the project plan has been developed outside of the current plan, compliance must be initiated and completed before the project can be implemented. The Fire Ecologist initiates compliance by completing a PEPC proposal and submitting it to the Environmental Review Coordinator. Proposed projects will become an agenda item at the next Environmental Review Team (ERT) meeting.

Requests for fuel modification on NPS lands are evaluated on a case-by-case basis. This evaluation will include an onsite inspection of the property by the FMT to assess risk to the property from wildland fire under expected conditions. The evaluation will include an inspection of the private

property to ascertain if the property owner has taken all reasonable actions on their lands to make the property fire safe. In cases where vegetation on NPS land is deemed to be a significant hazard to private property and the property owner is taking prudent actions on their property to improve fire safety, a fuels treatment proposal will be brought to the ERT for evaluation. As approved or modified by the ERT, the project will be implemented in cooperation with the jurisdictional fire agency to further mitigate the identified local fire hazard.

Proposed actions to review the effectiveness of the fuels program to meet its objectives and fire management program goals are identified in **Table 3-3**.

Table 3.3 Five Year Planning and Mitigation Programs

Activity	Year	Objectives
Revise 2016 FMP update to spatial FMP format	2016	Management objective to improve communication and operational efficiency
Implement bird surveys consistent with MBTA Review results and adapt procedure as needed to mitigate likely impacts	2016-2017; 2018	Compliance requirement Adaptive management review of required actions to meet park management goals
Review park structure defensible space based on house out principles and structural mitigation recommendations. Begin review Fall 2016 and implementation Winter 2017	2017-2018	Implementation of BMP's for fire management objectives to protect park resources and provide a model to neighboring communities
Using fire modeling behavior analyze the value of strategic fuel mod areas to meet the project objectives	2016-2017	Adaptive management review of strategic fuels program
Review biological effects of fuel modification and weed control programs in SFM areas	2017	Adaptive management review of strategic fuels program

3.5 Preparedness

The FMO will annually, before July 15 complete a Fire Readiness Review based on direction found in the [Interagency Standards for Fire and Fire Aviation Operations handbook](#) and according to the [Checklists for the Readiness Review](#).

Through the use of long-range weather forecasts and analysis of National Fire Danger Rating Indices, Predictive Services at the Southern California Area Coordination Center prepares a 90-day outlook of fire potential in the Southern California area. The FMO will provide the Chief Ranger and Superintendent this outlook as part of the required pre-season orientation for Line Officers.

Fire dispatch is provided by agreement with the Angeles National Forest. Fire situations, fire danger, current staffing levels, resource availability and mobilization information are maintained by Angeles National Forest dispatch.

3.5.1 All Risk Management

The SMMNRA is located in a uniquely urban environment that presents special challenges to fire management personnel assigned to the park. Areas of all risk incident management include vehicle fires, structure fires, emergency medical services and hazardous materials.

Vehicle fires: Vehicle fire suppression response inside the jurisdictional boundary of the NRA is the responsibility of Los Angeles County, Los Angeles City and Ventura County Fire Departments. SMMNRA personnel respond to these incidents because of the threat of a vehicle fire spreading into adjacent wildland vegetation. Several major commuter corridors pass through the park, increasing the probability that fire personnel will be required to take action to protect the natural resources from this ignition source.

With current equipment and training, personnel may only engage in protection of the wildland exposure when arriving first on scene of a vehicle fire. In situations where the module leader has determined that a fire extinguisher is the only suppression tool required to contain the fire, actions may be initiated. However, exposure protection remains the primary responsibility.

The fire apparatus and personnel are not currently equipped or trained for direct action on fully involved vehicle fires. Requirements to engage a fully involved vehicle include full structure fire turnouts and boots; double lined gloves, structure helmet with visor and full respiratory protection. The National Fire Protection Association (NFPA) defines the requirements for personal protective equipment in section 704.

Structure Fire: The local fire agencies have the jurisdictional authority for all structures fire that occurs inside of the NRA. This includes any structure fire involving National Park Service improvements. Direction for participation in a structure fire program is defined in Director Order and Reference Manual 58. SMMNRA does not meet current direction in RM58; therefore wildland fire employees may only participate on a structure fire incident utilizing exterior attack tactics or by logistical support of the jurisdictional fire agency.

SMMNRA personnel may not provide the “two-out” requirement for interior attack made by other fire agencies. OSHA 1910.134, Respiratory Protection Standards, requires that the individuals filling the “two-out” role be trained and equipped to enter a structure in the event that tactical support or rescue of the interior firefighters is required.

3.5.1 Annual Fire Work Program

The following outline details fire management program activities for the calendar year for Santa Monica Mountains National Recreation Area:

January

- a) The fuels management committee will review annual fuels projects for the coming year and coordinate with PSRM on necessary staffing and timing to implement mitigation measures. Begin implementation of pre-season fuels and weed work.
- b) In the event of the need for a prescribed burn, the park will follow procedures in the fuels management plan.
- c) Archive training and experience records of seasonal personnel.
- d) Update and implement recruiting plan for seasonal hiring
- e) Continue to seek out funding for WAE employees with other divisions within the park
- f) Advertise for seasonal positions
- g) Update fire GIS database with previous year's fires.
- h) Update FMP key contact list (p. 53)
- i) Submit annual fire ecology report

February

- a) Meet with cooperators, final review and revision of interagency agreements
- b) Submit proposed revisions of Fire Management Plan to Pacific West Region (PWR) FMO for review and approval

- c) Check with Pacific West Region (PWR) fire management staff on procedure for utilizing suppression and emergency preparedness accounts
- d) Coordinate emergency dispatch procedures with Angeles Emergency Operations Center
- e) Inventory fire cache; all tools, equipment, kits and supplies are ready, order needed personal protective equipment and tools
- f) Semiannual service of equipment

March

- a) Permanent employees take physical fitness exams
- b) Conduct Work Capacity Testing
- c) Update fire experience and training records for red-carded personnel
- d) Continue planning for fuels program
- e) Issue red cards to permanent personnel
- f) Update station catalog and perform annual maintenance on Cheeseboro RAWS
- g) Assess fuels projects, in preparation for funding deadline
- h) Finalize hazardous fuels treatment contracts
- i) Wildfire monitoring begins by end of month and goes through May

April

- a) Conduct pre-season coordination meeting with fire cooperators
- b) Begin hazard fuel reduction projects in defensible space annual grasslands
- c) Continue implementation of fuels projects
- d) Evaluate seasonal firefighter candidates and make job offers
- e) Conduct partner/fire agency meeting in preparation for wildfire season kickoff events
- f) Complete out-year fire training needs assessment
- g) Complete NFPORS entries for next fiscal year

May

- a) Maintain fire contacts with PWR FMO, nearby agencies, and cooperators
- b) Draft FIREPRO budget request and submit to Region
- c) Begin review for annual update to FMP
- d) Preseason planning completed; all cooperative agreements revised and in effect
- e) Probable beginning of fire season in county areas.
- f) Conduct annual fire refresher training awareness training
- g) Ensure engine/cache/equipment/personnel are ready for response to local fires
- h) Continue fuels treatments, as required
- i) Begin seasonal staffing of type III engine
- j) Wildfire monitoring completed

June

- a) Issue updated fire call-out list to the PWR FMO
- b) Submit FIREPRO budget request to park staff to Superintendent for approval.
- c) Finalize annual FMP update
- d) Continue fuels treatments
- e) Inspect all NPS facilities for exterior structure fire protection readiness
- f) Update pre-attack data layer for NPS properties
- g) Complete Status of Funds Report
- h) Support requests for out of park fire assignments (FMO)
- i) Monitoring data entry and organization through August

July

- a) Conduct semiannual PWR Readiness Review for fire response readiness and safety
- b) Continue in-house hazardous fuels abatement work

- c) Mail signed hard copy of FIREPRO budget request to PWR FMO
- d) Implement Step-Up Plan, adjust level of readiness in response to fire danger levels
- e) Complete purchasing in preparation for suspension of spending
- f) Continue to support requests for out of park fire assignments

August

- a) Review policies/prepare draft memos for ground fire restrictions/park closures during Santa Ana wind events
- b) Continue to support requests for out of park fire assignments

September

- a) Prepare for beginning of Santa Ana fire season
- b) Continue to support request for out of park fire assignments
- c) Complete Status of Funds Report
- d) Attain severity funding from region for Santa Ana wildfire season

October

- a) Maintain readiness for continuation of Santa Ana fire season
- b) Contract administration for hazardous fuels projects
- c) Training nomination forms due to the region
- d) Fire monitoring data analysis through December for annual report and publications

November

- a) Maintain readiness for continuation of Santa Ana fire season

December

- a) Conduct after Action Review for past fire season. Identify areas of weakness to be corrected
- b) Compile Fire Atlas; prepare annual summary report
- c) Forward outstanding fire reports to Region (
- d) Review Interagency Agreements, draft revisions as necessary, and submit to the Superintendent for approval

Ongoing Activities

- a) Meetings with partners, fire agencies, Santa Monica Mountains Firesafe Alliance, local Wildfire Safety Councils, Homeowners associations. Contact partners/fire cooperators concerning collaborative hazard mitigation projects
- b) Monthly or bi-monthly products for Central and Southern California region of the California Fire Science Consortium

3.5.2 Training

The FMO will coordinate and document training; issue fire qualification cards and certify qualifying experience prior to its entry in IQCS. All National Park Service employees assigned to wildland fire management duties will meet the training and qualification standards set by the National Wildfire Coordinating Group (NWCG), as defined by NWCG 310-1. Wildland fire qualifications standards for positions other than those defined in NWCG 310-1 will be defined and maintained on the Incident Qualification System.

The MEDN fire program fire qualifications rating committee serves as the point of contact for fire qualifications and training for SMMNRA personnel. The committee consists of the FMO, Engine module leader, and an ad hoc member for the Angeles National Forest. Fire management staff.

The annual Training Needs Assessments are required to be submitted to the Regional Fire Management Office every spring . NWCG training nomination forms (nomination entries into IQCS) based upon the Needs Assessment are to be submitted to the region and the sponsoring training centers in October.

The FMO will prioritize the Park's training allocations and training locations to assure the most cost efficient method to accomplish necessary training. t.

SMMNRA will conform to the requirements of RM18, NPS Fire Management Guideline, and Wildland Fire Qualification Subsystem Guide, PMS 310-1 for specific job training and experience standards, and NWCG for fitness standards. All park employees involved in wildland fires will meet the physical fitness standards established for those positions for which they are qualified.

Fire qualification cards are mandatory for personnel engaged in fire duties, as required in RM18. Only individuals qualified and certified at the command level appropriate to the complexity level of the incident will manage wildland fires. Red cards must be current and firefighters must have all required protective clothing and equipment with them before being dispatched to fires. Employees must understand that assignments may keep them on fire duty for extended periods.

3.5.2.1 Physical Fitness

Personnel assigned fire line suppression duties will maintain a high level of physical fitness due to the arduous nature of such duties. A Work Capacity Test (WCT) commensurate with duties assigned, as detailed in RM-18, PMS 310-1 and NWCG guidelines must be maintained.. The medical standards require all individuals maintaining a qualification identified in 310-1 as being arduous complete a medical examination prior to participating in a WCT. Law enforcement employees with arduous duty qualifications may have the LE medical protocols substituted for the firefighter medical examination.

3.5.3 Supplies and Equipment

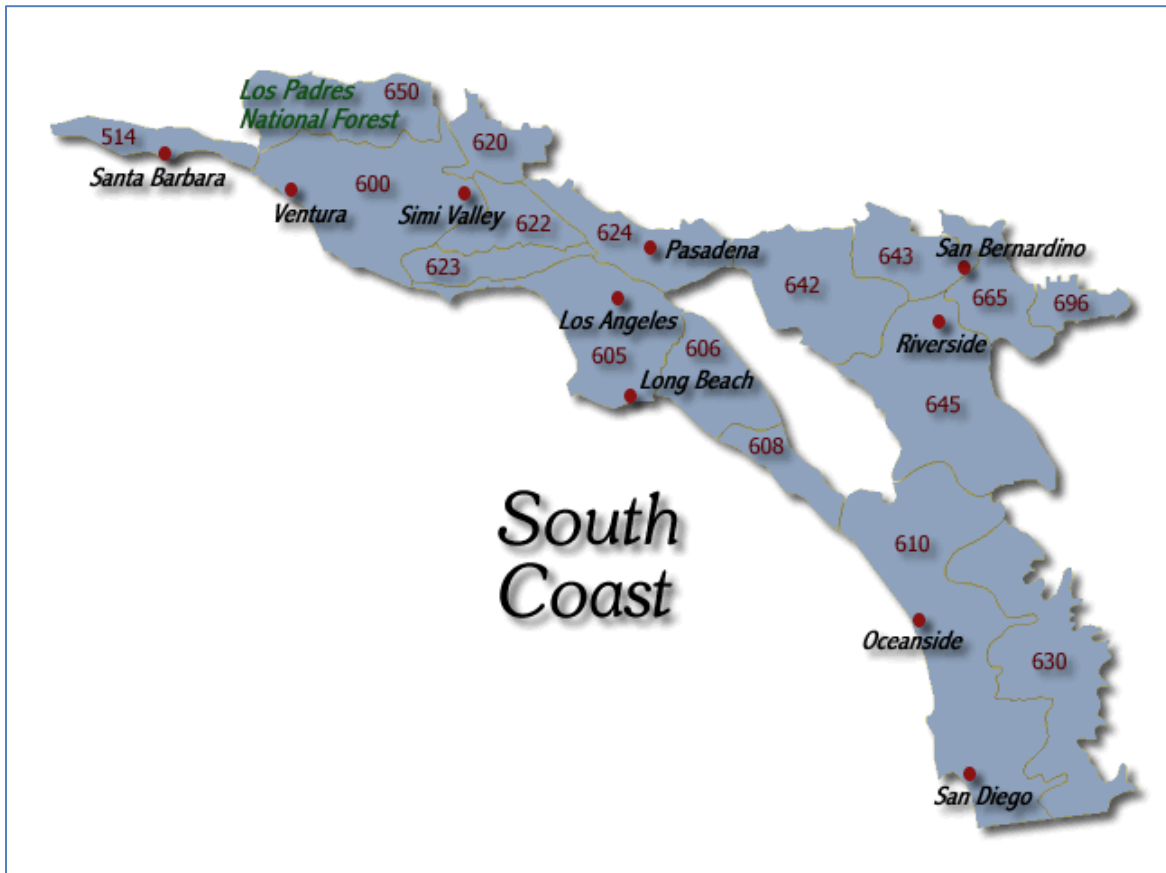
A central fire cache will be maintained at Paramount Ranch. This cache will provide all equipment and materials necessary to outfit at least all qualified firefighters. The engine module leader are responsible for maintaining the inventory. FIREPRO support and fuels support dollars will be used to procure necessary supplies.

3.5.4 National Fire Danger and Weather Information Program Management

The Fire Communication and Education Specialist (FCES) is assigned the management of the fire danger and weather information program at the park level. This individual assures maintenance of RAWS, verifies the accuracy of the station catalog, establishes green-up dates, prepares Pocket Cards and monitors weather data collection.

SMMNRA is divided between Fire Danger Rating Areas 605 and 623. Area 605 is representative of the coastal slopes and is covered by the Leo Carrillo RAWS and the Malibu Camp 8 RAWS. Area 623 best represents the inland areas of the park and is covered by the Cheeseboro and Beverly Hills RAWS (**Figure 3.2**).

Figure 3.2 Southern California NFDRS Zones



Fire Danger Indices are not computed for the SMMNRA by the Angeles EOC, however the County of Los Angeles Fire Department maintains a website where [current information](#) concerning fire danger may be obtained. The County groups fire danger into five geographic areas, with the Malibu group most appropriate for an overall evaluation of fire danger park-wide.

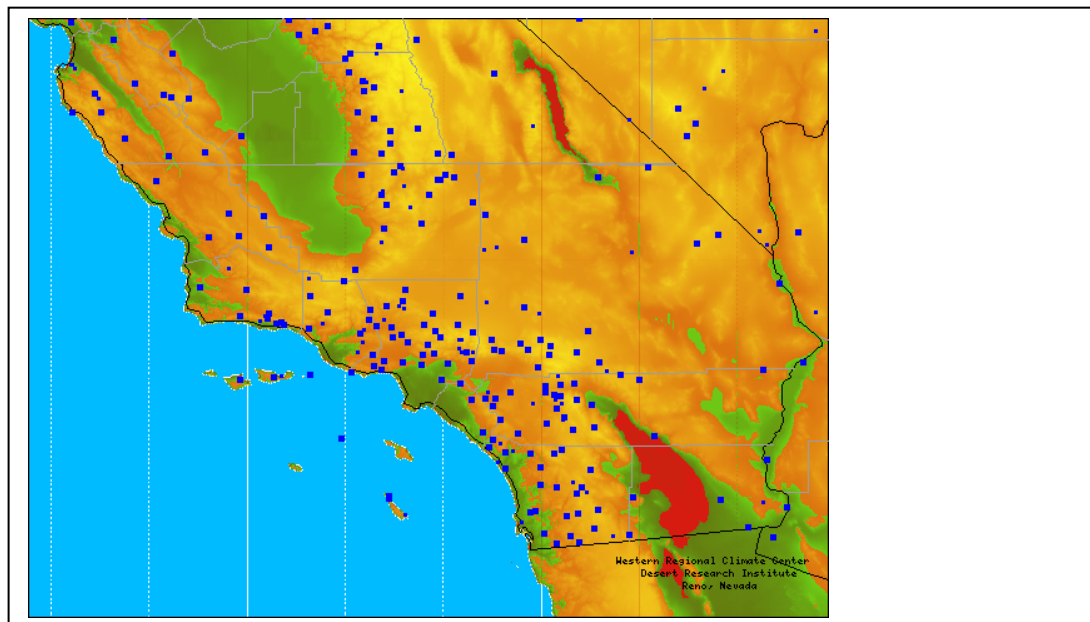
SMMNRA monitors weather from six primary RAWS, Cheeseboro, Malibu Hills (Camp 8), Malibu Canyon, Leo Carrillo, Topanga and Beverly Hills (**Table 3.4**)

Table 3.4 SMMNRA Remote Automated Weather Stations

Station Name	Location	Station ID	Fuel Model	Elevation
Cheeseboro	Agoura Hills	045313	4	1650
Malibu Canyon	Malibu	045452	4	610
Leo Carrillo	Malibu	045447	6	50
Malibu Hills (C8)	Malibu	045433	4	1575
Topanga	Topanga	045456	4	1600
Beverly Hills	Beverly Hills	045442	4	1260

Southern California has one of the highest densities of RAWS in the nation and the ability to monitor the approach of significant weather events is enhanced by this network of station (**Figure 3.3**).

Figure 3.3 Southern California [RAWS Stations](#)



3.5.4.1 Fire Danger Pocket Cards

As part of the 30-Mile Fire hazard mitigation plan, the SMMNRA maintains two Fire Danger Pocket Cards. The cards have been developed for an “Inland” location based on historic weather data from the Cheeseboro RAWS and a “Coastal” location based on data from the Camp 8 RAWS. Both cards have been posted on the Fire Danger Working Team [website](#).

3.5.4.2 Live Fuel Moisture Monitoring

One of the most critical factors determining fire spread rates in chaparral is the moisture content of living vegetation. Live-fuel moisture levels are determined more by the physiological condition of the plant community relative to yearly growth cycles, than by short-term changes in local weather. During winter and spring chaparral moisture contents can exceed 150% based on oven dry weight. At these levels of live-fuel moisture content, chaparral is very resistant to sustaining fire spread, which has limited the occurrence of large fires occurring early in fire season, even with Santa Ana wind conditions. The May 2013 Springs Fires was the park’s first large spring fire when extreme Santa Ana weather coincided with low live fuel moisture (**Figure 3.4.a**) due to severe drought conditions and an ignition along the 101 freeway.

Due to the importance of live-fuel moisture in chaparral, [Los Angeles County](#) and [Ventura County](#) Fire Departments measure live-fuel moisture and post the results to their websites bi-monthly (**Figure 3.4.a**). Live fuel moisture values of 80% in chamise chaparral are the critical threshold for large wildfires in southern California (Dennison and Moritz, 2010).

Fig. 3.4.a Los Angeles County Live Fuel Moisture 2013 and 2014

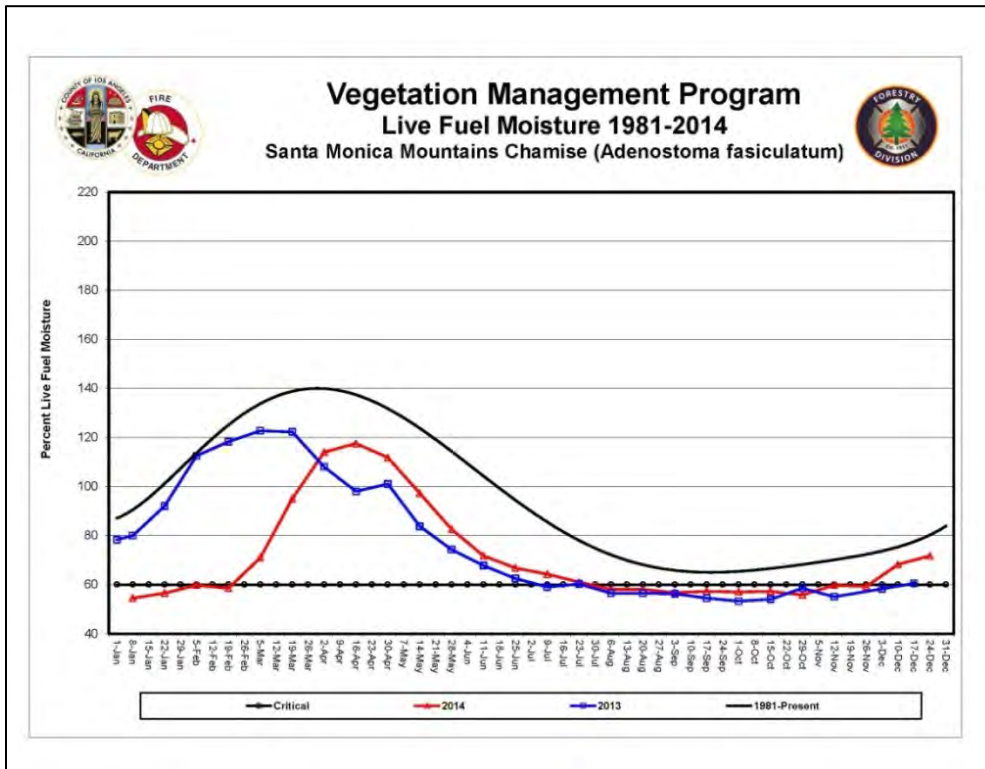
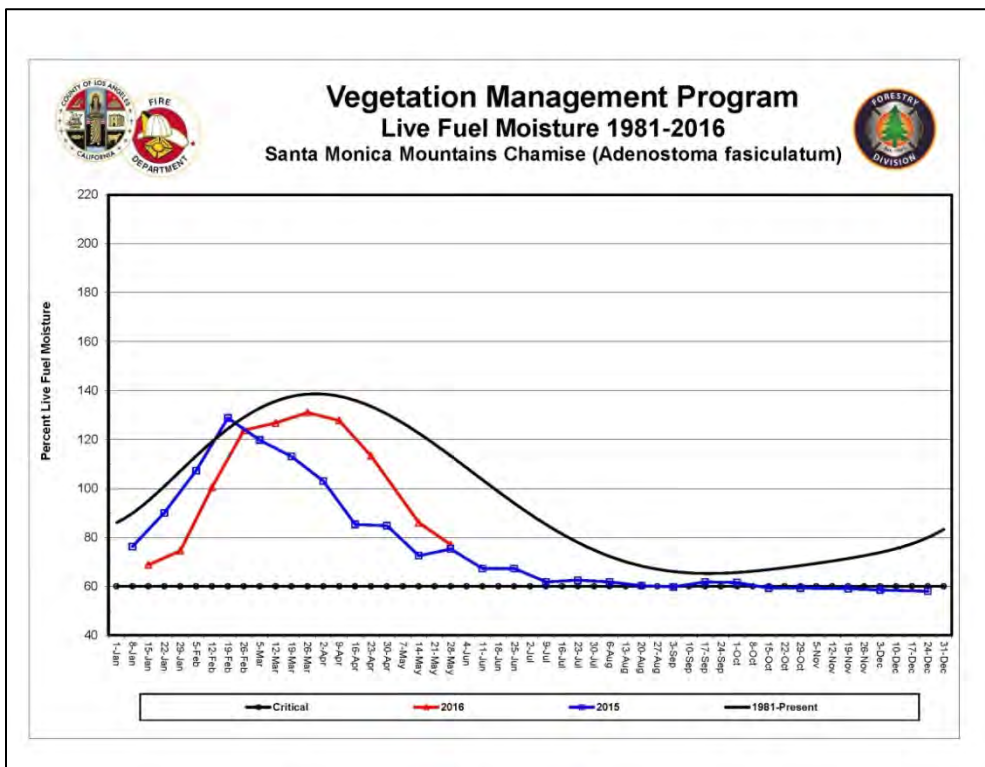


Fig. 3.3.b Los Angeles County Current Live Fuel Moisture 2015 to May 2016



3.5.5 Cooperating Agencies

Santa Monica Mountains National Recreation Area maintains cooperative fire protection agreements with the Los Angeles County Fire Department, Ventura County Fire Department, and the Los Angeles (City) Fire Department (Appendix H). The agreements cover wildland fire suppression only, as the fire agencies have the jurisdictional authority for structure fire suppression on federal property.

Agreements with the cooperators are based on the principle of “*assistance by hire*”. A reciprocal agreement where agencies agree to share equipment for a pre-determined length of time is not operationally feasible, as the National Park Service is unable to reciprocate to a degree which would provide a benefit to our cooperators.

Since all wildland suppression actions conducted on federal property are billable to the National Park Service it is critical that a Duty Officer or Agency Representative respond to all fire incidents on park property. All resources assigned to NPS incidents will be properly ordered and documented in ROSS. It is the responsibility of the responding official to agree to payment for suppression operations with the Incident Commander from the assisting fire cooperator. Payment should only be agreed to for resources used for suppression actions that occurred on federal property or were used in order to directly protect federal property. Resources ordered to suppress fire to protect State Responsibility Areas (SRA) or Local Responsibility Areas (LRA) are not billable.

An agreement concerning billable resources should be completed prior to or immediately after the demobilization of the incident. This agreement will be the document of record when approving payment for fire suppression assistance. It is the responsibility of the FMO to approve all bills submitted for suppression actions by the local cooperating agencies.

Maintaining the currency of agreements with the fire cooperators is the responsibility of the FMO. The Superintendent will approve all changes to the agreements prior to them being forwarded for final signature. The current agreements are scheduled to expire on the following dates:

- Los Angeles City – Currently under revision
- Los Angeles County – Currently under revision
- Ventura County – Current to 2019
- Angeles National Forest – Current to 2016

Direct Protection Areas (DPA)

The NPS has wildland fire protection responsibility for all federally owned lands inside of the congressionally designated boundary of the National Recreation Area. Currently these lands total approximately 23,500 acres. Fire management actions that occur on federal land need to meet direction provided in RM-18, DO-60, Interagency Standards for Fire and Fire Aviation Operations, and all other applicable federal requirements.

SMMNRA fire personnel will fill the position of Incident Commander, if qualified, for fires burning exclusively on federal property inside of the NRA. Where a qualified National Park Service Incident Commander is not available to respond, an incident commander can be ordered from Angeles dispatch, or the Chief Ranger, or other member of the law enforcement staff will respond as an Agency Representative to work with the Incident Commander of the jurisdictional fire agency. This individual must be fully involved in the command structure of the incident in order to protect park resources and make commitment of federal firefighting resources and funds.

3.5.6 Staffing and Action Guide/Step-up Planning

A “Staffing and Action Guide” (Appendix M) has been developed to guide daily fire management actions on the park. The guide establishes pre-approved actions based on the NFDRS staffing classes derived from the Cheeseboro RAWS. The FMO is responsible to assure that the response to wildland fire occurs. As fire danger increases, actions outlined in the Step-up Plan will be taken to enhance prevention and preparedness.

3.5.1 Detection

There are no staffed fire lookouts in the SMMNRA. Fire detection is often accomplished through 911 calls from passers-by. The volunteer group Arson Watch often patrols the mountains in marked vehicles, especially during Santa Ana wind events. The local engine and law enforcement patrols also serve a detection purpose.

All park personnel will report detected fires directly to Angeles EOC providing the dispatcher with an incident size-up based on the standard “*Size-Up Report*” in the Incident Response Pocket Guide.

3.5.7 Communications

Angeles National Forest provides dispatch services to SMMNRA. The EOC is staffed 24 hours per day, 7 days a week, year-round. SMMNRA fire management staff may be contacted after normal business hours via cellular or home telephones.

The park radio system consists of base stations at the park headquarters in Thousand Oaks, the fire and ranger offices at Paramount Ranch, and the ranger office at Rancho Sierra Vista. Radio repeaters are located at Castro Crest (TX164.1625 RX172.5250), Laguna Peak and Franklin Canyon (TX 164.1625 RX 171.7250), and Solstice Canyon (TX 162.2375 RX 169.7875)

Fire ground communications vary between the cooperators. Ventura County Fire operates in a frequency range compatible with the NPS radio system, generally conducting fire ground operations on TX 162.2375 RX 169.7875.

Los Angeles County operates on 400-megahertz frequencies for command and VHF frequencies for tactics. The FMO and the type III engine have handheld radios compatible at 450 to 480 megahertz.

Los Angeles City operates on 800-megahertz radios. No members of the fire management organization have compatible radios. However, Los Angeles City FD adapts to VHF frequencies for Wildland Fire Operations. **Appendix G.1** contains a complete list of local and cooperator radio frequencies.

3.6.7.1 Dispatching

When a fire occurs within the initial action zone of the NRA, the Angeles EOC notifies the on-duty Engine Captain and Duty Officer of a reported vegetation fire. For after-hours incidents the on-call Duty Officer is contacted by the EOC. It is the responsibility of the Duty Officer to evaluate the fire situation and request the activation of the NPS engine module.

SMMNRA only receives dispatch coverage from Angeles dispatch for the Los Angeles County portion of the park. This includes the Los Angeles City jurisdictional area. Through agreement with the EOC, Los Angeles County sends a Mobile Data Terminal (MDT) text message notifying the EOC of a vegetation fire within the initial action zone.

Dispatch for the Ventura County portion of the NRA is limited to monitoring the Ventura Fire dispatch frequency. When a vegetation fire is dispatched by Ventura Fire Command and Control, SMMNRA fire resources notify the Angeles EOC of the incident, provide a geographic location and respond. The EOC will track the status of the fire resources but cannot monitor fire ground operations in

Ventura County. It is the responsibility of the on-scene Duty Officer to maintain a communication link with the EOC in order to provide incident updates and request federal fire resources.

On all fire or all-risk incidents the Duty Officer or agency representative or will report to the Incident Command Post to serve as a Unified Incident Commander (if qualified) or as an Agency Representative. This individual must have delegated decision-making authority to commit park resources and federal funds, as well as provide technical information concerning sensitive resources to the Incident Command staff. The National Park Service representative or Unified Incident Commander will participate fully in the incident command process and be a party to all decisions made involving federal lands and resources.

Incident Commanders should consider all available tactical options, but choose the suppression option with the least potential environmental impacts, as long as firefighter and public safety is not compromised. Tactical options that should be considered include:

- Use natural barriers as fireline, where feasible
- Use cold trail, wet line, or a combination
- Utilize roads and trails as fireline
- Avoid riparian areas and other sensitive habitats
- Use low impact tools

All fires, except prescribed fires, in the Santa Monica Mountains will be actively suppressed. All suppression strategies may be considered in order to maximize the safety of firefighters and the public.

3.5.8 Aircraft Use

[RM-60](#) provides management direction for aviation operations. The Department of the Interior's Office of Aircraft Services (OAS)) provides program oversight to Department of Interior agencies. Direction from OA , RM-60 and the [Interagency Helicopter Operations Guide \(IHOG\)](#) provide guidance on aviation management and operations.

Rotor-wing

Los Angeles County Fire, Los Angeles City Fire and Ventura County Sheriff's Departments manage all aircraft operations on wildfire incidents within their respective jurisdictions. Each department operates according to internal protocols. Under current direction National Park Service personnel may only fly in OAS certified aircraft. Of the three primary fire cooperators, only Ventura County has have OAS certified aircraft as of the date of this document.

Los Angeles City, Los Angeles County and Ventura County field an impressive helicopter program. The fleet is dominated by Bell Helicopter airframes with the City and Los Angeles County featuring Bell 212 and 412's while Ventura County staffs Bell 205's. These helicopters respond to both emergency medical and fire suppression roles. Los Angeles City and Los Angeles County have dedicated fire suppression ships during wildland fire season while Ventura County supports both functions with all available aircraft.

Los Angeles City and Los Angeles County also manage a type one helicopter program operated from Van Nuys airport. The ships are contacted between July 1 and December 1 each year. Contracts have been extended beyond the December 1 contract period based on fire severity. The type one program is managed from Van Nuys airport. These aircraft are not responded on initial report of an incident but need to be requested by a Chief Officer from their department. Refueling operations for the type one helicopters should occur at either Van Nuys or Camarillo airports to minimize refueling issues.

When no fixed wing aircraft are assigned to a fire, the fire departments assign a Helicopter Coordinator for the incident. When federal fixed wing aircraft are assigned to an incident an Air Attack platform must be ordered by the National Park Service Unified Incident Commander to provide overall air space management for the incident.

Designated helispots are located throughout Los Angeles County, Los Angeles City and Ventura County. One permanent helibase is located within the boundaries of the SMMNRA at Camp 8. In Ventura County, the permanent helibase is located at Camarillo Airport.

The primary initial action aviation frequencies for SMMNRA are:

- Air Tactics 3: 169.200 (Fixed Wing)
- Rotor-wing VHF: 135.950
- Air to ground: 170.000

Fixed-wing

Fixed wing aircraft are available for fire suppression operations from the United States Forest Service airtanker based at Fox Field in Lancaster California. Fox Field is the primary refill base for tanker operations, with Goleta and Norton airtanker bases as alternate locations.

All orders for fixed-wing aircraft will go through the Angeles EOC. As per policy, an air attack platform will be dispatched when airtankers are ordered. A lead plane will also be part of any airtanker order. Air attack platforms are available from any of the three primary tanker base locations with a lead plane available from Fox Field.

Los Angeles County Fire Department contracts from Canadair for two CL-215 or CL 415 "Superscoopers" each fall. The aircraft are currently not board certified federal airtankers and are not permitted to drop on federal fires or federal property. The aircraft may work the airspace on Los Angeles County fires, SRA fires and federal fires under Unified Command as long as separation from the federal air tanker fleet is maintained. The Canadair aircraft are stationed at Van Nuys airport and are dispatched directly by the County's Command and Control Center.

Use of Water Resources in Air Operations

Helicopters from the County and City Fire Departments typically fill from fixed water points, such as hydrants or water tenders at a helispot. Recently the County of Los Angeles has added snorkels to their Type 2 helicopter fleet. The use of snorkels to fill the fixed tanks on the ships increases the flexibility of the overall program and aligns Los Angeles County with federal wildland agencies in southern California.

Table 3.5 Type 1 Helicopter Water Points

Water Point	Latitude	Longitude
Encino Reservoir	34.08'49.1"	118.30'20.9"
Las Virgenes Reservoir	34.07'38.8"	118.49'35.4"
Lake Eleanor	34.08'01.4"	118.51'03.7"
Lake Sherwood	34.08'27.7"	118.52'21.3"
Nicholas Flats	34.03'52.5"	118.54'25.8"
Westlake Lake	34.08'08"	118.49'27.1"
Stone Canyon Reservoir	34.06'.30'	118.27'30"
Malibu Lake	34.07'30"	118.45'
Hollywood Reservoir	34.07'30"	118.20'
Chatsworth Reservoir	34.14'	118.37'30"
Century Reservoir	34.06'30"	118.44'.00"
Sliverlake Reservoir	34.06'	118.16'

The Type 1 helicopters operated by the Forest Service, Los Angeles City and Los Angeles County exclusively use snorkels as a fill mechanism. **Table 3.5** identifies potential water points for type one helicopter operations within the Santa Monica Mountains. The pilots have final approval on any suggested water sources based on an evaluation of safety and effectiveness.

Use of salt water from the Pacific Ocean is discouraged within the SMMNRA. While the impacts to flora and fauna from extended utilization of salt water during fire operations is not well documented; the practice should be minimized. The Canadair CL-215/415's are normally the only users of the ocean as a water point. The corrosive nature of salt water on the fixed tanks makes the ocean an undesirable dip-site for rotor-winged aircraft.

4.0 ADAPTIVE MANAGEMENT STRATEGY

4.1 Monitoring

Fire is the most significant natural disturbance that regularly affects the vegetation in the Santa Monica Mountains and fuels management is park's single largest activity that affects park resources.

The primary purposes of monitoring fire program activities are:

- To ensure that any fire management activities that the SMMNRA implements are meeting management objectives,
- To provide guidance to the fire protection agencies within the Santa Monica Mountains,
- To limit possible legal actions against the park
- To ensure that the park collects at least the minimum information necessary to evaluate the SMMNRA fire management program.

The primary purposes of monitoring the effects of wildland fire are:

- To assess immediate effects of fire on park resources and provide recommendations for mitigation if necessary
- To detect trends in vegetation change mediated by fire
- To assess effectiveness of post fire stabilization and rehabilitation activities

Monitoring of the fire program's activities are facilitated by regular all-staff meetings, regular meetings of the FMT, annual review of environmental compliance and the annual FMP update.

Fuels treatments and wildfire effects are monitored using standardized data collection procedures to document basic information, detect trends identify future research needs and to facilitate information exchange between resource protection staff, fire suppression agencies and researchers. The fire monitoring program is carried out in accordance with the [National Park Service Fire Effects Monitoring Program](#) and Inventory and Monitoring Program standards as they apply to the needs of the SMMNRA.

Fire effects monitoring is the responsibility of the MEDN fire ecologist. Previously the park was served by the Point Reyes National Seashore Fire Effects Monitoring Crew, to monitor the approximately 70 established FMH plots on a schedule of one, two, five and ten years after a prescribed fire treatment. The Fire Ecologist at the park is the point-of-contact for the crew and maintains the [data](#) associated with these legacy plots. The legacy plots are now monitored only if they are re-burned in a wildfire or if there is a specific research objective for re-monitoring.

Staffing cuts and travel costs have limited recent support from Point Reyes to a single crew member for limited time periods that are insufficient for necessary wildfire monitoring. The Regional Fire Office, the SAMO Park Management Team, the SAMO Divisions of PSRM and Fire Management, the PORE Fire Management Program and the MEDN I&M program have all contributed to support fire effects monitoring of 2005, 2007 and 2013 wildland fires at SAMO.

In 2016 the park adopted the [Protocol for Terrestrial Vegetation Monitoring in the Mediterranean Coast Network](#) which provides for expanded monitoring in all burned areas for the first three years after a wildfire. At this time, funding for the increased work from fires will continue to be found on an ad hoc, annual basis.

4.2 Fire Research

The SMMNRA is one of three parks in the Mediterranean Coast Network which includes Cabrillo National Monument, Channel Islands National Park, and Santa Monica Mountains National

Recreation Area. These parks are relatively small, isolated, remnant examples of a coastal Mediterranean ecosystem within the larger, urbanized southern California landscape.

All three parks are aggressively managed for suppression response to wildland fires. The parks' coastal environment has a low natural ignition rate and while the vegetation is adapted to survive fire, it does not require a frequent fire return interval to maintain the shrub communities. With the urbanization of southern California, the historic fire regime has changed by increasing the rate of anthropogenic fire ignitions. Consequently, the potential exists to have large areas burn in a single fire event if ignition occurs under extreme climatic conditions when wildfires are not easily controlled. Prescribed fire does not provide any resource benefits in these shrubland community types.

The SMMNRA fire research program priorities are to identify the following:

- the most effective strategies for wildland fire management so that threats to life, property and park resources are reduced at the urban interface;
- to determine how fire history has influenced the modern vegetation pattern;
- to assess how variation in the fire regime is likely to affect the future trajectory of community structure and composition, especially the potential for type conversion due to increased fire frequency;
- to examine the effect of increased fire frequency on the biological diversity of the flora, especially the 70% of the flora considered to be uncommon or rare.

The following specific research topics were identified in the original FMP in 2006. Links to subsequent research are provided as they become available.

Relative Risk Factors to Populations of Obligate Seeders and Obligate Sprouters from Short Fire Return Intervals.

Obligate seeders are known to be at risk of extirpation from a too-short fire return interval. The critical threshold of the minimum fire return interval may vary among the different obligate seeding species and secondary environmental factors (fire intensity, rainfall, duration of drought period, presence of non-natives) may influence threshold values. These data are necessary to determine the limits of resiliency to fire return interval among species. Similarly the effect of repeated short fire return intervals and the relative resiliency among obligately resprouting species needs to be determined. Data on individual species responses will be used to make predictions about the effect of fire frequency on community structure and composition ([Jacobsen et al, 2004](#); [Witter et al, 2007](#))

Fire Effects in Coastal Sage Scrub

Coastal sage scrub species have mixed modes of regeneration following fire. The potential for changes in community composition as the result of differential fire-frequency induced mortality of lignotubers, seedlings or seeds should be investigated.

Vegetation Changes Observed in VTM Maps and VTM Plots in The Santa Monica Mountains.

United States Forest Service Vegetation Type Maps (VTM or Wieslander maps, 1938) exist for the Santa Monica Mountains. cursory visual comparison of the 1938 maps and the 1997 SMMNRA vegetation map show shifts in the composition of chaparral communities and the loss of coastal sage to grassland in Cheeseboro Canyon. More accurate evaluation of the changes in the vegetation boundaries since the VTM data were collected should be determined by digitizing the original VTM maps and overlaying them on our current vegetation maps. In addition to the maps, the original VTM plot data has been acquired for the park. Changes in community composition can be quantified by relocating and resampling the original VTM plots.

Impact of Competition from Invasive Exotics on the Post-Fire Herbaceous Flora

In conjunction with disturbance, non-native, Mediterranean annual weed species are known to have displaced or adversely impacted areas of coastal sage scrub and chaparral habitat. The potential exists for these weedy species to compete with, displace and eliminate the post-fire herbaceous flora that comprises a large part of the biodiversity of the Santa Monica Mountains' shrubland flora. The impact of invasive exotics on the post-fire herb flora should be investigated through a literature review, examination of existing fire monitoring plot data, and through experimental plots.

Wildfire Behavior and Fire Effects in Riparian Woodlands

Although the conventional wisdom is that wildfires "jump over or stop along riparian corridors", fire severity in riparian woodlands can vary from scorched or lightly burned to heavily burned. There are no data on the frequency, severity, and physical fire properties of fires in riparian woodlands in the Santa Monica Mountains. Data on the response of riparian species to fire in relation to fire intensity are also limited.

Floristic and Ecological Analysis of the Santa Monica Mountains Flora

One thousand plant taxa (species, subspecies and varieties) have been identified from the Santa Monica Mountains and Simi Hills (Barry Prigge and Carl Wishner, SMMNRA flora database, 2001). A database of ecological attributes of the individual species that comprise the flora is being compiled to do quantitative floristic and ecological analyses based on characteristics such as growth form, postfire regeneration mode, habitat and distribution. Species attributes of the database include: nativity (native/non-native); abundance (abundant, common, uncommon, rare); life cycle (annual/perennial); post-fire dominant (yes/no); growth form (trees, subshrubs, suffrutescents, herbaceous perennials, geophytes, annuals, succulents, vine); leaf traits (longevity) (evergreen, winter deciduous, summer deciduous); postfire regeneration mode (obligate seeder, facultative seeder, obligate sprouter); seed bank (yes, no-annual germination, mixed); seed germination requirements (none, heat stimulated, smoke stimulated, charate stimulated, scarification, inundation, winter stratification, summer stratification, photoperiod); seed dispersal (self, abiotic, vertebrate, invertebrate); flowering season (winter, spring, summer, fall); growing season (winter, spring, summer, fall); vegetation class (riparian woodland, coastal sage scrub, chaparral, oak woodland, coastal, grassland, savanna, rock outcrops and crevices), geographic distribution (high elevation peaks, throughout, away from coast, immediate coast, coastal slopes, streams, Malibu creek, Malibu creek westward, Point Dume, Point Dume east, Point Dume west, eastern mountains, disturbed, localized); elevation (high, mid, low, throughout); soils (shallow, deep, sandy, dry, moist); substrate (sandstone, volcanic, shale); topography (steep slopes, valley, bottom canyons); aspect (north, south, east, west); exposure (shade, open/sunny).

Burn Severity Mapping

Fire intensity and fire severity are known to exert significant effects on post-fire plant responses and ultimately on composition and structure in coastal sage and chaparral community. Burn severity from post-fire monitoring of individual plots has been shown to reduce total plant cover and seedling density in the first year after fire (Keeley, 1998) and fire intensity has been shown to affect regeneration in coastal sage scrub species that ultimately determines species composition and abundance (O'Leary, 1990). The National Burn Severity Project is currently mapping burn severity and vegetation regrowth after fire (http://edc2.usgs.gov/fsp/severity/fire_main.asp). This program provides the park with the opportunity to acquire landscape level data on fire severity to integrate into the park's fire history database and the new vegetation and fuels map.

Fire and Habitat Fragmentation

The synergistic effect of wildfire on wildlife populations in a fragmented landscape is not understood. Research is needed to determine the effects of fire on wildlife under different fire sizes, shapes and intensities, including wildfire and prescribed fire; the influence of surrounding human-modified

landscapes on post-fire wildlife recovery patterns; and the role and significance of fire as a potential extinction mechanism and edge effect facilitator in fragmented habitats.

Sensitive Species Database

Basic information on sensitive species' response to fire will be collected through literature review and field observation. Fire response information will be incorporated into the sensitive species database as part of the I. & M. program.

Effects of Fire-Derived Sediment Loads on Rocky Intertidal Habitats

Research and monitoring should be undertaken to understand the relationship between fire-derived sediments and rocky intertidal habitat. Are the suspended sediments observed in the water column off the Malibu Coast due to re-suspension of bottom sediments or to increased rates of terrestrial erosion? Is the pulse of sediments from post fire years with high rainfall a contributing factor to the fluctuation in kelp bed distribution and population size?

Fire History Prior to 1925

The park's GIS database begins in 1925. There are limited data on the nature, cause and frequency of fires prior to this date. All potential lines of evidence to extend the fire history should be pursued. Potential sources of data included soil phytoliths of Native American food plants, *Quercus* species tree ring and fire scar data, and wetland sediment cores of charcoal deposits.

Fire Database

The NPS will continue to build on and refine the GIS fire database. Information collected on individual fires and summarized in the database is necessary to answer basic questions about the regional fire regime, fire behavior and effectiveness of suppression operations, plant and animal responses to fire, and the social causes and costs of wildfires in the Santa Monica Mountains.

Optimization of Fuel Modification Zones

Defensible space created by mechanical fuel modification zones is one of the most effective residential fire protection strategies. However, fuel modification also has adverse environmental impacts on habitat and watershed quality. Optimizing the fuel modification zone for both fire protection and habitat conservation would provide for homeowner safety while reducing the cumulative impacts of development in the SMMNRA. Methods to quantify the amount of fuel modification required to protect structures from ignition due to radiant heat or from direct flame impingement are needed. The potential cumulative habitat impacts from fuel modification that exceeds the amount necessary to protect structures (e.g. 100' vs. 200') should be analyzed.

4.3 Climate Change and Future Fire Regimes

There is every reason to believe that fire, combined with drought, represents a potential climate change tipping point for chaparral shrublands, the most abundant vegetation type in California. High fire frequency has been shown to cause the loss of some chaparral species (Jacobsen et al. 2004, Witter et al. 2007) and the loss of shrub cover leads to increases in non-native herbs and grasses (Keeley 2012). Shrub loss from drought combined with fire may be another driver towards type conversion from shrubland to grassland dominated vegetation types. Type conversion reduces biodiversity, reduces carbon storage and increases fire risks. Changes in fuel structure towards more herbaceous vegetation types increases the potential for more ignitions over a longer period of time. Fuel types with a greater herbaceous component have a higher ROS, potentially increasing fire sizes, a risk to both human communities and natural resources. Of greatest concern is that an increase in type converted shrublands will contribute to a negative feedback loop of increased fire and ecosystem degradation known as the grass fire cycle (D'Antonio 2000).

See [Resilience of Mediterranean Shrublands to Drought and Fire](#) a proposal to the Fire Program Reserve Research Fund, funded in FY 2016.

4.4 Annual Program Evaluation and Plan Review Process

The FMO will be responsible for completing an annual fire summary report. The report will contain the number of fires by ignition source, acres burned by fuel type, cost summary, personnel utilized, and fire effects. This report is due annually.

The FMO will coordinate an annual review of the Fire Management Plan. The review will include an assessment of the ongoing implementation of the FMP, a review of proposed changes to the plan and evaluation of significant budgetary changes which could affect the validity of the FMP. The review will be conducted by May 31st and revisions to the FMP will be coordinated and implemented by June 31st of each year.

The Fire Management Team, coordinated by the FMO, will conduct a critique (and/or AAR) of any large fire or any fire where significant resource damage or other significant event occurred. This critique will confirm effective decisions or correct deficiencies, identify new or improved procedures improve or refine the fire management program and determine the cost-effectiveness of a fire operation. The Regional or National Office may choose to be part of any critique or review depending on the complexity of the issues associated with the fire.

Any fire may potentially include events that require the activation of an Interagency Investigation Team. As defined in the *Interagency Standards for Fire and Fire Aviation Operations*, three categories of events require the activation of a team. These events are:

- Entrapment
- Incident with potential and/or non-serious injury
- Wildland fire serious accident

Should one or more of these events occur while an incident is under National Park Service command or during Unified Command involving the National Park Service, an Interagency Investigation Team will be ordered by the park's FMO or their designated representative. Protocols for ordering an investigation team are outlined in the *Interagency Standards for Fire and Fire Aviation Operations*, Chapter 13 and RM18, Chapter 18. It is expected that the Superintendent will brief the incoming team, with the FMO assuming the role of Liaison Officer between the team and the Superintendent after the in-briefing.

APPENDIX A. REFERENCES

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[California Fire Science Consortium](#)

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APPENDIX B. NWCG GLOSSARY

[NWCG Glossary Webpage](#)

APPENDIX C. COMPLIANCE FOR FMP

C.1. Consultation

This plan was developed in coordination with the following state or federal agencies:

- US Department of the Interior, National Park Service, Pacific West Region
- Santa Monica Mountains NRA
 - Division of Planning, Science and Resource Management
 - Division of Visitor and Resource Protection
 - Division of Maintenance
- US Fish and Wildlife Service
- US Department of Commerce, National Marine Fisheries Service
- US Environmental Protection Agency
- Santa Ynez Band of Mission Indians
- California Coastal Commission
- California Department of Parks & Recreation
- California Department of Forestry & Fire Protection
- Santa Monica Mountains Conservancy/Mountains Recreation & Conservation Authority
- Los Angeles Fire Department
- Los Angeles County Fire Department
- Ventura County Fire Department
- Resource Conservation District of the Santa Monica Mountains
- Mountains Restoration Trust
- South Coast Air Quality Management District
- Ventura County Air Pollution Control District

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- | | |
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Public Consultation

Suppression agencies, resource agencies, and academics were invited to a June 2001 fire management workshop to strategize how to accomplish the goals of the fire management plan. From this workshop, alternatives for the Environmental Impact Statement were developed. In April 2002, four public meetings were held in Beverly Hills, Calabasas, Malibu, and Thousand Oaks to present the four potential alternatives. Additional meetings were held in June 2002 in Thousand Oaks targeting land and fire management agencies. Once the draft EIS was released, a sixty-day comment period was initiated, and the public and agencies were invited to submit their comments. In August, 2004, four public meetings were held in Los Angeles, Calabasas, Malibu and Thousand Oaks to provide more information to the public and encourage their participation. Their comments have been incorporated into the Final EIS. The Record of Decision for the FEIS was signed on February 16, 2006 by the Regional Director, Pacific West Region.

C.3. NEPA

[Record of Decision Final Environmental Impact Statement for a Fire Management Plan, February 16, 2006](#)

Decision Document (Memo-to-File, CE, FONSI) for FMP

C.4. NHPA (Section 106)

Response from SHPO for FMP

Programmatic Agreement if applicable.

C.5. ESA (Section 7)

Response from FWS for FMP; document

Informal consultation

FWS-issued Biological Opinion for formal consultation

C.5. PEPC



[Park Home](#)

Santa Monica Mountains NRA (SAMO)

[Create Project](#)

Region: Pacific West
State(s): California

Create project from existing PEPC ID

Enter PEPC ID

Go

Search Projects

Project ID:

Project Type: -- Fire - Mechanical Fuel Reduction

NEPA Type: All

Target Start From:

Target Start To:

Search

Create Project from RPRS App #

Enter App #

Go

Create Project from PMIS #

Enter PMIS #

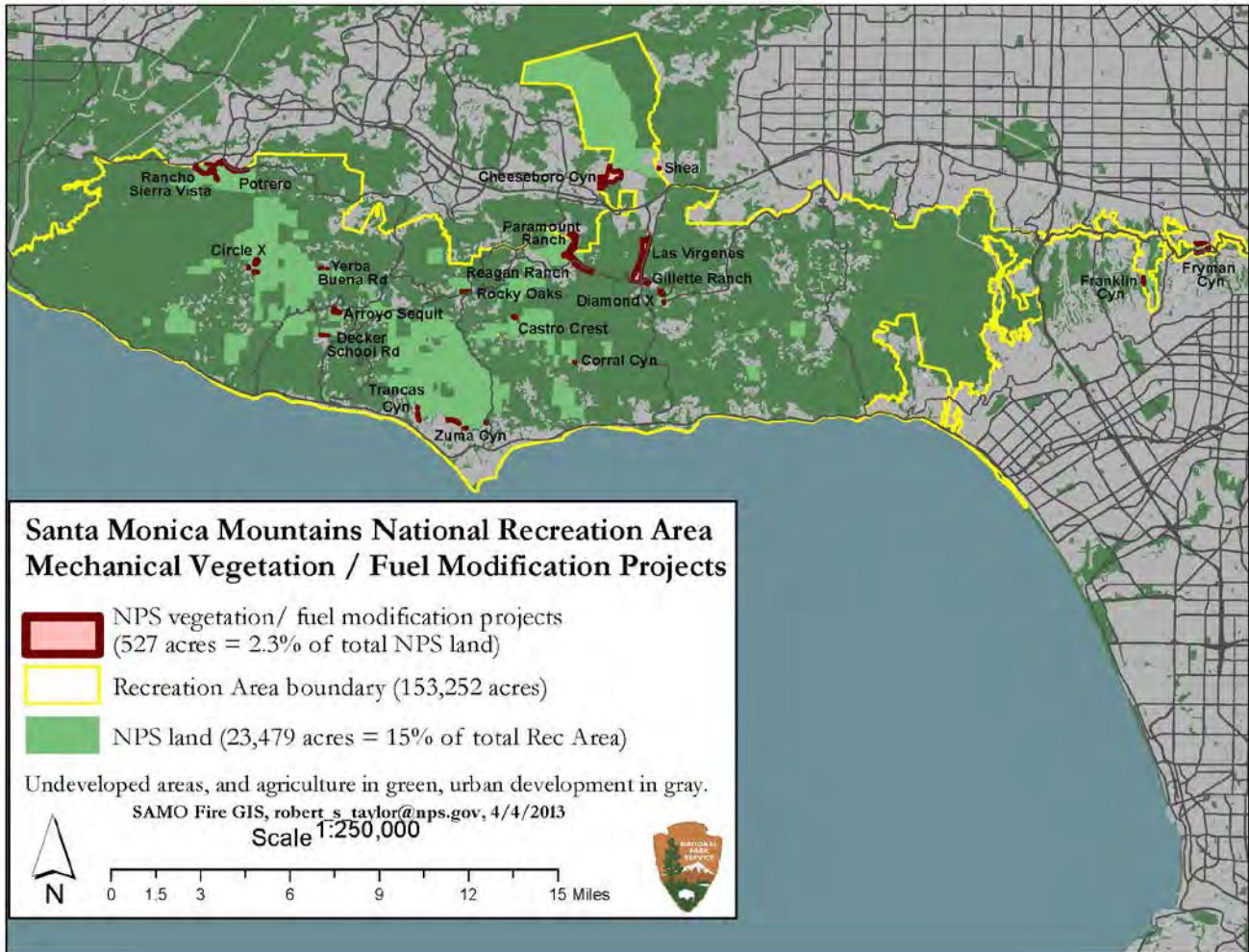
Go

ID	Title	Project Type	NEPA Type	Target Start
50216	Monte Nido Fire Safe Project	Fire - Mechanical Fuel Reduction		11/01/2014
43354	Remove Invasive Eucalyptus Trees and Plants from Dadd Property and Peter Strauss Ranch	Fire - Mechanical Fuel Reduction	CE	09/01/2012
39398	Corral Canyon Fire Safe Alliance: The Phoenix Project	Fire - Mechanical Fuel Reduction	CE	12/12/2011
35148	2011 Programmatic CE: SAMO Annual Defensible Space	Fire - Mechanical Fuel Reduction		04/01/2011
35149	2011 Programmatic CE: SAMO Annual Strategic Fuel Modification	Fire - Mechanical Fuel Reduction		04/01/2011
23588	Additional Defensible Space SAMO 2008	Fire - Mechanical Fuel Reduction		04/01/2009
24086	SAMO Annual Strategic Fuel Modification	Fire - Mechanical Fuel Reduction	CE	03/15/2009
23579	West Hillside Drive Community Wildfire Protection Plan (CWPP)	Fire - Mechanical Fuel Reduction	CE	01/01/2009
18090	Cheeseboro Strategic Fuel Reduction	Fire - Mechanical Fuel Reduction		11/01/2008
18091	Cheeseboro Strategic Fuel Reduction	Fire - Mechanical Fuel Reduction		11/01/2008
18092	Cheeseboro Strategic Fuel Reduction	Fire - Mechanical Fuel Reduction	CE	11/01/2008
18109	Reagan Ranch Strategic Fuel Reduction	Fire - Mechanical Fuel Reduction	CE	10/01/2008
18110	Las Virgenes Creek Strategic Fuel Reduction	Fire - Mechanical Fuel Reduction	CE	10/01/2008
18112	Potrero Strategic Fuel Reduction	Fire - Mechanical Fuel Reduction	CE	10/01/2008
22583	Remove Exotic Eucalyptus at Peter Strauss Ranch	Fire - Mechanical Fuel Reduction	CE	06/30/2008
14873	Mountain Recreation & Conservation Authority Weed Abatement and Defensible Space	Fire - Mechanical Fuel Reduction	CE	12/01/2007
17783	Additional Defensible Space (SAMO)	Fire - Mechanical Fuel Reduction		11/01/2007
14893	Paramount Strategic Fuel Treatment	Fire - Mechanical Fuel Reduction	CE	05/01/2007

1 - 18 of 18

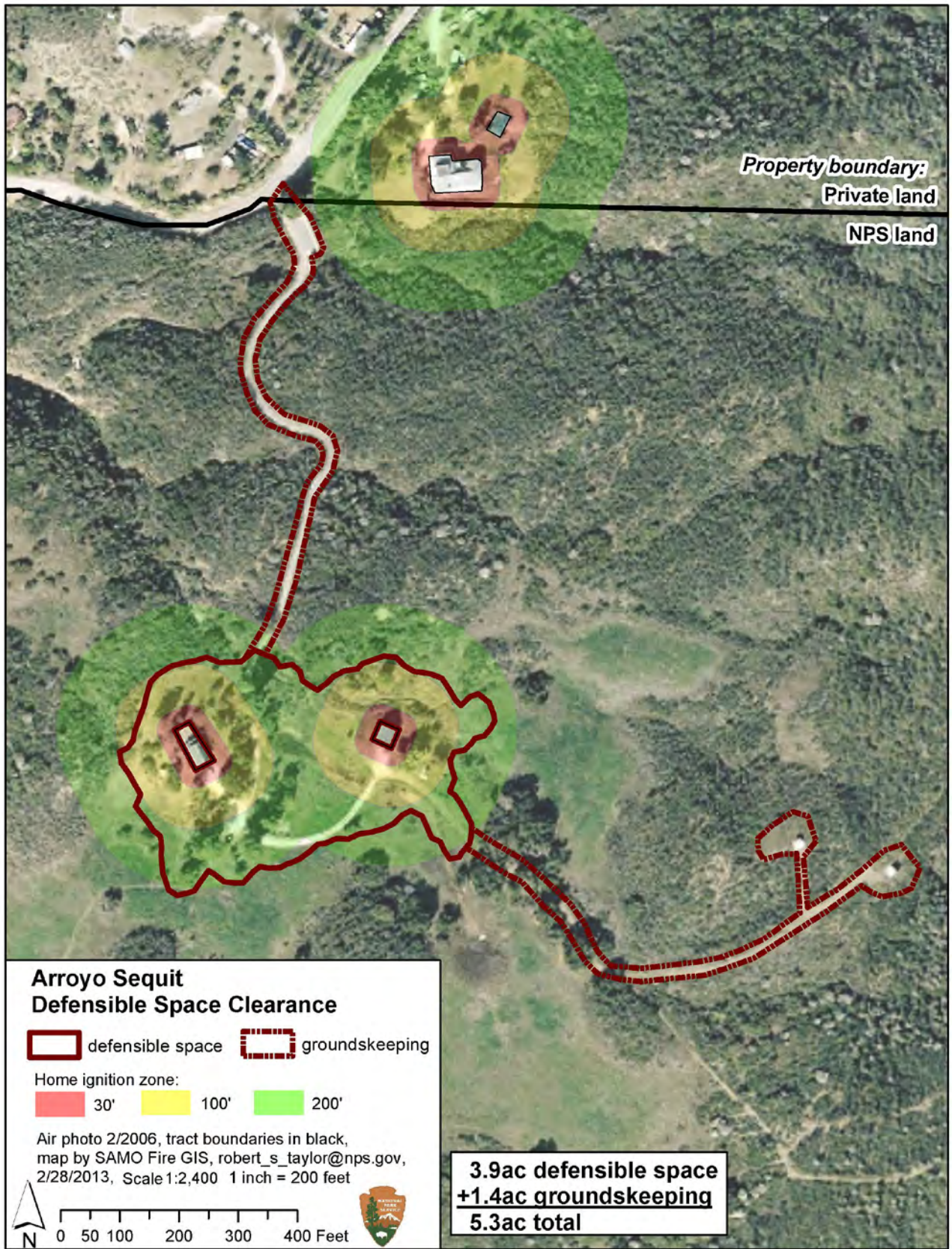
APPENDIX D. MULTI-YEAR FUELS TREATMENT PLAN WITH MAPS

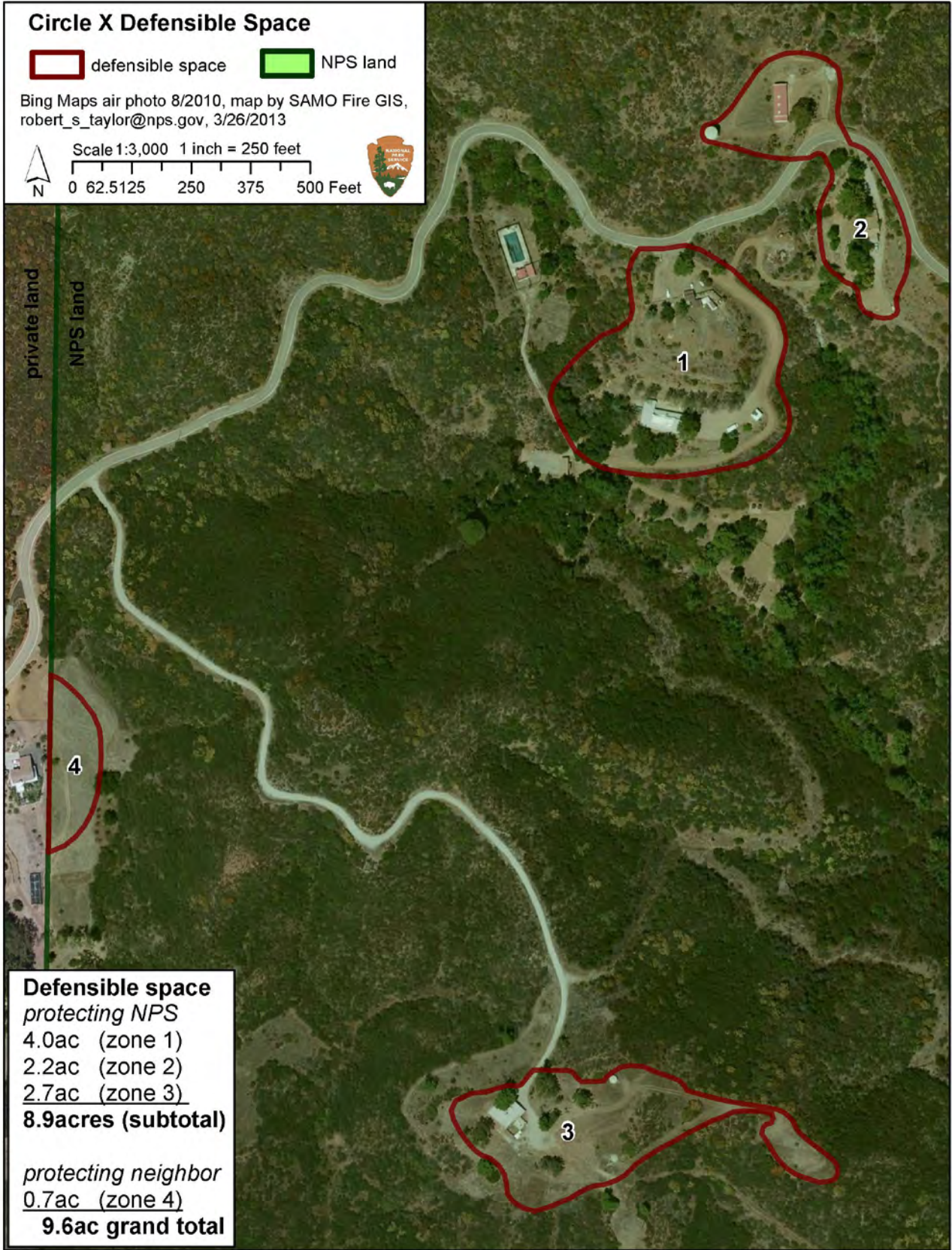
D.1 Overview

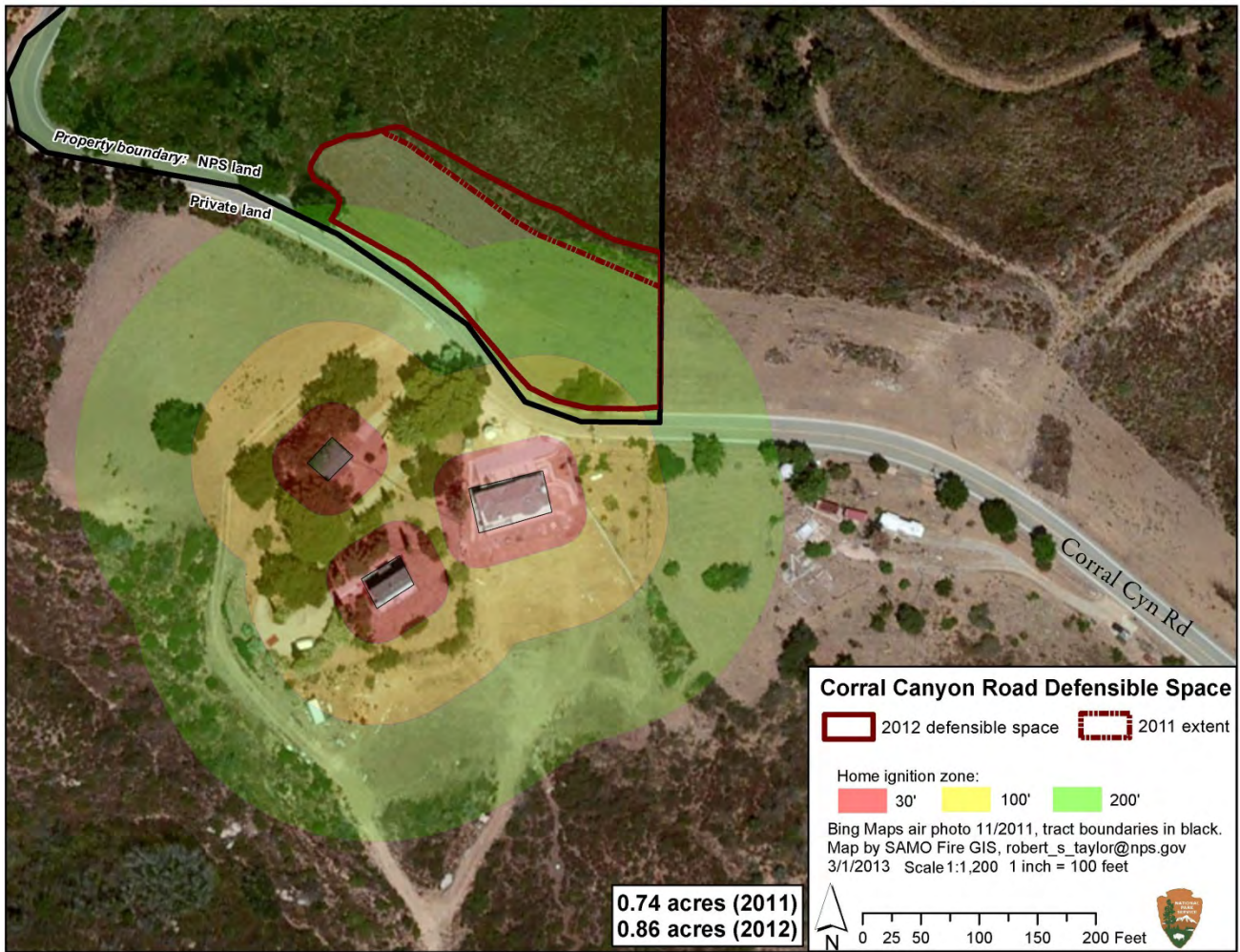


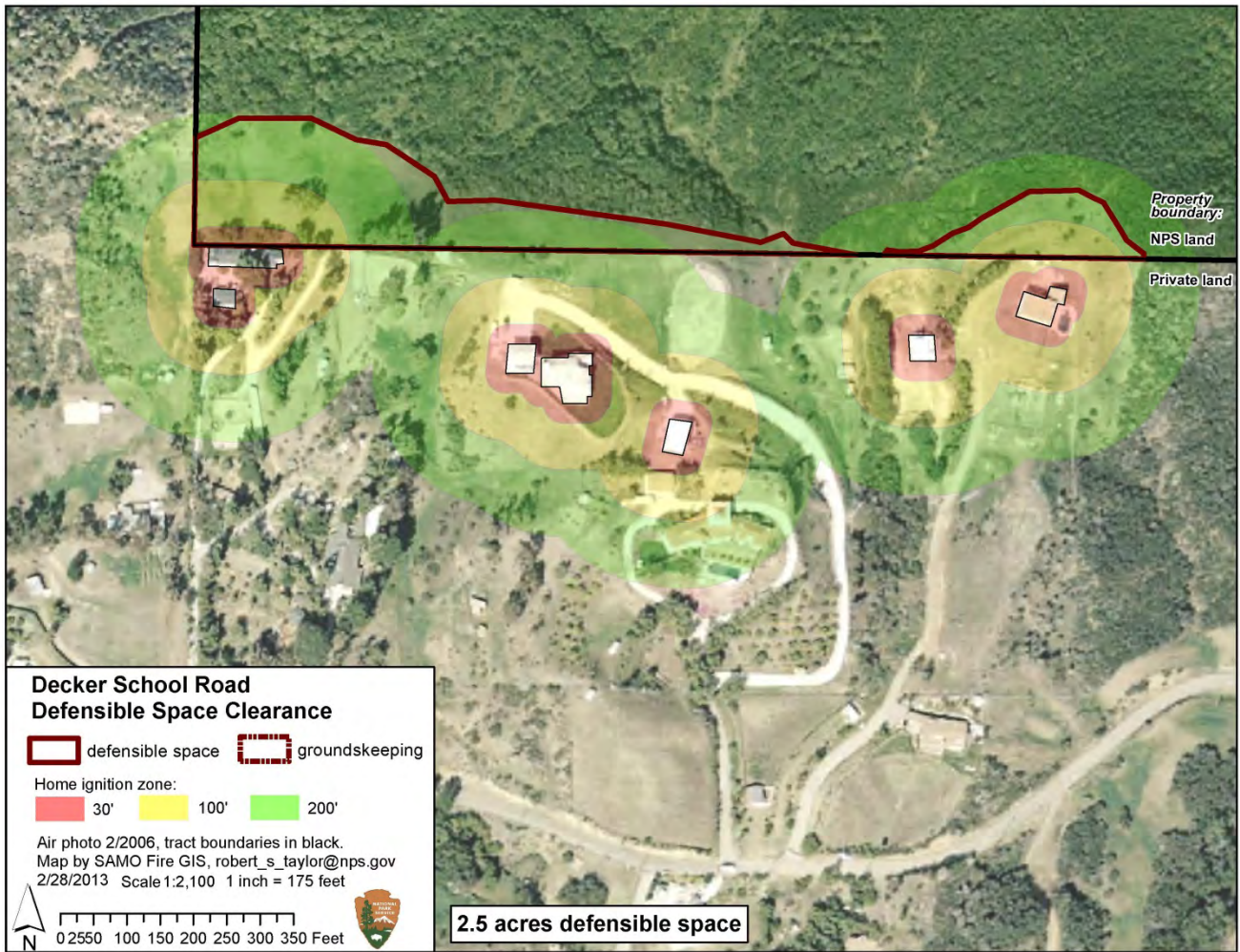
D.2 Defensible Space

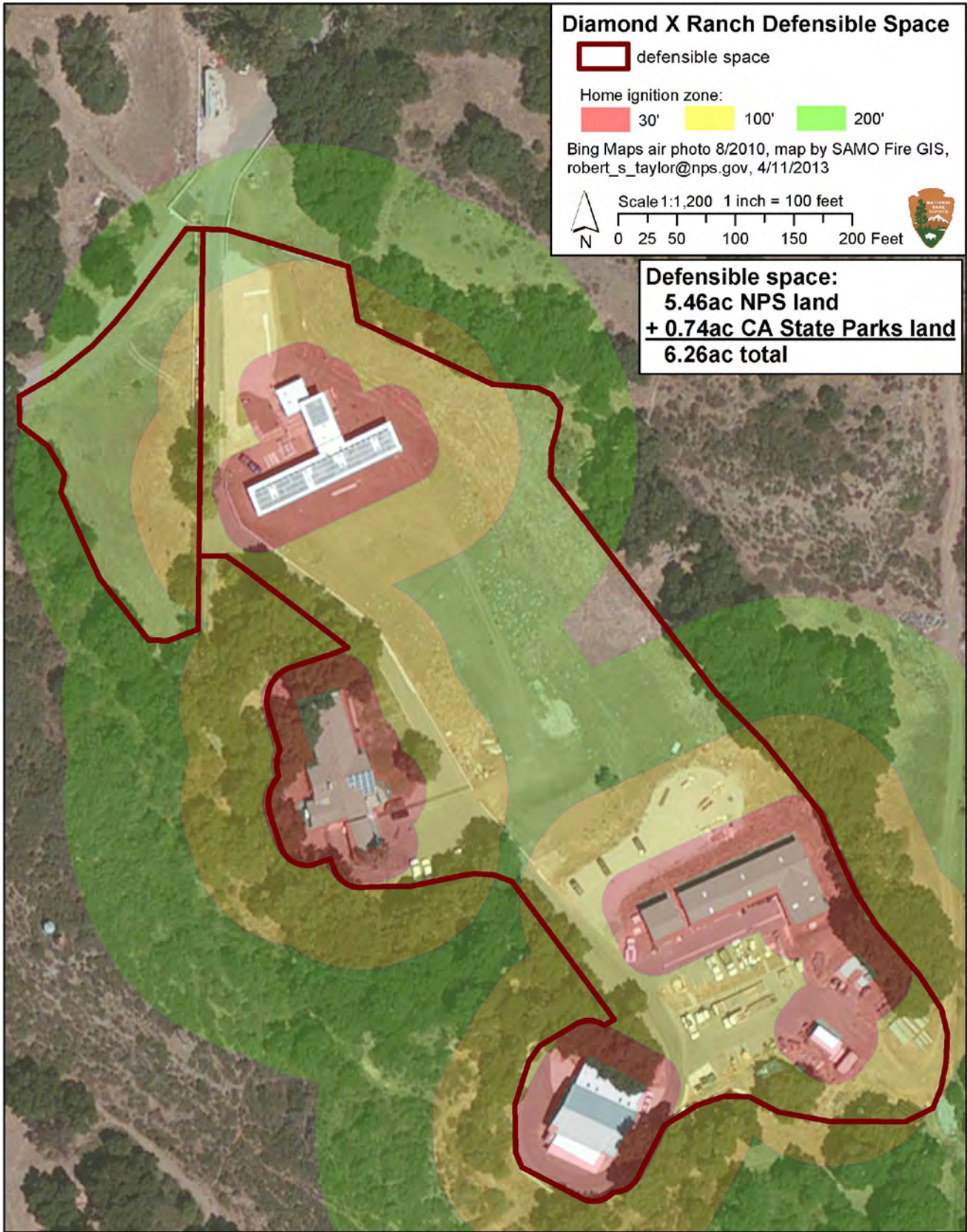
Name of Unit	Acres	Objectives
Arroyo Sequit	4.0	hazard fuel management for park facilities (annual)
Castro Crest	2.1	hazard fuel management for radio repeater station (annual)
Cheeseboro Cyn	10.2	hazard fuel management for neighboring homes (annual)
Circle X	6.9	hazard fuel management for park facilities (annual)
Corral Cyn Rd	0.9	hazard fuel management for one neighboring home (annual)
Decker School Road	2.5	hazard fuel management for neighboring homes (annual)
Diamond X	6.3	hazard fuel management for park facilities (annual)
Franklin Cyn	6.9	hazard fuel management for neighboring homes (annual)
Fryman Cyn	8.0	hazard fuel management for neighboring homes (annual)
King Gillette	3.4	hazard fuel management for park facilities (annual)
King Gillette East	0.5	hazard fuel management for neighboring homes (annual)
Paramount Ranch NE	1.3	hazard fuel management for neighboring homes (annual)
Paramount Ranch SE	8.0	hazard fuel management for park facilities (annual)
Rancho Sierra Vista	11.8	hazard fuel management for park facilities (annual)
Rancho Sierra Vista roadside groundskeeping	3.0	hazard fuel management, reducing ignition potential of cars
Rocky Oaks (incl. La Kretz Field Station)	4.4	hazard fuel management for park facilities (annual)
Rocky Oaks parking area groundskeeping	0.2	hazard fuel management, reduce ignition potential of cars
Shea Homes	0.3	hazard fuel management for neighboring commercial property (annual)
Solstice Cyn roadside groundskeeping	0.9	hazard fuel management, reduce ignition potential of cars
Trancas Cyn	4.3	hazard fuel management for neighboring homes (annual)
Yerba Buena Rd	0.2	hazard fuel management for neighboring homes (annual)
Zuma Cyn	8.1	hazard fuel management for neighboring homes (annual)
Total defensible space	94.2	

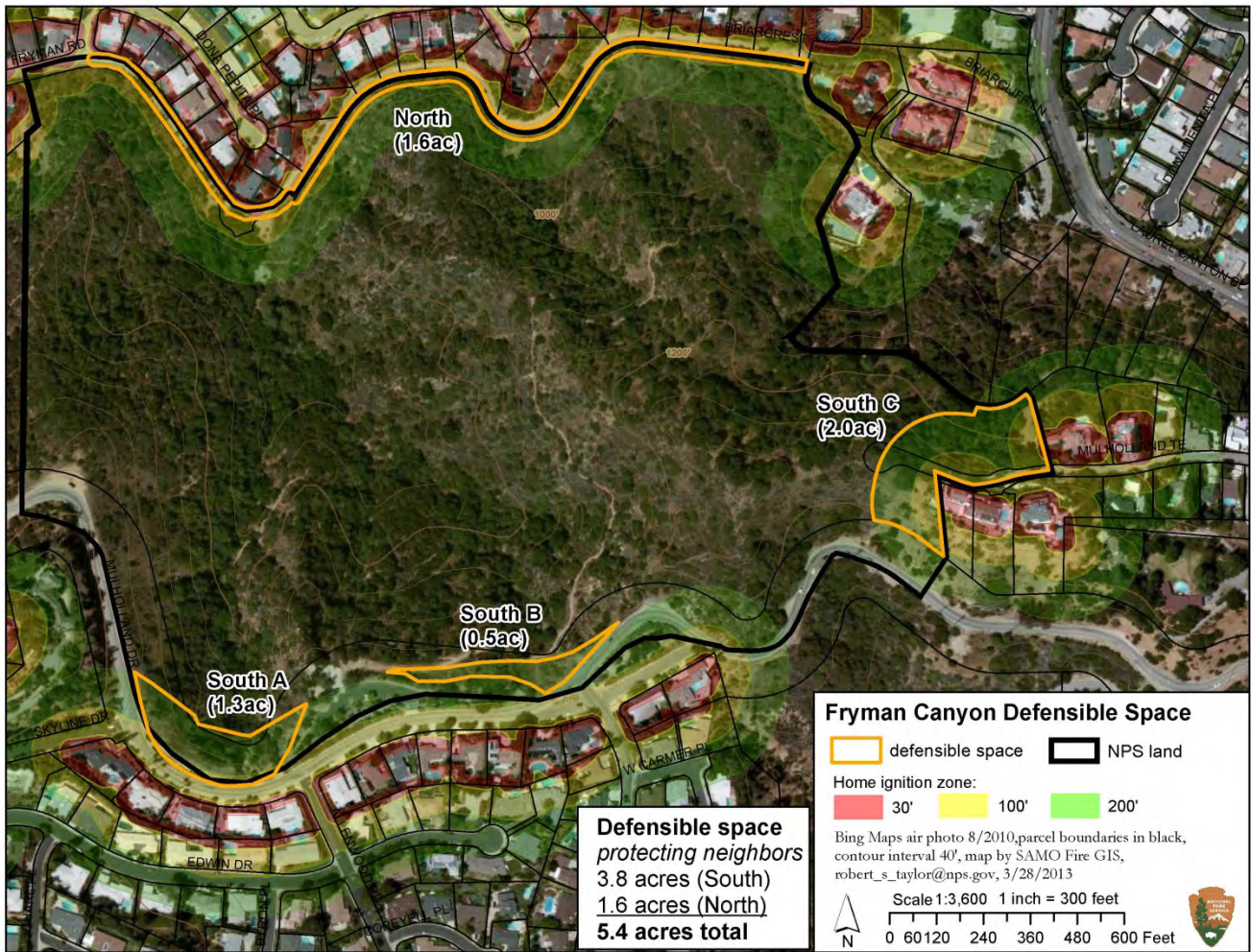






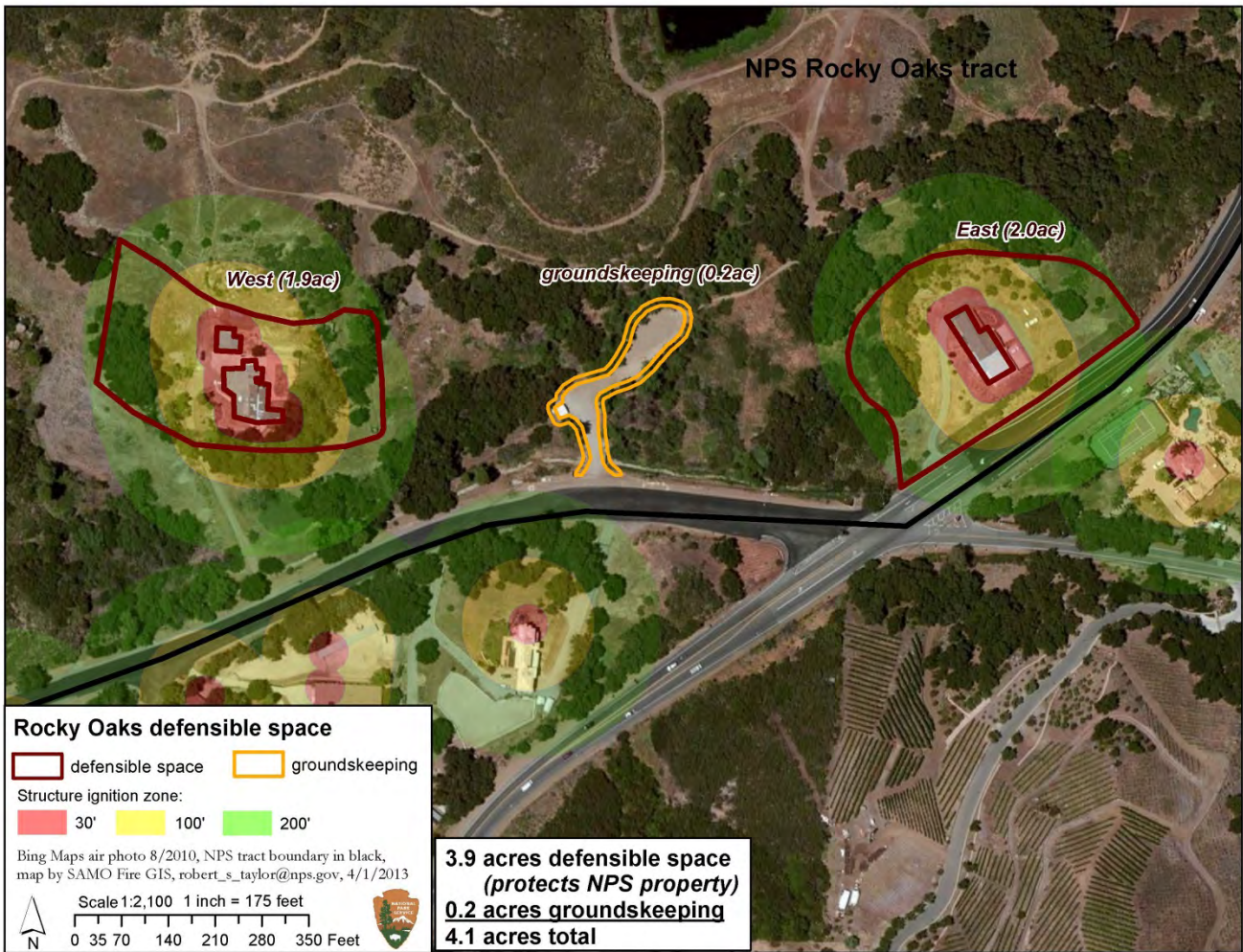


















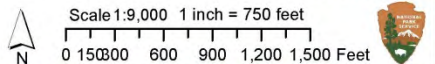
Potrero Strategic Project Area and RSV defensible space

	defensible space		Structure ignition zone: 30'
	groundskeeping		100'
	strategic fuel mod		200'

Bing Maps air photo 8/2010, parcel boundaries in black, map by SAMO Fire GIS, robert_s_taylor@nps.gov, 3/31/2013

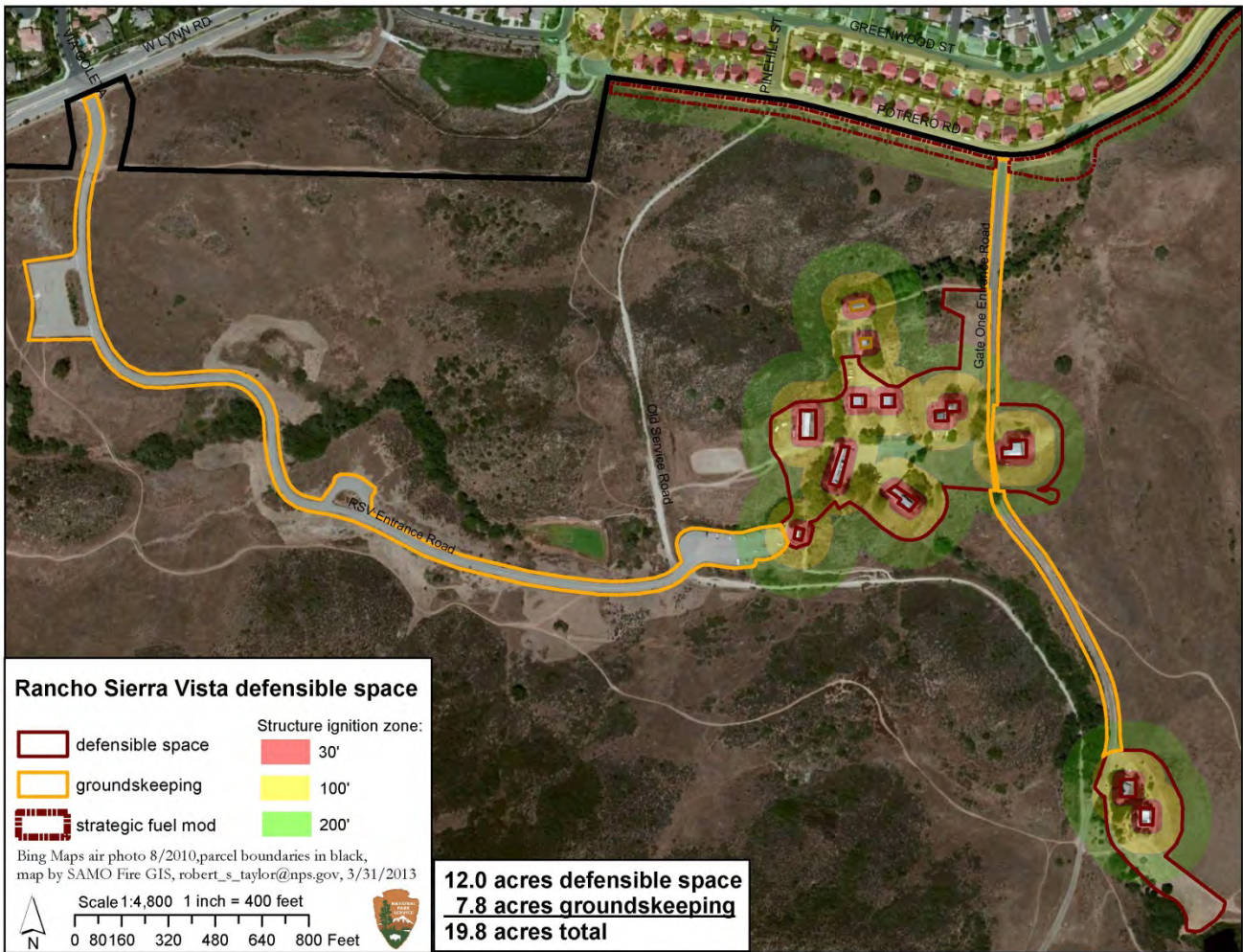
Scale 1:9,000 1 inch = 750 feet

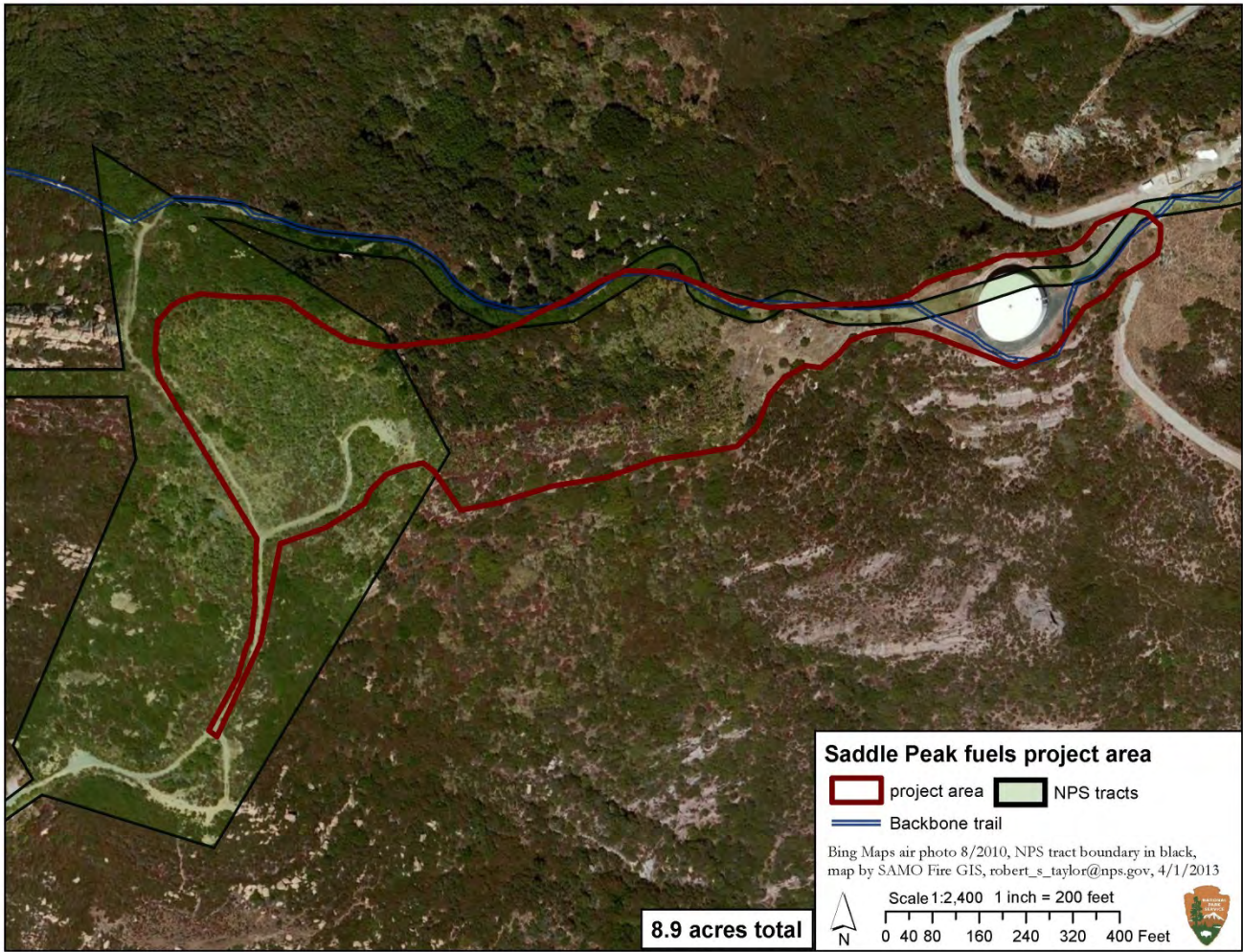
0 150 300 600 900 1,200 1,500 Feet



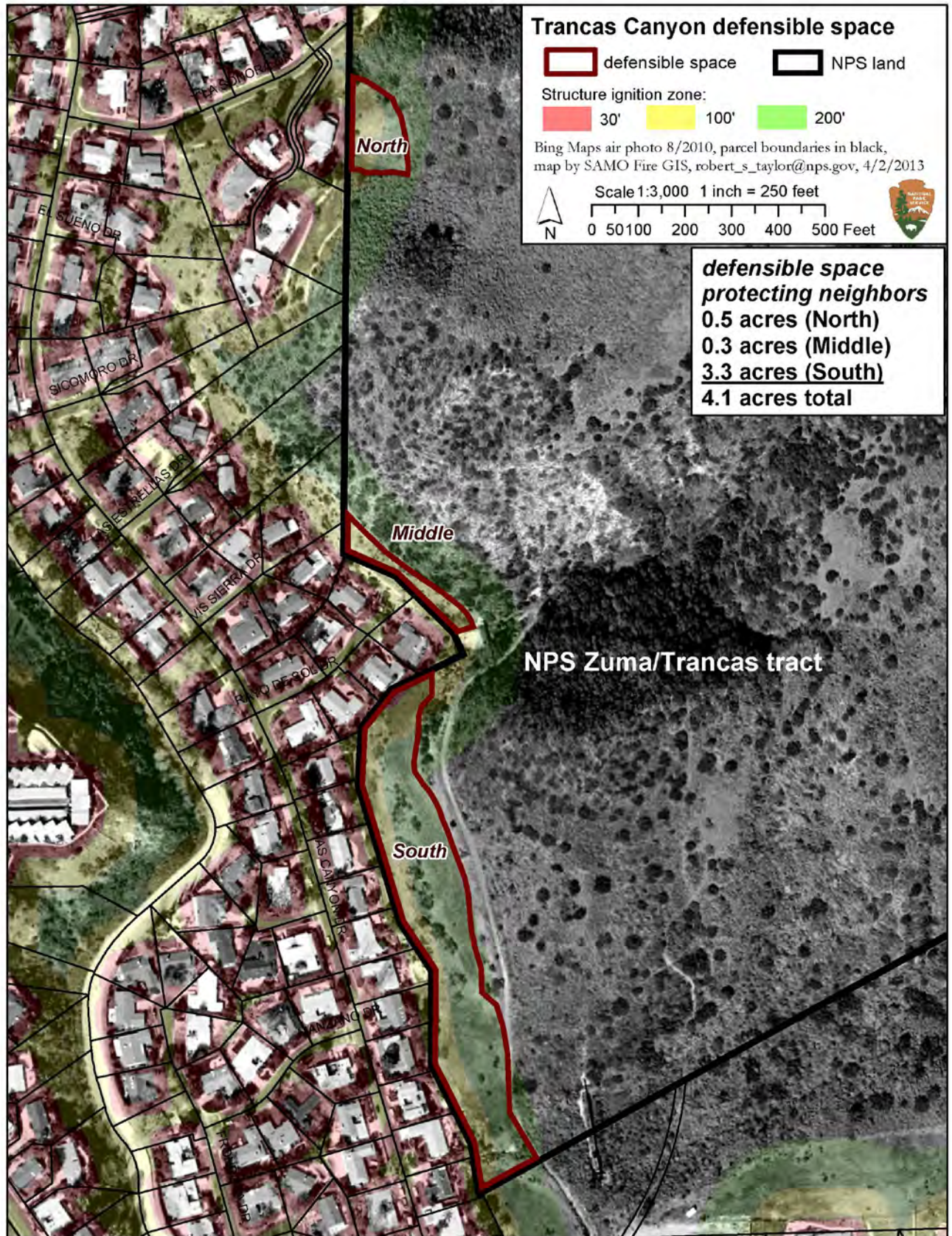
12.0 acres defensible space
7.8 acres groundskeeping
30.0 acres strategic project area
49.8 acres total

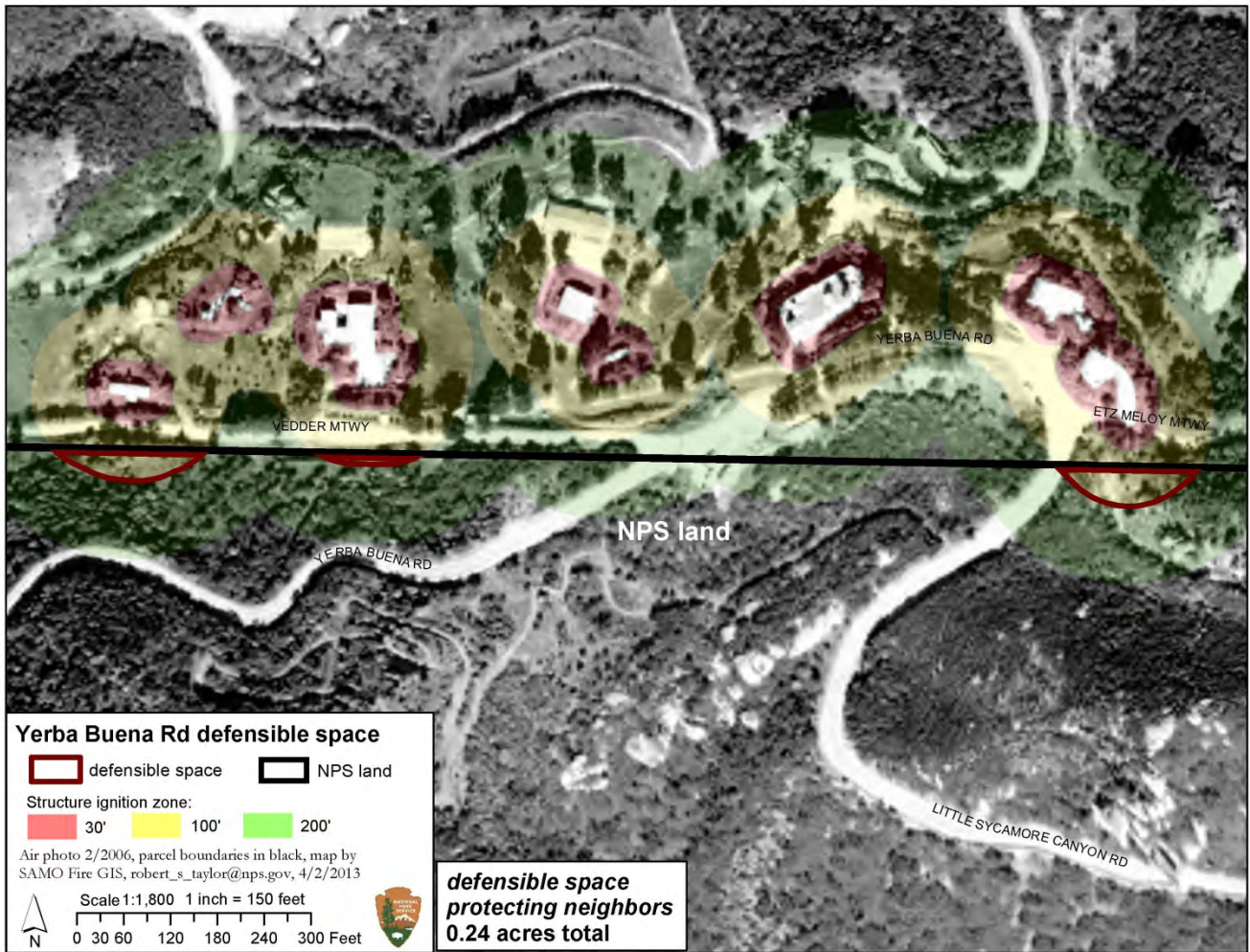












**Zuma Northeast
defensible space project**

defensible space
 NPS land

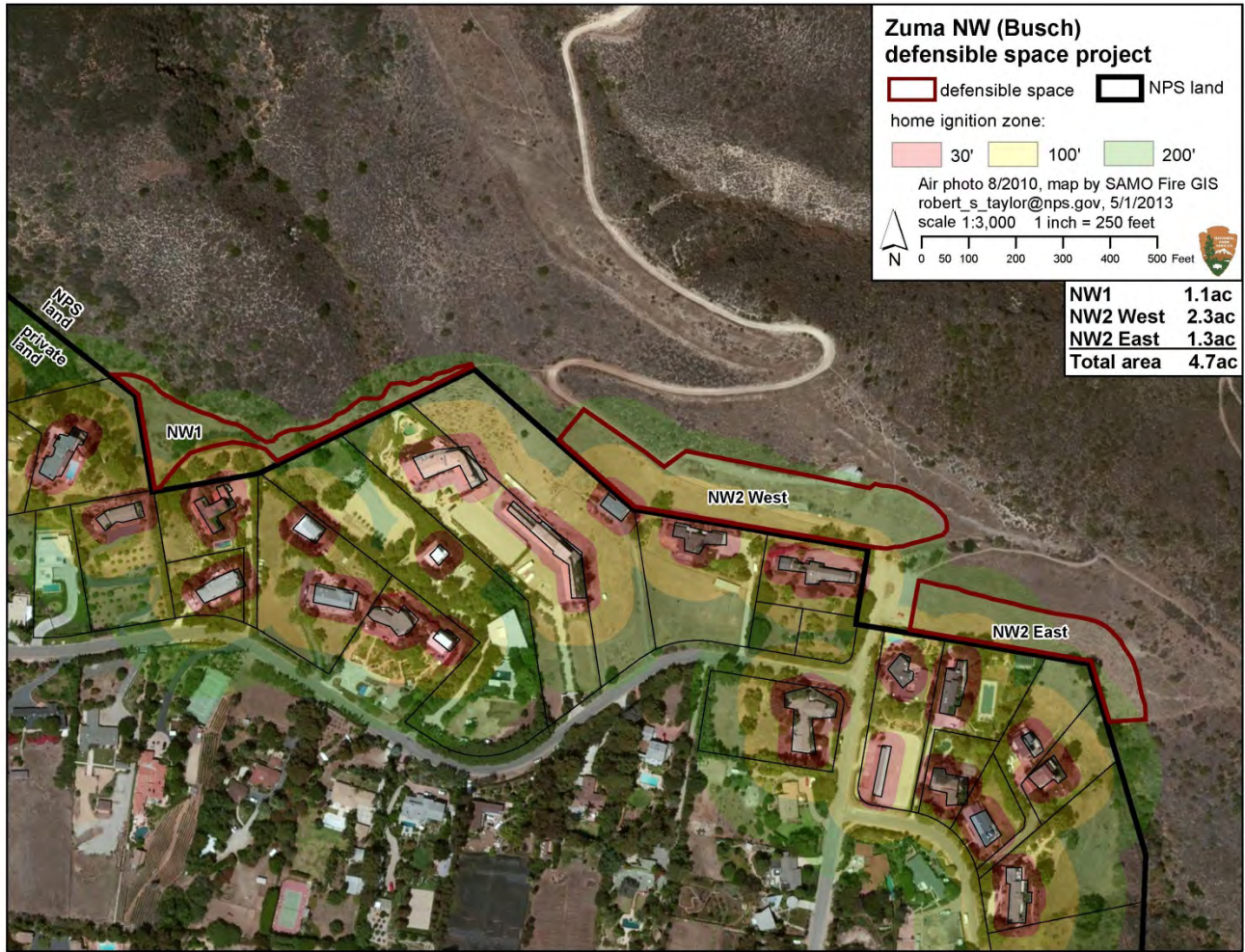
home ignition zone:

30'
 100'
 200'

Air photo 8/2010, map by SAMO Fire GIS
 robert_s_taylor@nps.gov, 5/1/2013
 scale 1:900 1 inch = 75 feet

Zuma NE = 1.4ac

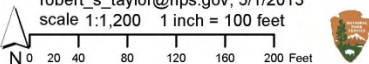




**Zuma NW (Bonsall) South
defensible space project**

defensible space
 NPS land
 home ignition zone:
 30'
 100'
 200'

Air photo 8/2010, map by SAMO Fire GIS
 robert_s_taylor@nps.gov, 5/1/2013
 scale 1:1,200 1 inch = 100 feet

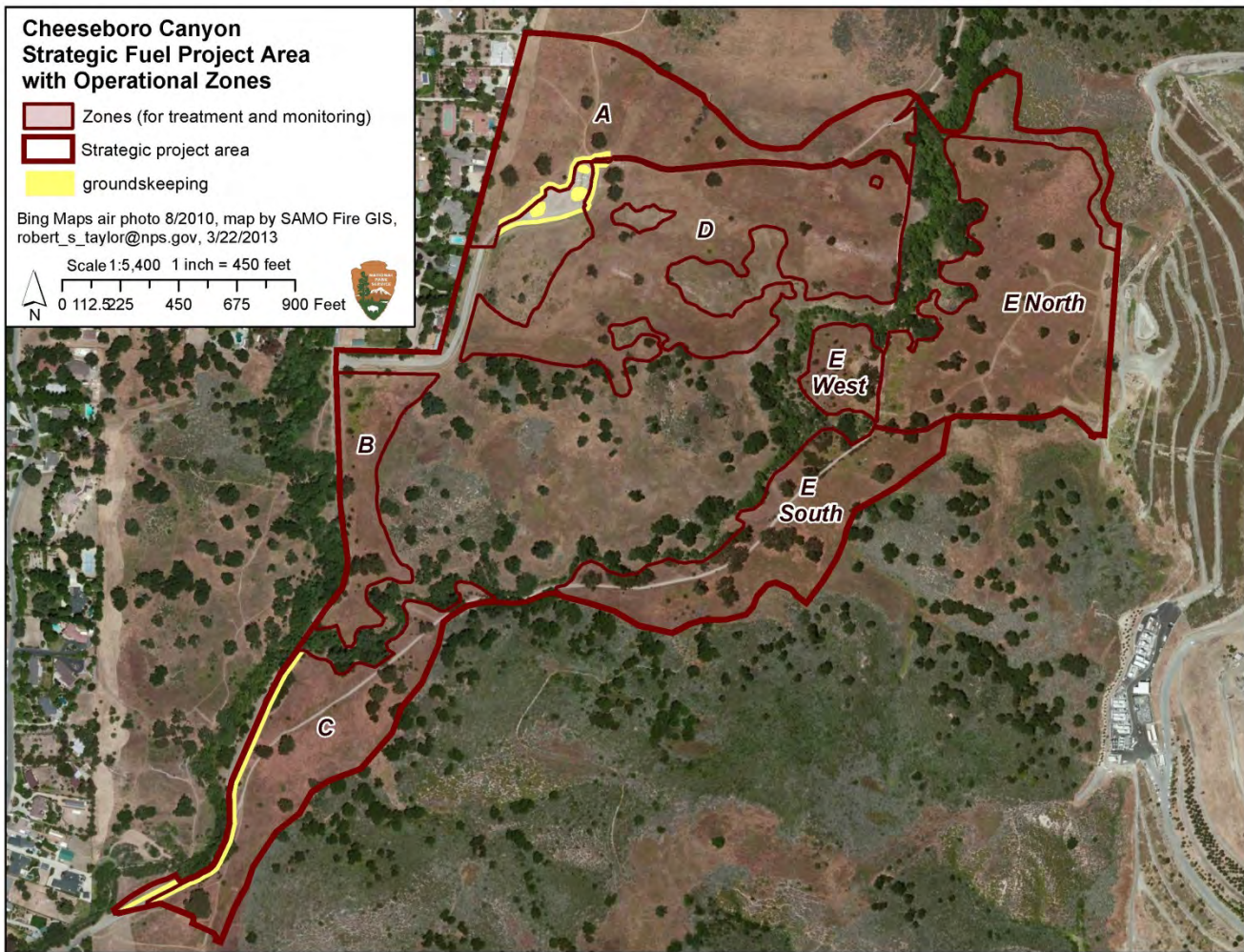


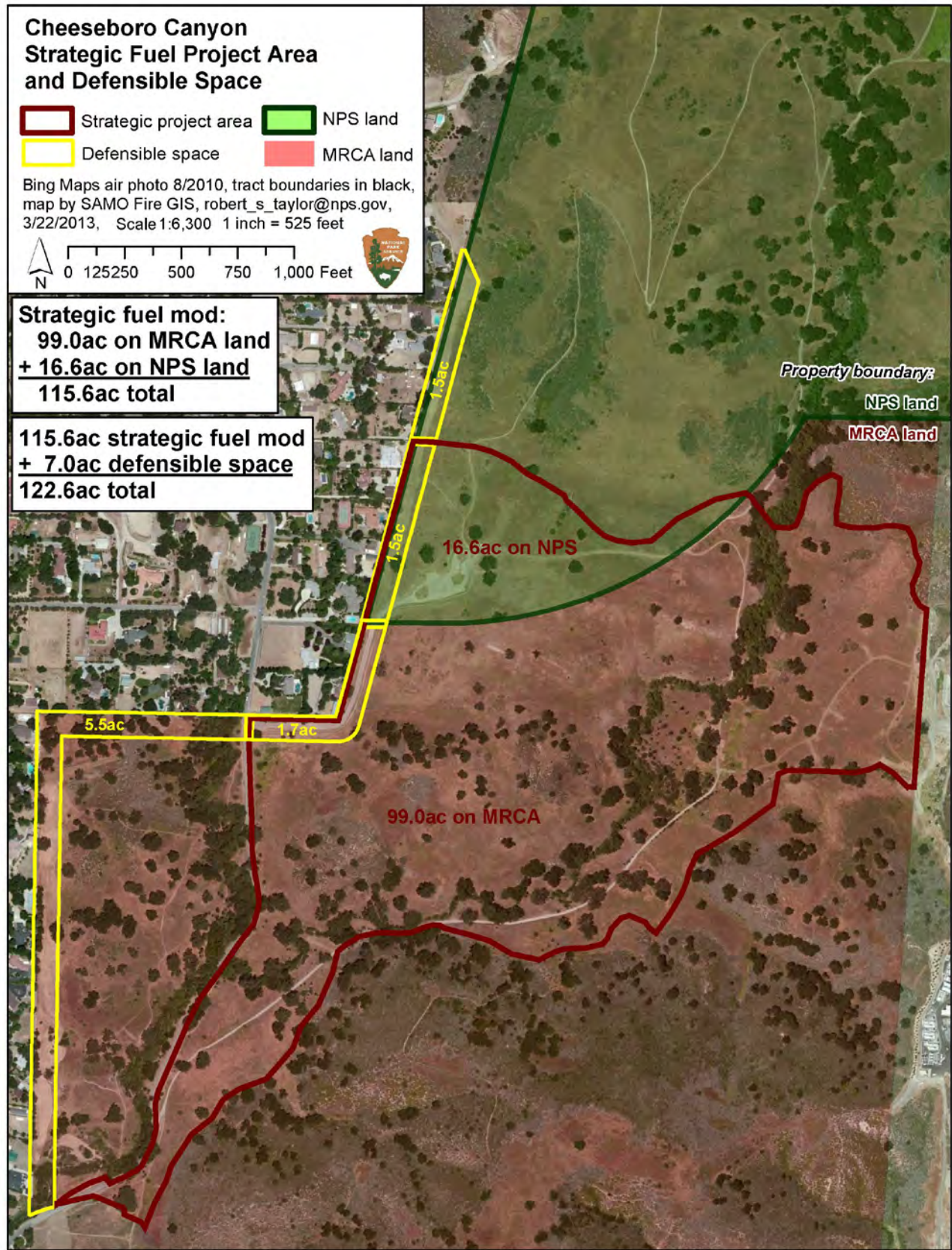
South = 1.7ac






D.3 Strategic Fuel Modification

Name of Unit	Acres	Objectives
Cheeseboro Cyn (NPS & MRCA land)	35.5	Create opportunities to limit fire spread
King Gillette (NPS & MRCA land)	76.5	Create opportunities to catch fire starts, limit fire spread
Las Virgenes (CA State Parks land)	70.7	Create opportunities to catch fire starts, limit fire spread, protect evacuation route
Potrero (NPS land)	37.7	Create opportunities to catch fire starts, limit fire spread
Reagan Ranch (CA State Parks land)	42.0	Create opportunities to catch fire starts, limit fire spread
Subtotal strategic treatments	262.5	

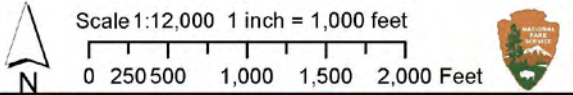




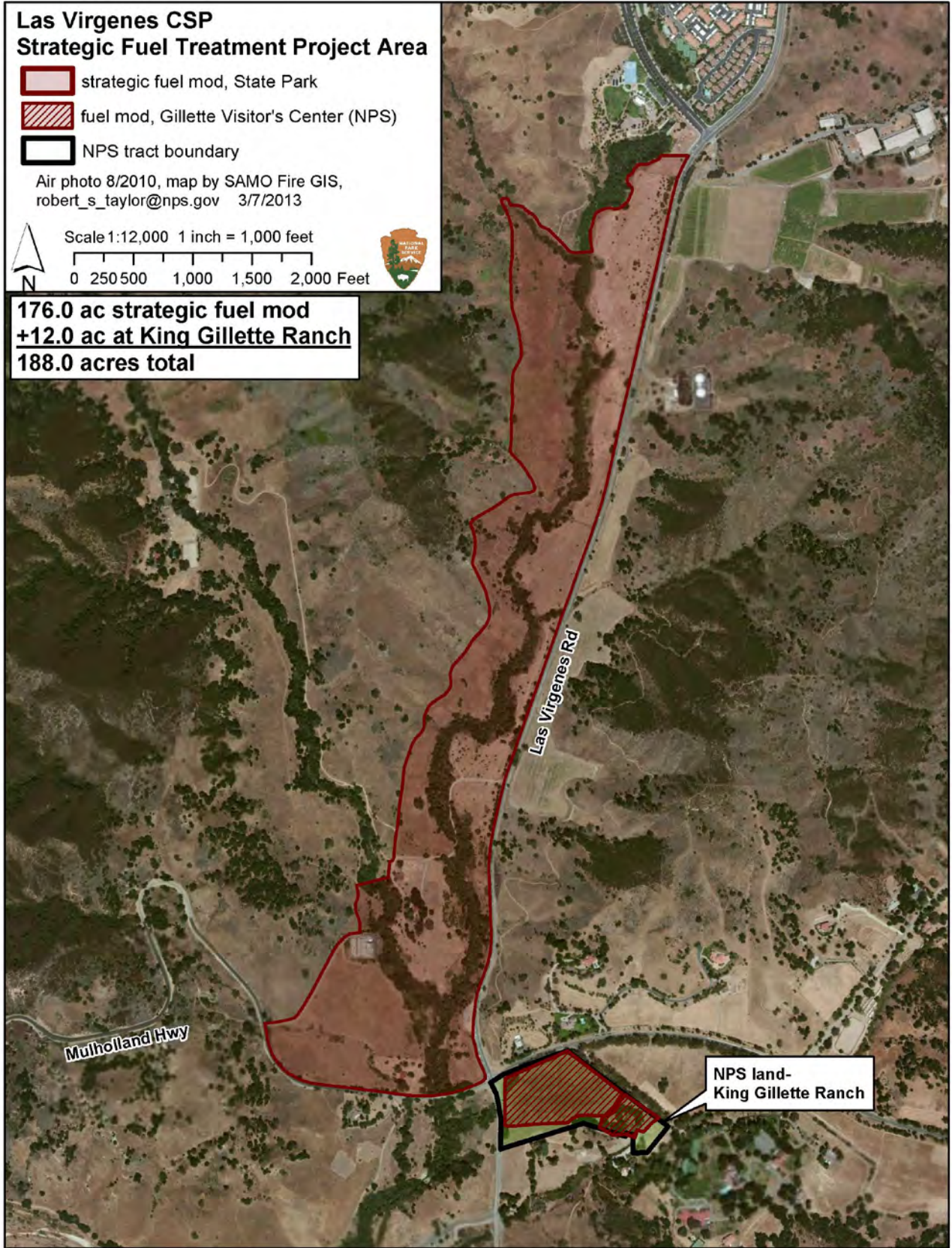
**Las Virgenes CSP
Strategic Fuel Treatment Project Area**

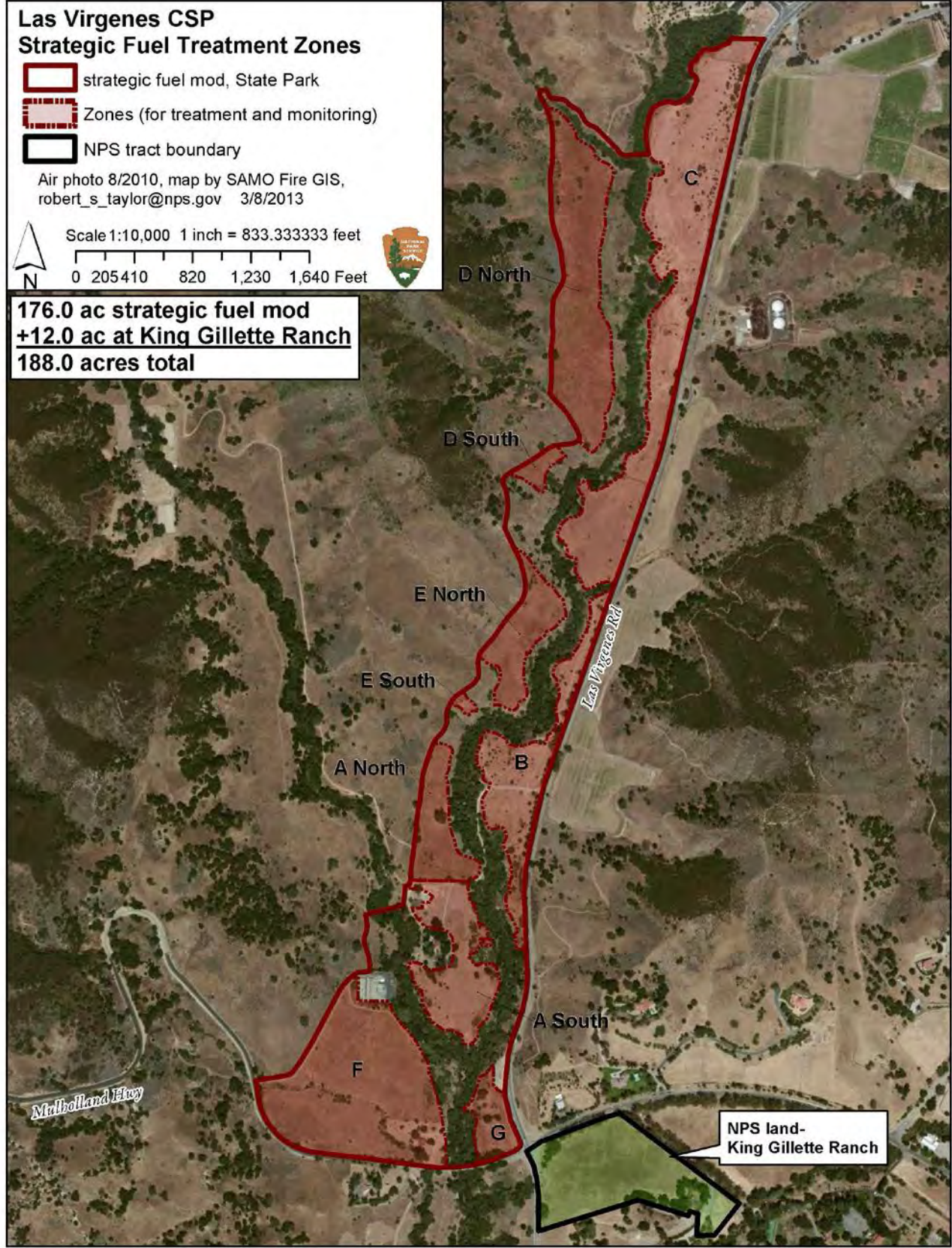
-  strategic fuel mod, State Park
-  fuel mod, Gillette Visitor's Center (NPS)
-  NPS tract boundary

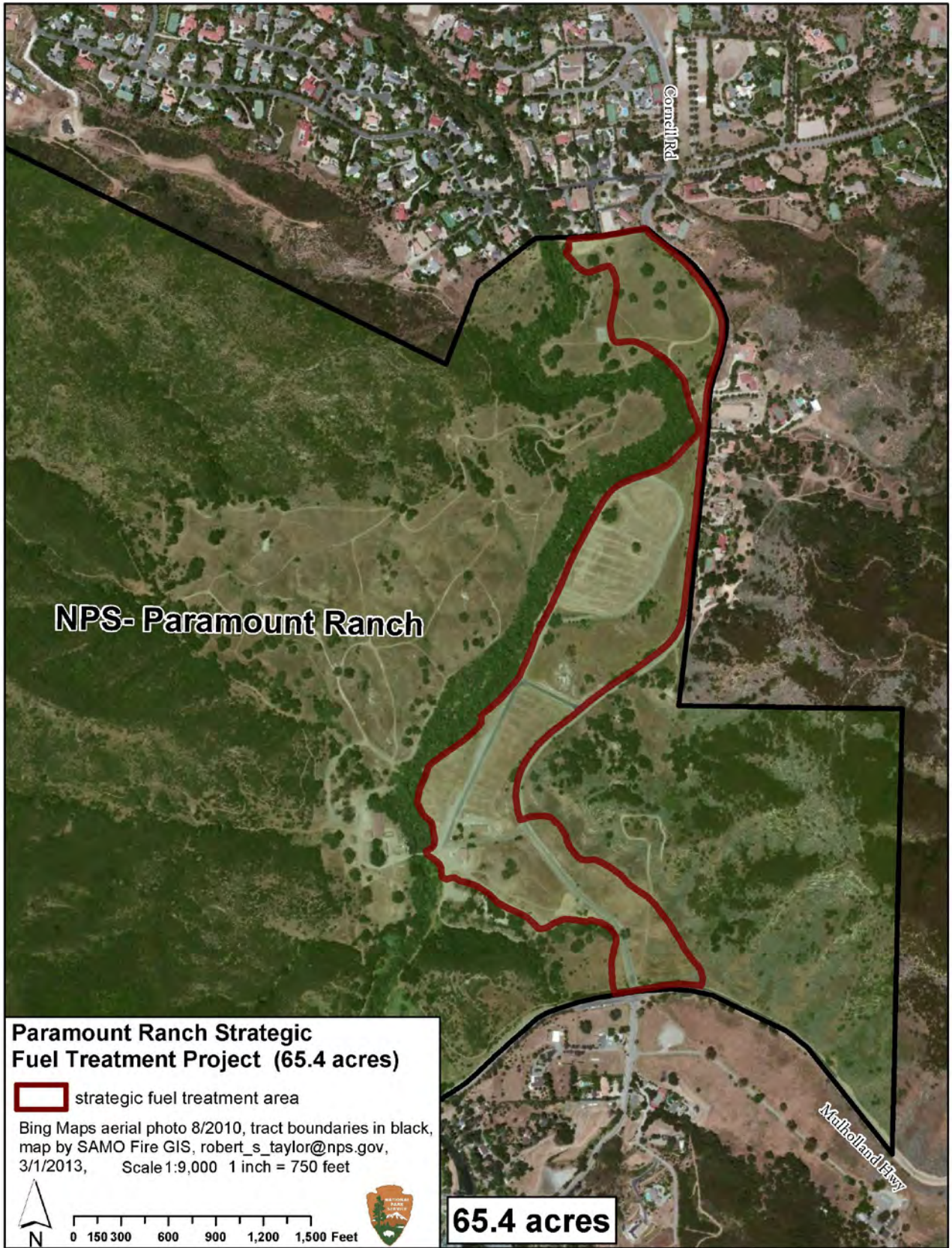
Air photo 8/2010, map by SAMO Fire GIS,
robert_s_taylor@nps.gov 3/7/2013

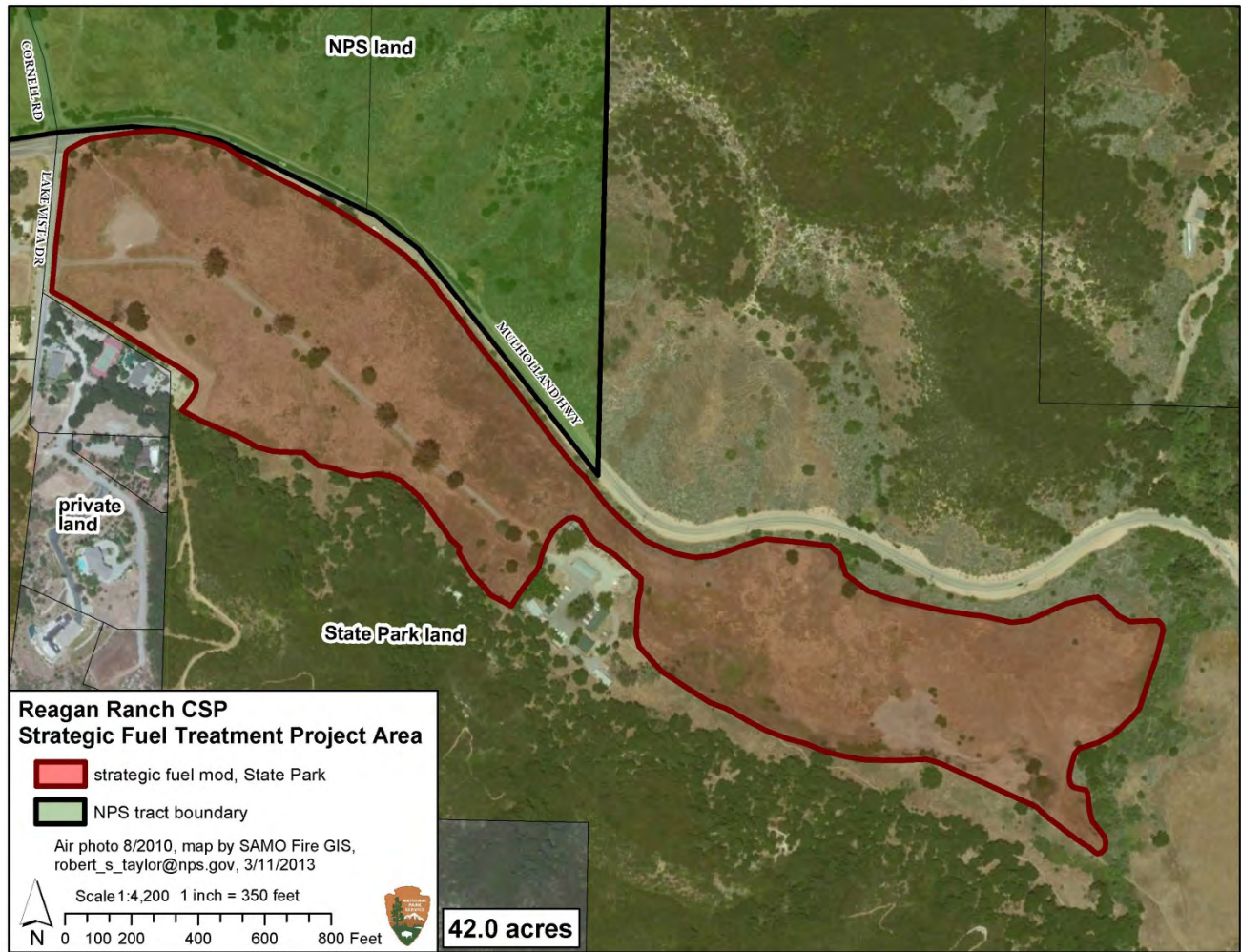


**176.0 ac strategic fuel mod
+12.0 ac at King Gillette Ranch
188.0 acres total**









APPENDIX E. FIRE MONITORING PLAN

[Protocol for Terrestrial Vegetation Monitoring in the Mediterranean Coast Network](#)

APPENDIX F. PREPAREDNESS PLANNING DOCUMENTS

F.1 Annual Delegation of Authority from Park Superintendent



United States Department of the Interior

NATIONAL PARK SERVICE
Santa Monica Mountains National Recreation Area
401 West Hillcrest Drive
Thousand Oaks, California 91360-4207

In reply refer to:
Y16 (SAMO)

Date: April 21, 2016

Delegation of Authority for Derrek Hartman, Fire Management Officer for 2016 wildfire operations. This delegate's full authority for managing incident operations within the framework of legal statute, current policy, and the direction provided in both your oral and written briefing materials. You are expected to do a complete and efficient job, while providing for SAFETY first. Firefighter and public safety is my primary concern on this incident. Make sure you comply with the 10 Standard Orders and 18 Situations that Shout Watch-out and implement LCES in all your planning processes and suppression efforts.

You are to provide the necessary suppression capability to control wildfires at a reasonable cost, to meet the objectives specified, and to protect on and off-park values. You are to go into Unified Command as appropriate for NPS land in relation to an incident.

Work closely with the Park Chief Ranger, to understand complex local issues, including jurisdictional questions. Keep my staff informed and work close in proactively dealing with controversial issues. Assign Resource Advisors and consult the Planning, Science and Resource Management staff to assure you have key resource information while managing an incident.

In regards to fire suppression actions and T&E species protection, keep in mind "Fire Fighter and public safety" is my # 1 priority. The Resource Advisor can help you address the protection of these important features.

Sensitive political issues require you to have an aggressive information organization in place, I expect you to keep our Public Affairs Officer apprised of your progress and any emerging issues. Provide for safety, but cooperate closely with the local media. Be responsive to their needs.

If you have any problems or concerns, please contact me. I am available to discuss your needs and or revisit this delegation. I can be reached at:

Office: (805) 370-2342
ANF Forest Dispatch: (661) 723-2704

David Szymanski
Park Superintendent

Delegation for Unit Fire Management Officer

Derrek Hartman, Fire Management Officer for the Santa Monica Mountains National Recreation Area is delegated authority to act on my behalf for the following duties and actions:

1. Represent the National Park Service in the Southern California Multi-Agency Coordinating Group in setting priorities and allocating resources for fire emergencies.
2. Coordinate all prescribed fire activities in the Santa Monica Mountains National Recreation Area and suspending all prescribed fire and issuance of burning permits when conditions warrant.
3. Ensure that only fully qualified personnel are used in wildland fire operations.
4. Coordinate, preposition, send, and order fire and aviation resources in response to current and anticipated zone fire conditions.
5. Oversee and coordinate the Angeles Interagency Dispatch Center on behalf of the Santa Monica Mountains National Recreation Area.
6. Request and oversee distribution of severity funding for Unit Fire and Aviation.
7. Approve Fire Program requests of overtime, hazard pay, and other premium pay.
8. Ensure all incidents are managed in a safe and cost-effective manner.
9. Coordinate and provide all fire and prevention information needs to inform internal and external customers with necessary information.
10. Coordinate all fire funding accounts with the Budget Officer to assure unit fiscal guidelines are adhered to and targets are met.
11. Approve and sign aviation request forms.
12. Approve Red Cards in accordance with agency policy.
13. Authorized to hire Emergency Firefighters in accordance with the Emergency Worker Pay Plan.



Fire Management Officer

April 21, 2016
Date



Park Superintendent

April 21, 2016
Date

F.2 Initial Response Plan

F.2.1 Strategic fire size-up procedures
See Chapter 3

F.2.2 Notification procedures
See Chapter 3

F.2.3 Step-up Plan/Staffing Plan
See Chapter 3

F.2.4 Status and location of Fire Danger Rating Operating Plan –
See Chapter 3

F.2.5 Status and location of Job Hazard Analyses for wildland fire and fire aviation operations
Park safety files

F.2.6 List of current wildland fire qualified park personnel

LE	Alongi	Mike	SEC1
LE	Bishop	Coby	SEC1
LE	Chelko	Dan	FFT2 (T)
Perm	Cromwell	Robert	FFT2
Perm	Davis	Aaron	READ
AD	Dillon	Costa	PIOF
Seasonal	Gabrielson	Cody	FFT2
Seasonal	Galster	Nathan	FFT1
Seasonal	Garcia	Hector	FFT2
Perm	Hartman	Derrek	MCCO
Perm	Heras	George	FWPT
Perm	Irvine	Irina	READ
Seasonal	Lopez	Michael	FFT2
Perm	MacDonald	Darcy	SEC1
Perm	Massey	Fauzia	FSC3
LE	McCrary	Kim	SEC1
LE	McDaniel	Melanie	SEC1
AD	Mendelsohn	Mark	READ
Perm	O'Neill	Ryan	ENGB
Perm	Owens	Paula	EDRC (T)
Perm	Rodriquez	Erik	ENGB
Term	Ringelstein	Austin	REAF
Perm	Snow	Trouper	LSC3
Perm	Taylor	Robert	GISS (T)
Perm	Vazquez	Roberto	
Perm	Whitman	Charlie	READ
Perm	Wilson	Mike	AREP
Perm	Witter	Marti	READ
LE	Yost	Michael	SEC1
AD	Young	Tom	SECM
Perm	Zavalza	Zandra	PTRC(T)
Perm	Zenan	Mike	BCMG

F.2.7 Structure protection inventory and needs

["Mitigation of Fire Hazards in the Wildland Urban Interface of the Southern California Mediterranean Coast Network of the National Park Service – Structural Assessment of Park Buildings to Mitigate Structural Losses from Wildfires: Final Report"](#)

F.2.8 Transfer of Command Package

Any transfer of command to on IMT1 or IMT 2 incidents will be done in conjunction with our partners. No transfer of command is done solely by the park Superintendent but always with our agency partners.

F.3 Seasonal Staffing and Response Capacity

Santa Monica Mountains National Recreation Area
SPECIFIC STAFFING and ACTION GUIDE

FIRE MANAGEMENT:

ACTIVITY:

RATING:

ACTION CODE:

REGION:

PWR

Prevention

NFDRS: All

AR – Action Require

GACC:

OSC

Detection

Fuel Model: All

AA – Action Authorized

PARK:

SMP

Suppression

Reinforcements

Facilitating

DIVISION: Protection

DATE: 2016

ACTION DESCRIPTION	STAFFING LEVELS				
	1	2	3	4	5
	1. Regular scheduled tours of all fire management personnel.	AA	AA	AA	AR
2. Sixth day work week permitted for Prevention/Education Specialist			AA	AA	AA
3. Holidays, weekends, and other periods of high risk or increased visitor use					
a. Fire Management/LE personnel should review prevention effort scheduled for the day and determine best method of contacting users in high hazard areas.			AA	AR	AR
b. FMO will provide the Chief Ranger with a copy of fire mgmt staffing plan and schedule.	AR	AR	AR	AR	AR

Santa Monica Mountains National Recreation Area
SPECIFIC STAFFING and ACTION GUIDE

FIRE MANAGEMENT:

ACTIVITY:

RATING:

ACTION CODE:

REGION:

PWR

Prevention

NFDRS: All

AR – Action Require

GACC:

OSC

Detection

Fuel Model: All

AA – Action Authorized

Park:

SMP

Suppression

Reinforcements

Facilitating

DIVISION: Protection

DATE: 2016

ACTION DESCRIPTION	STAFFING LEVELS				
	1	2	3	4	5
	1. In season – May 15 to December 15 or until sufficient rains occur to abate fire hazard, monitor Ventura County Fire radio traffic for reports for wildland fires. (Angeles EOC monitors LACo Fire)	AA	AA	AA	AR
2. During Santa Ana wind activity, coordinate with LE and park management and divisions to assure awareness	AA	AA	AA	AA	AA
4. NWS Red Flag Weather Conditions.					
a. Fire Staff					
(1) Activate type VI engine patrol.			AA	AA	AA
(2) Extend coverage to 12 hours.			AA	AA	AA
(3) Extend coverage up to 24 hours.			AA	AA	AA

Santa Monica Mountains National Recreation Area
SPECIFIC STAFFING and ACTION GUIDE

FIRE MANAGEMENT:

ACTIVITY:

- Prevention
- Detection
- Suppression
- Reinforcements
- Facilitating

RATING:

NFDRS: All
 Fuel Model: All

ACTION CODE:

AR – Action Require
 AA – Action Authorized

REGION:

PWR
 OSC
 SMP
DIVISION: Protection

DATE: 2016

ACTION DESCRIPTION	STAFFING LEVELS				
	1	2	3	4	5
	1. Initial attack modules on regular scheduled tours during the budgeted fire season.				
a. Minimum Staffing – meeting module criteria.	AA	AA			
b. Full Staffing – meeting module criteria.			AR	AR	AR
2. Initial attack modules prepared to meet get away standards during the budgeted fire season or when severity is authorized	AR	AR	AR	AR	AR
3. Sixth or seventh work day.			AA	AA	AA
4. Extended staffing hours.			AA	AA	AA
5. Augment suppression capabilities by staffing the type VI engine				AA	AA

**Santa Monica Mountains National Recreation Area
SPECIFIC STAFFING and ACTION GUIDE**

FIRE MANAGEMENT:

ACTIVITY:
 Prevention
 Detection
 Suppression
 Reinforcements
 Facilitating

RATING:
 NFDRS: All
 Fuel Model: All

ACTION CODE:
 AR – Action Require
 AA – Action Authorized

REGION: PWR
GACC: South
PARK: SMP
DIVISION: Protection

DATE: 2004

ACTION DESCRIPTION	STAFFING LEVELS				
	1	2	3	4	5
	1. Order type I handcrew to supplement initial action capabilities				AA
2. Order cover engine from federal fire cooperators if E73 is assigned off-park				AA	AA

**Santa Monica Mountains National Recreation Area
SPECIFIC STAFFING and ACTION GUIDE**

FIRE MANAGEMENT:

ACTIVITY:
 Prevention
 Detection
 Attack
 Reinforcements
 Facilitating

RATING:
 NFDRS: All
 Fuel Model: All

ACTION CODE:
 AR – Action Require
 AA – Action Authorized

REGION: PWR
GACC: South
PARK: SMP
DIVISION: Protection

DATE: 2016

ACTION DESCRIPTION	STAFFING LEVELS				
	1	2	3	4	5
	1. SUPERVISION and FACILITATION:				
a. Fire Management Officer or qualified Duty Officer,					
(1) On regular scheduled tours.	AR	AR	AR	AR	AR
(2) 6 th or 7 th day.			AA	AA	AA
b. Extend staffing to comply when active wildland fire is occurring on or adjacent to the park	AR	AR	AR	AR	AR
c. Maintain qualified fire suppression module leader in park				AA	AA

Santa Monica Mountains National Recreation Area
SPECIFIC STAFFING and ACTION GUIDE

FIRE MANAGEMENT:

ACTIVITY:

- XX Prevention
- XX Detection
- XX Suppression
- XX Reinforcements
- XX Facilitating

RATING:

NFDRS: All
Fuel Model: All

ACTION CODE:

AR - Action Require
AA - Action Authorized

REGION:

PWR
GACC: OSC
FOREST: SMP
DIVISION: Protection

DATE: 2016

ACTION DESCRIPTION	STAFFING LEVELS				
	1	2	3	4	5
	1. FEDERAL HOLIDAYS and HOLIDAY WEEKEND STAFFING				
a. All Fire Management personnel authorized to work on holidays.	AA	AA	AA	AA	AA

APPENDIX G. COMMUNICATION AND EDUCATION PLAN

See Chapter 1.4

G.1 Radio Frequencies

Ventura County Fire Department Radio Communications for Santa Monica Mountains NRA

1) VNC Dispatch	RX 155.0550	TX 155.0550	82.5
2) Command 2	RX 154.2350	TX 155.8350	79.7
3) Tac 3	RX 153.9500	TX 153.9500	167.9
4) VFIRE 23	RX 154.2950	TX 154.2950	156.7
5) Command 5	RX 153.8750	TX 158.8050	85.4
6) Tac 6	RX 154.0250	TX 154.0250	167.9
7) VFIRE 22	RX 154.2650	TX 154.2650	156.7
8) Command 8	RX 155.9850	TX 154.7250	186.2
9) Tac 9	RX 153.8300	TX 153.8300	167.9

LOS ANGELES COUNTY FIRE DEPARTMENT

TMAC 2015 VHF by ZONE

ZONE	CH	DISPLAY	DESCRIPTION - USE	Rx Freq	Rx PL	Tx Freq	Tx PL	Dev	Prvt	Mode
	31	LARTCS-4V	LA REGIONAL TACTICAL COMM SYSTEM - MT. LEE	159.03000	100.0	155.58000	100.0	N	H	A
	32	LARTCS-5V	LA REGIONAL TACTICAL COMM SYSTEM - OAT MTN	159.15000	100.0	155.37000	100.0	N	H	A
	33	LOB V-1	LONG BEACH DISPATCH	153.9500	D132	156.1950	D132	N	H	A
	34	LOB V-2	LONG BEACH 2	153.9200	D155	158.9400	D155	N	H	A
	35	LOB V-3	LONG BEACH 3	151.1600	D134	159.3750	D134	N	H	A
	36	LOB V-4	LONG BEACH 4	153.7700	D143	155.9250	D143	N	H	A
	37	LOB V-5D	LONG BEACH 5	150.7750	D152	150.7750	D152	N	H	A
	38	LOB V-6D	LONG BEACH 6	153.8300	131.8	153.8300	131.8	N	H	A
	39	LOB V-7D	LONG BEACH 7	151.2350	D226	151.2350	D226	N	H	A
	40	MRA 1D	MOUNTAINS RECREATION & CONSERVANCY AUTHORITY	155.0850	110.9	155.0850	110.9	N	H	M
	41	MRA 3 SVP	MTN REC & CONSERVANCY AUTH - SAN VICENTE PEAK	155.0850	110.9	154.8000	131.8	N	H	A
	42	MRA 7 FIRE	MTN REC & CONSERVANCY AUTH - "FIRE TAC"	155.0850	167.9	155.0850	167.9	N	H	A
	43	NPS SMP	NAT'L PARK SERVICE - SANTA MONICA MOUNTAINS (CASTRO PEAK)	172.5250	CSQ	164.1625	110.9	N	H	A
	44	OES 1B	OES "FIRE NET" (T-4 = OAT MTN, T-7 = STRAWBERRY PK)	154.1600	CSQ	159.1950	MPL	N	H	A
	45	OES 2B	OES "FIRE NET" (TONE 3 = SANTIAGO PEAK)	154.2200	CSQ	159.1950	131.8	N	H	A
	46	ORC ACC V	ORANGE COUNTY VHF ACCESS "CONTROL 1"	151.0850	136.5	159.0000	136.5	N	H	A
	47	VER V-1	VERNON BACKUP DISPATCH	154.1300	107.2	155.9850	D156	N	H	A
	48	VFIRE22	NAT'L VHF FIRE INTEROP TAC 22	154.2650	156.7	154.2650	156.7	N	L	A
	49	VFIRE23	NAT'L VHF FIRE INTEROP TAC 23	154.2950	156.7	154.2950	156.7	N	L	A
	50	VFIRE24	NAT'L VHF FIRE INTEROP TAC 24	154.2725	156.7	154.2725	156.7	N	L	A
	51	VFIRE25	NAT'L VHF FIRE INTEROP TAC 25	154.2875	156.7	154.2875	156.7	N	L	A
	52	VFIRE26	NAT'L VHF FIRE INTEROP TAC 26	154.3025	156.7	154.3025	156.7	N	L	A
	53	VMED28	NAT'L VHF EMS INTEROP TAC 28	155.3400	156.7	155.3400	156.7	N	H	A
	54	VMED29	NAT'L VHF EMS INTEROP TAC 29	155.3475	156.7	155.3475	156.7	N	H	A
	55	VSAR16	NATIONAL SEARCH & RESCUE TAC	155.1600	CSQ	155.1600	127.3	N	H	A
	56	VNC DISP	VENTURA COUNTY FIRE DISPATCH	155.0550	82.5	155.0550	82.5	N	H	A
	57	VNC C-2	VENTURA COUNTY FIRE - C-2	154.3250	79.7	155.8350	79.7	N	H	A
	58	VNC T-3	VENTURA COUNTY FIRE - T-3	153.9500	167.9	153.9500	167.9	N	H	A
	59	VNC C-5	VENTURA COUNTY FIRE - C-5	153.8750	85.4	158.8050	85.4	N	H	A
	60	VNC T-6	VENTURA COUNTY FIRE - T-6	154.0250	167.9	154.0250	167.9	N	H	A

Z4 - LA BASIN & BNS

LOS ANGELES COUNTY FIRE DEPARTMENT

TMAC 2015 VHF by ZONE

ZONE	CH	DISPLAY	DESCRIPTION - USE	Rx Freq	Rx PL	Tx Freq	Tx PL	Dev	Pwr	Mode
5	61	VNC C-8	VENTURA COUNTY FIRE - C-8	155.9850	186.2	154.7250	186.2	N	H	A
5	62	VNC T-9	VENTURA COUNTY FIRE - T-9	153.8300	167.9	153.8300	167.9	N	H	A
5	63	VNC C-12	VENTURA COUNTY FIRE - C-12	154.4150	CSQ	155.7300	MPL	N	H	A
5	64	VNC A/G	VENTURA COUNTY FIRE AIR-10-GROUND	154.2350	167.9	154.2350	167.9	N	H	A
LA	65	XLE V-1	AREA "E" BACKUP DISPATCH/STATION ALERTING	154.2050	127.3	154.7400	127.3	N	H	A
LA	66	XLE V-2	AREA "E" BACKUP COMMAND	154.2500	127.3	159.1650	127.3	N	H	A

APPENDIX H. FIRE PREVENTION PLAN

APPENDIX J. DUTY OFFICER MANUAL

Hard copies available in Fire Management Office.

[MEDITERRANEAN COAST NETWORK FIRE OPERATIONS HANDBOOK](#)

APPENDIX K. COOPERATIVE AND INTERAGENCY AGREEMENTS

K.1 Los Angeles City Fire Department

K.2 Los Angeles County Fire Department

K.3 Ventura County Fire Protection District

K.4 Angeles National Forest

RECIPROCAL FIRE PROTECTION AGREEMENT
BETWEEN
THE NATIONAL PARK SERVICE
SANTA MONICA MOUNTAINS NATIONAL RECREATION AREA
AND
THE LOS ANGELES CITY FIRE DEPARTMENT
CITY OF LOS ANGELES COUNTY

THIS AGREEMENT, made and entered into this _____ day of _____, 1999, by and between the National Park Service, Santa Monica Mountains National Recreation Area, hereinafter referred to as “SMMNRA,” and the Los Angeles City Fire Department, hereinafter referred to as “LAFD.”

Article I
Background and Objectives

WHEREAS, the SMMNRA is mandated and responsible to provide for fire suppression, fire prevention, and protection of life, property and resources on lands administered by the SMMNRA; and

WHEREAS, the LAFD is mandated and responsible for providing fire suppression, fire prevention, and protection of life, property, and resources within LAFD jurisdiction; and

WHEREAS, the Director of the National Park Service (or his/her delegate) is authorized to enter this Agreement pursuant to 16 USC 460KK (j), 42 U.S.C. 1856 a, and to enter into this Agreement and has mutual aid authority under 16 USC 1b1; and

WHEREAS, it is in the best interest of the citizens of the CFPD to provide the most expeditious response to suppress fires; and

WHEREAS, both the SMMNRA and the LAFD desire to cooperate to the maximum extent possible to achieve objectives of common interest and concern with respect to fire suppression, fire prevention, and protection of life, property, and resources within their respective jurisdictions.

NOW, THEREFORE, both parties do mutually understand and agree as follows:

Article II Statement of Work

This Agreement herein made is subject to the following terms and conditions:

(1) The LAFD shall provide fire protection and suppression services within the boundaries of the SMMNRA, which area is within the boundaries of the LAFD.

(2) The SMMNRA shall assist the LAFD in fire suppression activities with available equipment and manpower.

(3) The nature, scope, and extent of service provided by the CFPD shall be determined in a Fire Operations Plan mutually agreed upon by the SMMNRA and the LAFD.

(4) The Fire Operations Plan may be amended as mutually agreed upon by both parties.

(5) The LAFD shall be reimbursed by SMMNRA for direct expenses, which are additional firefighting costs above normal operation costs, and losses incurred while fighting fires under this Agreement as determined by the LAFD. If an incident involves multiple jurisdictions, then a cost-share agreement shall be developed and signed by all applicable jurisdictions by the close of the incident. Said reimbursement shall be based upon a Billing Rate Schedule for contracted wildland and structural services approved by the City of Los Angeles, Chief Administrative Office. The Billing Rate Schedule shall be attached to and be a part of the Fire Operations Plan.

(6) The LAFD, through its Fire Chief, may annually update the Billing Rate Schedule to reflect current billing rates of the LAFD as approved by the City of Los Angeles, Chief Administrative Office. The Fire Operations Plan shall be amended to reflect this annual update of the billing rate schedule.

(7) This Agreement does not affect or limit the LAFD's rights or remedies to seek reimbursement from any other sources other than SMMNRA for expenses or losses incurred while performing fire suppression services under this Agreement.

(8) This Agreement is made upon the express condition that each party to this Agreement, its agents and employees, shall be held harmless and free from all liabilities and claims for damages and/or suits from the other party for or by reason of any injury, injuries, or death to any person or persons or property of any kind whatsoever. Each party hereby covenants and agrees to assume responsibility for its respective liabilities, charges, expenses, and costs on account of or by reason of any injuries, deaths, liabilities, claims, suits, or losses however occurring or damages growing out of its activities under this Agreement. This does not preclude the CFPD from obtaining reimbursement for expenses as stated in the Fire Operations Plan.

Article III Term of Agreement

This Agreement hereby made shall terminate five (5) years from the effective date hereof, at noon California time, unless prior thereto it is relinquished, abandoned, or otherwise terminated pursuant to the provisions of this Agreement or of any applicable Federal or State law or regulation. This Agreement may be renewed or otherwise amended by the mutual written Agreement of the parties. The effective date of this Agreement shall be the date of its execution by the SMMNRA and the LAFD.

Article IV Termination of the Agreement

This Agreement may be terminated upon 30 days written notice by either party.

**Article V
Required Clause**

During the performance of this Agreement, the participants agree to abide by the terms of Executive Order 11246 on nondiscrimination and will not discriminate against any person because of race, color, religion, sex, or national origin. The participants will take affirmative action to ensure that applicants are employed without regard to their race, color, religion, sex, or national origin.

WITNESS WHEREOF, this Agreement has been executed on the day and year first above written and is effective and operative as to each of the parties as herein provided.

**NATIONAL PARK SERVICE
SANTA MONICA MOUNTAINS
NATIONAL RECREATION AREA**

**CITY OF LOS ANGELES
LOS ANGELES FIRE DEPARTMENT**

By _____
Superintendent

By _____

ATTEST:

ATTEST:

By _____
Deputy Superintendent

By _____

APPROVED AS TO FORM:

APPROVED AS TO FORM:

By _____
Chief Park Ranger
Santa Monica Mountains NRA

By _____

Appendix K.2 Los Angeles County

Agreement No. RFPA _____

RECIPROCAL FIRE PROTECTION AGREEMENT
BETWEEN
THE NATIONAL PARK SERVICE
SANTA MONICA MOUNTAINS NATIONAL RECREATION AREA
AND
THE CONSOLIDATED FIRE PROTECTION DISTRICT
OF LOS ANGELES COUNTY

THIS AGREEMENT, made and entered into this _____ day of _____, 1999, by and between the National Park Service, Santa Monica Mountains National Recreation Area, hereinafter referred to as "SMMNRA," and the Consolidated Fire Protection District of Los Angeles County, hereinafter referred to as "CFPD."

Article I
Background and Objectives

WHEREAS, the SMMNRA is mandated and responsible to provide for fire suppression, fire prevention, and protection of life, property and resources on lands administered by the SMMNRA; and

WHEREAS, the CFPD is mandated and responsible for providing fire suppression, fire prevention, and protection of life, property, and resources within CFPD jurisdiction; and

WHEREAS, the Director of the National Park Service (or his/her delegate) is authorized to enter this Agreement pursuant to 16 USC 460KK (j), 42 U.S.C. 1856 a, and to enter into this Agreement and has mutual aid authority under 16 USC 1b1; and

WHEREAS, it is in the best interest of the citizens of the CFPD to provide the most expeditious response to suppress fires; and

WHEREAS, both the SMMNRA and the CFPD desire to cooperate to the maximum extent possible to achieve objectives of common interest and concern with respect to fire suppression, fire prevention, and protection of life, property, and resources within their respective jurisdictions.

NOW, THEREFORE, both parties do mutually understand and agree as follows:

Article II
Statement of Work

This Agreement herein made is subject to the following terms and conditions:

- (1) The CFPD shall provide fire protection and suppression services within the boundaries of the SMMNRA, which area is within the boundaries of the CFPD.
- (2) The SMMNRA shall assist the CFPD in fire suppression activities with available equipment and manpower.
- (3) The nature, scope, and extent of service provided by the CFPD shall be determined in a Fire Operations Plan mutually agreed upon by the SMMNRA and the CFPD.
- (4) The Fire Operations Plan may be amended as mutually agreed upon by both parties.
- (5) The CFPD shall be reimbursed by SMMNRA for direct expenses, which are additional firefighting costs above normal operation costs, and losses incurred while fighting fires under this Agreement as determined by the CFPD. If an incident involves the CFPD and SMMNRA a cost-share agreement shall be developed and signed by all applicable jurisdictions by the close of the incident or as soon as reasonable. Said reimbursement shall be based upon a Billing Rate Schedule for contracted wildland and structural services approved by the Los Angeles County Auditor-Controller. The Billing Rate Schedule shall be attached to and be a part of the Fire Operations Plan.
- (6) The CFPD, through its Fire Chief, may annually update the Billing Rate Schedule to reflect current billing rates of the CFPD as approved by the Los Angeles County Auditor-Controller. The Fire Operations Plan shall be amended to reflect this annual update of the billing rate schedule.
- (7) This Agreement does not affect or limit the CFPD's rights or remedies to seek reimbursement from any other sources other than SMMNRA for expenses or losses incurred while performing fire suppression services under this Agreement.
- (8) This Agreement is made upon the express condition that each party to this Agreement, its agents and employees, shall be held harmless and free from all liabilities and claims for damages and/or suits from the other party for or by reason of any injury, injuries, or death to any person or persons or property of any kind whatsoever. Each party hereby covenants and agrees to assume responsibility for its respective liabilities, charges, expenses, and costs on account of or by reason of any injuries, deaths, liabilities, claims, suits, or losses however occurring or damages growing out of its activities under this Agreement. This does not preclude the CFPD from obtaining reimbursement for expenses as stated in the Fire Operations Plan.

Article III Term of Agreement

This Agreement hereby made shall terminate five (5) years from the effective date hereof, at noon California time, unless prior thereto it is relinquished, abandoned, or otherwise terminated pursuant to the provisions of this Agreement or of any applicable Federal or State law or regulation. This Agreement may be renewed or otherwise amended by the mutual written Agreement of the parties. The effective date of this Agreement shall be the date of its execution by the SMMNRA and the CFPD.

Article IV Termination of the Agreement

This Agreement may be terminated upon 30 days written notice by either party.

Article V

Required Clause

During the performance of this Agreement, the participants agree to abide by the terms of Executive Order 11246 on nondiscrimination and will not discriminate against any person because of race, color, religion, sex, or national origin. The participants will take affirmative action to ensure that applicants are employed without regard to their race, color, religion, sex, or national origin.

IN WITNESS WHEREOF, this Agreement has been executed on the day and year first above written and is effective and operative as to each of the parties as herein provided.

NATIONAL PARK SERVICE CONSOLIDATED FIRE PROTECTION
SANTA MONICA MOUNTAINS DISTRICT OF LOS ANGELES COUNTY
NATIONAL RECREATION AREA

By _____ By _____
Superintendent Chairperson, Board of Supervisors

ATTEST: ATTEST:
JOANNE STURGES, Executive Officer
Clerk of the Board of Supervisors

By _____ By _____
Deputy Superintendent Deputy

APPROVED AS TO FORM: APPROVED AS TO FORM:

LLOYD W. PELLMAN
COUNTY COUNSEL

By _____ By _____
Chief Park Ranger Deputy

Signatures on File

Appendix K.3 Ventura County Fire Department

Agreement No. RFPA _____

RECIPROCAL FIRE PROTECTION AGREEMENT
BETWEEN
THE NATIONAL PARK SERVICE
SANTA MONICA MOUNTAINS NATIONAL RECREATION AREA
AND
THE VENTURA COUNTY FIRE PROTECTION DISTRICT

THIS AGREEMENT, made and entered into this _____ day of _____, 1999, by and between the National Park Service, Santa Monica Mountains National Recreation Area, hereinafter referred to as ASMMNRA,≡ and the Ventura County Fire Protection District, hereinafter referred to as AVCFPD.≡

Article I
Background and Objectives

WHEREAS, the SMMNRA is mandated and responsible to provide for fire suppression, fire prevention, and protection of life, property and resources on lands administered by the SMMNRA; and

WHEREAS, the VCFPD is mandated and responsible for providing fire suppression, fire prevention, and protection of life, property, and resources within VCFPD jurisdiction; and

WHEREAS, the Director of the National Park Service (or his/her delegate) is authorized to enter this Agreement pursuant to 16 USC 460KK (j), 42 U.S.C. 1856 a, and to enter into this Agreement and has mutual aid authority under 16 USC 1b1; and

WHEREAS, it is in the best interest of the citizens of the VCFPD to provide the most expeditious response to suppress fires; and

WHEREAS, both the SMMNRA and the VCFPD desire to cooperate to the maximum extent possible to achieve objectives of common interest and concern with respect to fire suppression, fire prevention, and protection of life, property, and resources within their respective jurisdictions.

NOW, THEREFORE, both parties do mutually understand and agree as follows:

Article II
Statement of Work

This Agreement herein made is subject to the following terms and conditions:

- (1) The VCFPD shall provide fire protection and suppression services within the boundaries of the SMMNRA, which are within the boundaries of the VCFPD.
- (2) The SMMNRA shall assist the VCFPD in fire suppression activities with available equipment and staffing.
- (3) The nature, scope, and extent of service provided by the VCFPD shall be determined in a separate Fire Operations Plan mutually agreed upon by the SMMNRA and the VCFPD.
- (4) The Fire Operations Plan may be amended as mutually agreed upon by both parties.

The SMMNRA shall reimburse VCFPD for resources used on NPS land as agreed upon between the VCFPD and the SMMNRA. All losses of equipment or repairs necessitated as a result of the incident shall be reimbursed by SMMNRA.

If an incident involves multiple jurisdictions, then a cost-share agreement shall be developed and signed by all applicable jurisdictions by the close of the incident. Reimbursement shall be made according to the VCFPD's annual Board of Directors' Rate and Fee Schedule, which is adjusted annually. VCFPD shall forward the annual rates to SMMNRA upon adoption. The Rates and Fees Schedule is attached as Exhibit A.

- (6) This Agreement does not affect or limit the VCFPD's rights or remedies to seek reimbursement from any other sources other than SMMNRA for expenses or losses incurred while performing fire suppression services under this Agreement.
- (7) Each party shall indemnify, defend, and hold the other party, its officers and employees, harmless from any and all cost, expense, and liability for injury or damage to persons or property arising out of or caused by its acts or omissions or the acts or omissions of its officers and employees in the performance of this Agreement. This does not preclude the VCFPD from obtaining reimbursement for expenses as stated in the Fire Operations Plan.

Article III Term of Agreement

This Agreement hereby made shall terminate five (5) years from the effective date hereof, at noon California time, unless prior thereto it is relinquished, abandoned, or otherwise terminated pursuant to the provisions of this Agreement or of any applicable Federal or State law or regulation. This Agreement may be renewed or otherwise amended by the mutual written Agreement of the parties. The effective date of this Agreement shall be the date of its execution by the SMMNRA and the VCFPD.

Article IV Termination of the Agreement

This Agreement may be terminated and/or renegotiated upon 60 days written notice by either party.

Article V

Required Clause

During the performance of this Agreement, the participants agree to abide by the terms of Executive Order 11246 on nondiscrimination and will not discriminate against any person because of race, color, religion, sex, or national origin. The participants will take affirmative action to ensure that applicants are employed without regard to their race, color, religion, sex, or national origin.

IN WITNESS WHEREOF, this Agreement has been executed on the day and year first above written and is effective and operative as to each of the parties as herein provided.

NATIONAL PARK SERVICE VENTURA COUNTY FIRE PROTECTION
SANTA MONICA MOUNTAINS DISTRICT
NATIONAL RECREATION AREA

Arthur E. Eck Date Susan Lacey, Chair Date
Superintendent Board of Directors

ATTEST: ATTEST: RICHARD D. DEAN,
County Clerk, County of Ventura,
State of California, and ex-officio
Clerk of the Board of Directors of the Ventura County Fire Protection District thereof.

By _____
Woodrow Smeck
Acting Deputy Superintendent

By _____
Deputy County Clerk

APPROVED AS TO FORM:

By _____
Jon Dick
Chief Ranger

Signatures on File

Appendix K.4 U.S. Forest Service

INTERAGENCY AGREEMENT
BETWEEN
U.S. DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
AND
U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

This agreement is entered into by and between the U.S. Department of Agriculture, acting by and through the Forest Supervisor, U.S. Forest Service, Angeles National Forest, Arcadia, California (hereinafter referred to as USFS) and the U.S. Department of Interior, National Park Service, acting through and by the Superintendent, Santa Monica Mountains National Recreation Area (hereinafter referred to as NPS).

ARTICLE I: BACKGROUND, OBJECTIVES AND AUTHORITY

The NPS is charged with the responsibility to conserve the scenery and the natural and historic objects and wildlife of the areas under its jurisdiction and to provide for the enjoyment of the same in such manner as will leave them unimpaired for the future generations (16 U.S.C. 1).

Both parties desire to provide mutual aid and conduct joint training of their staff.

Both parties have decided that a 24-hour dispatch service provided by USFS will be in the public interest for the protection of resources and public safety.

This Agreement is entered into under the authority of the Reciprocal Fire Protection Act, 42 U.S.C. 1856a.

ARTICLE II: STATEMENT OF WORK

A. The NPS shall:

1. Provide aid and assistance for fire, law enforcement, training and other similar disciplines, as requested and as agency resources permit.
2. Be responsible for maintenance of NPS communication equipment at USFS Communication Center.
3. Maintain all other necessary communication equipment in order to maintain radio communication with the USFS.
4. Provide Angeles Communication Center NPS Radio Protocols, Location Maps and Radio Call Numbers.

5. Reimburse the USFS costs associated with the operation of the 24-hour dispatch center an estimated annual amount of \$32,000.00

B. The USFS shall:

1. Provide aid and assistance for fire, law enforcement, training and other similar disciplines, as requested and as agency resources permit.
2. *Provide the NPS with a 24-hour Interagency Communications Center.*
3. Be responsible for maintenance of communication consoles, computer support system, and USFS communication equipment.
4. Develop a Communication Operating Plan for review by NPS that will outline the communication center organization and operating procedures.
5. Issue NPS Case Incident Numbers upon request by Law Enforcement Park Rangers and maintain Case Incident Log for NPS.
6. Advise, consult with and obtain the permission of the Superintendent of Santa Monica Mountains National Recreation Area, before any changes are made to the communication-operating plan that may affect the NPS.

C. Both parties shall:

1. Comply with all applicable Federal laws and regulations and other existing regulations promulgated thereunder in their use of this Agreement.
2. Be subject to the express condition that the exercise thereof will not unduly interfere with the management and administration of the USFS or NPS.
3. Acknowledge that this Agreement will in no way modify or supersede any agreement presently in effect involving with either party to this Agreement.
4. Cooperate, to the extent allowed by law, in the submission of claims pursuant to the Federal Tort Claims Act against the United States by third parties for personal injury or property damage resulting from the negligent act or omission of any employee of the Government in the course of his/her employment (28 U.S.C. S (or "\$" ??) 2671, et seq.)
5. Agree the cost of any needed repairs, replacement of equipment, and/or maintenance of the same shall be the responsibility of the respective parties.

6. Agree any changes to the radio communication center will be at the respective agency's expense and become the property of the respective agency upon expiration or termination of this Agreement.

D. Nothing contained herein shall be construed as binding the NPS or USFS to expend in any one fiscal year any sum in excess of appropriations made by Congress or administratively allocated for the purpose of this Agreement for that fiscal year.

ARTICLE III: TERM OF AGREEMENT AND MODIFICATION

A. This Agreement shall remain in full force and effect for five years from the date of the last signature below.

B. This Agreement may be modified by the mutual written consent of the parties.

ARTICLE IV: KEY OFFICIALS

The personnel listed below are identified as key officials and considered essential to the effort being performed under this Agreement:

1. Superintendent, Santa Monica Mountains National Recreation Area,
401 W. Hillcrest Drive, Thousand Oaks, California 91360-4207.
2. Forest Supervisor, Angeles National Forest,
701 North Santa Anita Avenue, Arcadia, California 91006-2799

ARTICLE V: AWARD

A. Transfer of funds for the 24-hour Interagency Communications Center for the NPS shall be made to the USFS using the U.S. Treasury Department's On-Line Payment and Cost Accounting System (OPAC). The NPS Agency Location Code is 14100099.

B. The chargeable appropriation is 8540-_____-_____.

C. Billing inquiries shall be forwarded to the Key Officials listed in Article IV, above.

D.

ARTICLE VI: TERMINATION

Either party may terminate this Agreement by providing 60 days written notice to the other party.

ARTICLE VII: PROPERTY UTILIZATION

NPS Communication equipment will be on loan to the USFS in order to provide 24-hour dispatch coverage at the Communications Center.

ARTICLE VIII: REPORTS AND OTHER DELIVERABLES

USFS will submit an annual report by January 15 incorporating radio communication traffic generated by the NPS during normal and emergency operations.

ARTICLE IX: AUTHORIZED SIGNATURES

IN WITNESS WHEREOF, the parties have executed this agreement.

U.S. DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

Theresa Fisher _____
Agreement Supervisor - National Park Service _____ Date

Arthur E. Eck _____
Superintendent _____ Date
Santa Monica Mountains NRA

U.S. DEPARTMENT OF AGRICULTURE
U.S. FOREST SERVICE

Contracting Officer - Forest Service _____ Date

Jody Cook _____
Forest Supervisor _____ Date
Angeles National Forest

Signatures on File

Cc:

Margie BEHM Acting Communication Manager
Anna Marie MERCADO Supervisory Dispatcher
ANGELES COMMUNICATION CENTER
4503 WEST WILLIAM BARNES AVE
LANCASTER CA 93536
(626) 447-8992 or 8993

APPENDIX L. WFDSS OBJECTIVES AND REQUIREMENTS

Type	Activated	Deactivated	Strategic Objective/Management Requirement
Strat Obj	02/14/2014		Protect the natural ecosystem from excess wildfire to preserve the native biodiversity and reflect the natural fire regime.
Strat Obj	02/14/2014		Provide public information regarding wildfire concerning its impact on natural and cultural resources.
Strat Obj	02/14/2014		Identify strategic barriers to wildfire that provide suppression forces viable control features to meet fire control objectives.
Strat Obj	02/14/2014		Identify Park values that require tactical mitigation to incident.
Strat Obj	02/14/2014		Provide NWCG qualified personnel in multiple functions to the incident.
Strat Obj	02/14/2014		Provide full suppression response to limit fire spread utilizing MIST tactics to the safest degree possible.
Strat Obj	02/14/2014		Safety is the responsibility of everyone assigned to wildland fire, and must be practiced at all operational levels. Firefighter and public safety takes precedence over structure and resource loss.
Strat Obj	02/14/2014		Protect natural and cultural resources values from damage by fire suppression.
Strat Obj	02/14/2014		Provide that NPS Duty Officer and Resource Advisors are ordered for incident on NPS land.
Mgmt Req	02/14/2014		Responding personnel will be qualified for their assignment, will have the appropriate PPE to do the assignment and will be provided qualified personnel to direct fire control assignments.
Mgmt Req	02/14/2014		The 10 Standard Fire Orders will be adhered to as rules of engagement for wildfire operations. The 18 Watchout Situations will be mitigated in all wildfire operations.
Mgmt Req	02/14/2014		Close SMMNRA parkland for public safety during a wildfire that is impacting the unit or will impact the unit during the course of the fire.
Mgmt Req	02/14/2014		Suppress all wildfires in the SMMNRA to limit the size to the smallest extent possible while providing for fire responder and public safety.
Mgmt Req	02/14/2014		Use fire suppression strategies and tactics that have the lightest impact on the resources while still controlling the fire safely.
Mgmt Req	02/14/2014		Provide AREP for Park values at risk in the incident.
Mgmt Req	02/14/2014		Concentrate suppression efforts, especially high impact tactics, at the community interface to protect values at risk.
Mgmt Req	02/14/2014		Resource Advisors will be assigned to incident to mitigate fire suppression tactics.
Mgmt Req	02/14/2014		Protect values at risk using appropriate pre-suppression anchor points, fuel modifications, road systems and natural barriers.
Mgmt Req	02/14/2014		Include the effects on wildfire on natural resources in Fire Information releases.
Mgmt Req	02/14/2014		Provide natural resource information to fire personnel that concern their safety in relation to plants, wildlife and features.
Mgmt Req	02/14/2014		Provide natural resource bulletins to public concerning issues on safety that involve components of the natural resources.
Mgmt Req	02/14/2014		FMO will be attached to incident as unified command IC or AREP.
Mgmt Req	02/14/2014		Limit use of heavy equipment such as bulldozers to existing roads on park lands.
Mgmt Req	02/14/2014		Provide sensitive resource maps to the incident (i.e. Resource Advisor maps).
Mgmt Req	02/14/2014		Provide resource advisors to incident to ensure timely mitigation of fire suppression tactics to suppress fire while limiting resource damage.

DRAFT

Decision Tree for Prioritizing Vegetation Treatments

To Reduce Fire Risks to Structures

In California Shrublands

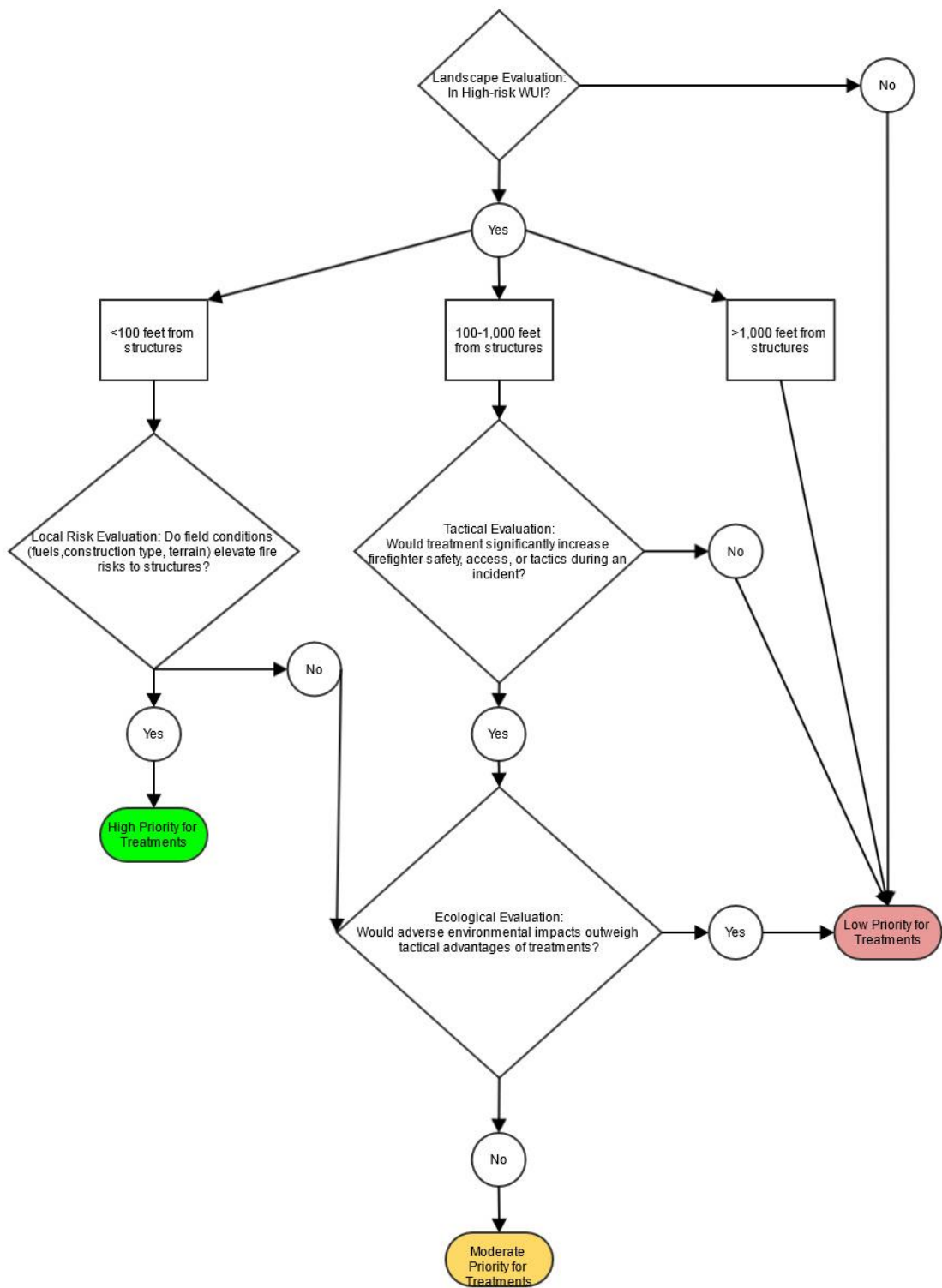
This draft decision tree (Figure 1) is narrowly intended to help Calfire prioritize where vegetation treatments are most likely to reduce wildfire risks to human structures in southern California chaparral, sage scrub, or other shrubland types. It is NOT intended to cover all possible cases of vegetation treatments (e.g., to achieve ecological restoration goals) or all vegetation types (e.g., coniferous forests). Similar, but different, decision trees could be created for these other situations.

Overview

The decision tree facilitates an objective, repeatable, and scientifically defensible decision-making process to categorize a proposed vegetation treatment project as High, Moderate, or Low Priority for implementation. It is based on extensive scientific information that shows where modifying vegetation is most likely to provide the “biggest bang for the buck” by reducing risks of structure damage from wildfires and improving firefighting tactical advantages during an incident, while minimizing adverse environmental impacts and economic costs. The goal is to maximize the benefit-cost ratio of vegetation treatment projects and to avoid wasting limited funds on projects that have a low probability of reducing risks or a high probability of adverse or unintended impacts (e.g., unnecessary environmental degradation, increases in flashy fuels, or high maintenance costs).

The decision tree starts with a coarse-filter (landscape level) evaluation of whether the proposed treatment is within a landscape zone mapped as having high risk of structure loss during a wildfire. Empirical analyses have shown structure loss is significantly more likely if a home is located in fire-prone areas (such as Santa Ana wind corridors) or in certain housing configurations (near the edge of a development or at low housing density) (Syphard et al. 2012,2013). Maps of high risk to structures can be developed as a function of where homes have historically been destroyed, but may also consider effects on fire risk of terrain, development patterns, vegetation characteristics, and wind patterns. A draft fire-risk map has been developed for San Diego County, and similar maps should be developed for other southern California counties.

If structures are in a high-risk area, the decision tree next evaluates the relative certainty that vegetation modification will reduce risks of structure loss by providing for defensible space or for additional firefighter safety and firefighting tactical advantages. Depending on distance of the proposed treatment from the structures at risk (roughly, <100 feet, 100-1,000 feet, or >1,000 feet away), it uses several field evaluation procedures to determine the likely benefits (i.e., risk reduction) and costs (e.g., environmental degradation) to assign treatments to High, Moderate, or Low Priority categories. **(NOTE to reader: the field evaluation procedures are under preparation and are not yet included in this initial DRAFT. They should be developed in collaboration with firefighting experts and ecologists.)**



+

Figure 1. Vegetation Treatment Decision Tree

Funds should always be allocated first to High Priority Treatment projects. Moderate Priority projects should only be implemented once all High Priority projects are implemented. Low Priority projects should rarely if ever be implemented, and only if the project is carefully designed and analyzed to demonstrate that it will have a positive benefit–cost ratio to risk reduction and will not increase other fire risk factors, such as by increasing flashy fuels.

Foundational Assumptions and Logic

- Most structure ignitions during wildfires occur from fire brands (blowing embers) rather than radiant or convective heating from flames.
- Most structure loss to wildfires occurs during wind-driven (e.g., “Santa Ana” and “Sundowner”) fires. Fuel breaks alone do not stop fires under such severe weather conditions.
- Fuel breaks can provide access and anchor points for tactical firefighting operations and can be used to control fire perimeters under normal weather conditions or during the later stages of wind-driven fires, once the winds subside. The challenge is to identify strategic locations where fuel breaks are most likely to be effective.
- The certainty that vegetation treatments reduce structure losses decreases with distance from the structures:
 - Treatments immediately adjacent to (<100 feet from) homes or other structures minimize the potential for structure ignition from flame impingement or radiant heat and increase the amount of defensible space from which firefighters can safely protect those structures under either wind-driven or fuel-driven fires (e.g., by dousing ember ignitions in the built environment).
 - Empirical studies demonstrate that treatments more than 100 feet from structures do not directly influence the probability of structure losses. However, treatments that create or improve access routes, escape routes, safety zones, anchor points, or firelines for backfires, MAY help firefighters safely protect communities during incidents. To be useful to firefighters protecting communities, such fuel modifications should be near (generally, within about 1,000 feet of) the structures at risk and must be safely accessible from existing roads.
 - Due to great uncertainty that treatments more than about 1,000 feet from structures will help firefighters protect communities, they should rarely, if ever, be implemented, and only if in-depth analysis demonstrates that there are substantial tactical benefits to be gained due to special circumstances, along with minimal potential for adverse or unwanted impacts, such as degradation of ecological resources or increases in weedy (flashy) fuels.

Safety Considerations

Regardless of distance from structures at risk, only sites where firefighters can be safely deployed according to the National Wildfire Coordinating Group’s (NWCG’s) risk management process should be considered for vegetation treatments. Fuel breaks should be confined to areas where a firefighter’s mandatory hazard control analysis based on firefighting rules of engagement (e.g., from Standard Fire Orders and the LCES checklist) determine that suppression operations could proceed safely and

effectively under expected fire conditions. Lack of anchor points, viable escape routes and safety zones, or presence of multiple “watch out” situations or tactical hazards should disqualify any potential treatment area. Fuel breaks should never be located in places too remote or dangerous for firefighters to reach given expected fire behavior or historic fire scenarios.

Next Steps

- Develop objective evaluation procedures (e.g., scoring matrices or other objective, repeatable methods) for how to perform the three field evaluation processes in the decision tree (the three large diamonds):
 - **Local Risk Evaluation.** This should entail a “house-out” field evaluation of structure risks based on characteristics of the built environment, vegetation, terrain, weather patterns, fire history, and other relevant factors. The evaluation process should be developed based on best available fire science and expertise and should include a cost-benefit analysis.
 - **Tactical Evaluation** of improvements to firefighter safety, access, and tactics. This field evaluation process should be developed collaboratively with fire-fighting experts having thorough knowledge of fire behavior and fire-fighting tactics and operations.
 - **Ecological Evaluation** of impacts to the environment. This field evaluation should be developed by experts in ecology and resource management in California shrubland ecosystems. It should consider the potential risks of vegetation type conversion, increases in weedy species and flashy fuels, runoff and soil erosion, and impacts to sensitive species and vegetation communities.
- Establish an expert oversight group and process to provide input and review for application of the decision tree and guidelines.
- Establish a process (such as another decision tree and associated guidelines) for planning and implementing ecological rehabilitation and restoration of unneeded fuel breaks (e.g., existing breaks that rate as Low Priority under these guidelines).
- Develop guidelines for maintaining higher-priority fuel breaks to ensure their continued effectiveness.
- Develop guidelines for what structures qualify for consideration under these guidelines (e.g., should treatments near isolated rural homes receive the same priority as treatments near suburban developments or clusters of homes?).



August 9, 2019

Board of Forestry and Fire Protection
Attn: CalVTP
PO Box 944246
Sacramento, CA 94244-2460

Sent via email to CalVTP@bof.ca.gov

RE: CalVTP Programmatic Environmental Impact Report (State Clearinghouse number 2019012052)

To the members of California Board of Forestry and Fire Protection:

The California Native Grasslands Association works to promote, preserve, and restore the diversity of California’s native grasses and grassland ecosystems through education, advocacy, research, and stewardship. The following comments on the CalVTP Draft Programmatic Environmental Impact Report (PEIR) address impacts to and mitigations for native herbaceous vegetation, program objectives, and the associated treatment descriptions, especially regarding fuel breaks and Wildland Urban Interface (WUI) fuel reduction. Our focus is on both “sensitive natural communities” and foundational native herbaceous vegetation in grasslands, shrublands, and woodlands.

O18-1

- 1. CalVTP Objectives – In general, herbaceous native vegetation, both as sensitive natural communities and foundational herbaceous vegetation, needs to be retained to achieve the primary program objective “to reduce risks to life, property, and natural resources by managing the amount and continuity of hazardous vegetative fuels.”**

O18-2

To the extent the program retains native herbaceous vegetation, both a sensitive natural community and as a foundational flora, the project should be able to avoid other significant environmental impacts, such as disrupting ground nesting birds and special-status butterflies




and insects, and soil disturbances that often result in conversion to flashy weed fuels. Flashy weedy fuels commonly fill in if intact herbaceous native grass and forb communities are disturbed, disrupted, or removed to the point of damage by various treatments; weeds grow more quickly and most dry out faster, exacerbating the very issue the initial treatment means to address. We recommend that the PEIR adequately address this concern. Several comments below follow up on this point.

- 2. The photo illustrations of fuel break and WUI fuel reduction treatments in the PEIR do not adequately represent treatments that correspond to the minimization and avoidance of environmental impacts described in PEIR, such as to sensitive herbaceous natural communities, to beneficial native grass and forb vegetation, to sensitive natural communities in general, and for project long term effectiveness.**

Below are the visual examples the WUI and shaded and non-shaded fuel break, treatments. These are the only visual examples representing the three main treatment types in the CalVTP. The PEIR photographic examples only portray a “bare earth” model of treatment where all native grasses, forbs, and low groundcover flora are removed.

O18-2
cont.

Figure 1. Treatments currently represented in the CalVTP

		
<p>WUI treatment example (source: CalVTP PEIR, Calfire. 2017)</p>	<p>Non-shaded fuel break example (source: CalVTP PEIR, Calfire. 2017)</p>	<p>Shaded fuel break example (source: CalVTP PEIR, Calfire. 2017)</p>

Example of WUI and non-shaded and shaded fuel break from CalVTP PEIR with no remaining native ground vegetation. The practice of scraping all vegetation down to bare soil is an invitation for re-colonization by flashy weeds, often resulting in more flammable vegetation than by simply leaving the low-growing native vegetation in place.

Effective treatment for continuity, density, and amount of native vegetation are key to the fuel management tactics stated in the CalVTP. Although site specific and, to a degree, ecoregion specific - retaining low-growing native herbaceous vegetation as a standard project requirement of WUI or fuel break treatment serves the fuel reduction and environmental objectives of the project. It also greatly minimizes negative aesthetic impacts. The below examples in Figure 1 were taken from combined WUI and fuel break treatment work in the Central California Coast ecoregion where herbaceous native vegetation is retained.

Figure 2. Fuel reduction treatments examples that retain herbaceous native vegetation

		
<p>WUI treatment example (source: CNGA, 2019)</p>	<p>Non-shaded fuel break example. Native Blue Wildrye bunchgrass (<i>Elymus glaucus</i>) in the foreground. (source: CNGA, 2019)</p>	<p>Shaded fuel break example (source: CNGA, 2019)</p>

The CalVTP PEIR states that “to counteract decades of fire suppression and mitigate the effects of climate change, vegetation treatments would be designed to *reduce hazardous vegetative fuels*, improve protection from wildfire through strategically located fuel breaks, and mimic a natural fire regime using prescribed burning. Additionally, “vegetation treatment at the landscape scale is focused on *reducing* the likelihood of a ground fire increasing in intensity (note: by reducing amount, density, and continuity of vegetation fuels) and helping fire responders more *easily contain a fire*” (1.1 Purpose of the CalVTP, pg. 1-3, italics added).

Retaining native grasses and forbs serves to reduce the likelihood of a ground fire increasing in intensity by retaining the native vegetation systems that preserve soil moisture and can continue to compete against type conversion to tall, dense, and rapidly drying weeds. In addition, keeping this native flora is in line with the PEIR’s intent to maximize “natural habitat conditions, processes, and values”, as well as minimizing severe aesthetic impacts.

Severe landscape treatment such as those depicted in Figure 1 may have been traditionally employed, and it may be a necessary outcome in certain situations, but the photographic images in Figure 1 do not adequately model treatment outcomes that fully coincide with the stated fuel reduction, environmental, and aesthetic objectives of the PEIR. Therefore, we recommend that:

- a) the PEIR include photographic images that model the PEIR treatment results that conserve special status species, sensitive plant communities, and beneficial native vegetation.

O18-2
cont.

- b) if scientific evidence or case studies justify keeping these more severe landscape treatments in certain fuel reduction conditions (such as areas already overtaken by dense and tall invasive weeds), these conditions should be clearly described in the PEIR.

O18-2
cont.

3. Fuel breaks should not be located in sensitive natural communities.

In situations where this is not possible, mitigation measure Bio 3a should be modified so that, instead of removal, no more than 20% of a sensitive natural community may be treated to reduce fuel amount, density, or continuity in a way that retains the functioning of that sensitive natural community consistent with the “ecological restoration” treatment in the PEIR.

“Mitigation 3c” seems to assume that developing fuel breaks and maintaining intact sensitive native herbaceous vegetation natural communities (as well as sensitive plant communities in general) is incompatible with the objectives and strategy of the CalVPT. The California Native Grasslands Association commends the PEIR program for including specific protective measures for sensitive natural communities, including native perennial grass and forbs. Our position is also that native herbaceous vegetation, both as sensitive natural communities and as foundational vegetation, is an asset toward project objectives, and not an impediment.

O18-3

Currently, the PEIR Mitigation BIO 3a states that: *To the extent feasible, fuel breaks will not remove more than 20 percent of the native vegetation cover from a stand of sensitive natural community vegetation in sensitive natural communities with a rarity rank of S3 (vulnerable) or in oak woodlands. In forest and woodland sensitive natural communities with a rarity rank of S3, and in oak woodlands, only shaded fuel breaks will be installed, and they will not be installed in more than 20 percent of the stand of sensitive natural community or oak woodland vegetation* (italics and underline added).

It is recommended that this Mitigation measure be modified to state that sensitive natural communities be avoided. If unavoidable, no more than 20% would be treated consistent with the PEIR “ecological restoration” treatment. This ecological restoration treatment is described as the process of “re-establishing the composition, structure, pattern, integrity, and ecological processes necessary to facilitate terrestrial and aquatic ecosystem sustainability, resilience, and health currently and in the future. This would involve vegetation treatments that seek to return the landscape closer to native conditions where natural fire processes can be reestablished and habitat quality is improved, including habitat remediation where non-native, invasive plants have spread, and excess fire fuel buildup has occurred” (pg. 2-15).

- 4. Standard Project Requirements – qualifications. The RFP and botanist should be able to demonstrate knowledge and recognition of sensitive natural communities, including native grasses and forbs within the ecoregion project area, and also have direct and timely access to botanical expertise and information to assist in identifying the special-status species and sensitive natural communities on the project site.**

O18-4

Section “2.7.5 Biological Resource Standard Project Requirements (pg. 2-35) states that the: “Qualified Registered Professional Forester (RPF) or Botanist: To be qualified, an RPF or botanist would 1) be knowledgeable about plant taxonomy, 2) be familiar with plants of the region, including special-status plants, 3) have experience conducting floristic botanical field surveys as described in CDFW “Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities” (current version dated March 20, 2018), or experience conducting such botanical field surveys under the direction of an experienced botanical field surveyor, 4) be familiar with the California Manual of Vegetation (Sawyer et al. 2009 or current version), and 5) be familiar with federal, state, and local statutes and regulations related to plants and plant collecting. The project proponent will review the resume and approve the qualifications of RPFs or botanists.” We recommend that 2) be modified to say that be the Forester or Botanist “be familiar with plants of the region, including special-status plants and sensitive natural communities”.

O18-4
cont.

It goes without saying that the flora of California is diverse, especially for a project of this scale. Also, sensitive natural communities, particularly for native grasses and forbs during dormancy, require skill and experience to recognize in the field. Therefore, it is recommended that the PEIR stipulate that qualified Registered Professional Foresters and Botanists also have direct and timely access to botanical expertise and information to assist in identifying the special-status species and sensitive natural community on the project site. Where reception allows it, this additional technical support may be provided electronically.

- 5. Due to the relatively limited scientific evidence and longitudinal experience at the scale of this proposed program , the varied and complex ecoregions of California, as well as the desire to minimize large scale, unintended consequences, it is strongly recommended that a) Adaptive management protocols and practices be incorporated as a necessary, not an optional, feature of the CalVTP, and, b) a three year site treatment follow up “treatment establishment” program be required.**

O18-5

- a) Adaptive management protocols and practices be incorporated as a necessary, not an optional, feature of the CalVTP**

It is recommended that adaptive management protocols be firmly in place and funded when CalFire begins to ramp up the scale and pace of vegetation fuel treatments from an estimated initial 25,000 acres of prescribed burning and 20,000 acres of other treatment activities statewide (45,000 acres), to reach approximately 250,000 acres per year in 2024.

O18-6

Currently, adaptive management efforts are described as follows: “Effectiveness or validation monitoring after application of a treatment *may* be performed to the extent feasible, recognizing fiscal constraints, the need for ongoing access to property, and staff availability” (2.6.1 Adaptive Management - Framework Development and Monitoring, italics added).

The PEIR describes a useful adaptive management framework. However, due to the scale of this project and relatively limited scientific evidence and longitudinal experience to address varying conditions within multiple and complex ecoregions, it is recommended that this section be modified to state that “Effectiveness or validation monitoring after application of a treatment *will* be performed and funded - with staffing. Contracts under the PEIR will require ongoing access to property over a prescribed period (usually up to three years) to perform effectiveness and validation monitoring.”

O18-6
cont.

Additionally, it is recommended that a state-funded clearinghouse be set up so that agencies and the public can link to timely and updated information on the new scientific information, and the location, timing, and effectiveness monitoring of treatments. It is recommended that pre and post photographic monitoring be compiled on initial treatments and followed up with post treatment photos for three years. Regarding scientific information, new information is being developed on managing grasslands, including the effects of timing and fire frequency on recruitment and populations of certain sensitive native grass communities. This information builds upon the fire frequency rate information referenced in the PEIR under the Manual of California Vegetation (Sawyer, 2009) and should be made available to CalVTP projects statewide.

O18-7

b) A three year site treatment follow up “treatment establishment” program is spelled out and required.

From the “Program Description” (Section 2.3.2 - Proposed CalVTP Implementation or 2.6 – Implementation Framework) it is not apparent that follow up to initial treatments is included in the PEIR. Assuring that “adaptive management” becomes a key component of the PEIR allows the State and the public to use the ramping up period to follow up on, and attempt to repair if necessary, treatment approaches in different ecoregion situations. It is recommended that the Program Description include provisions for a three year follow up review, with follow up treatment as needed, for each unique treatment in each unique ecoregion landscape situation. If the follow up review of the treatment shows that the treatment is meeting fuel reduction and standards, and either enhances or is benign to ecological diversity and functioning, it can be added to the “lessons learned” data base in the PEIR’s adaptive management component. If the treatment is not achieving fuel reduction and results in significant environmental impacts for the particular landscape situation, follow up fuel treatment and any compensatory environmental mitigation will be needed, The treatment will be modified or abandoned for that situation. Information on both outcomes is vital to achieving success and avoiding massive unintended consequences as the project ramps up to a quarter-million acres of treatment per year.

O18-8

6. It is recommended that avoiding impacts in sensitive soil substrates be added as a Standard Program Requirement

O18-9

Section 2.7.5 “Biological Resource Standard Project Requirements” provides for identifying and minimizing impacts to Coast Zone ESHAs (SPR BIO-9). Serpentine, sands, rock outcrops, and other sensitive soil substrates often support special status plants. To enhance the protection of special status plants, especially since equipment or other disturbance could, and often does, occur when the special status plants may be dormant, we recommend that a Standard Program Requirement be added to identify and avoid impacts to sensitive soil substrates. These substrates tend to be thin soils that do not support dense vegetation.

O18-9
cont.

7. It is recommended that a Certified Rangeland Manager (CRM) is consulted when prescribed grazing is being considered as a treatment.

The PEIR currently states that consulting with a Certified Rangeland Manager (CRM) is *advised* when prescribed grazing is being considered as a treatment. We recommend that a CRM is consulted because of the reasons explained in the PEIR – “Effectiveness of these treatments depend on a number of things that CRMs have familiarity with, including the palatability of plant species on the site to the animals available for use; how terrain, water availability, and environmental conditions during the grazing period are likely to influence animal behavior; and other potentially complicating factors like predators (including domestic dogs); public access; and setting up adequate facilities up for gathering and loading animals arriving at or being removed from the site.” The CRM should also be able to advise the project on needed measures to avoid the spread of invasive weeds.

O18-10

8. It is recommended that the Section 3 - Ecoregion tables of “Vegetation and Habitat Types within the Treatable Landscape” be updated as new information on sensitive natural communities becomes available.

The California Native Plant Society, the California Department of Fish and Wildlife, and other partners have developed valuable mapping classifications of plant alliance and sensitive natural communities to describe the state’s rich and diverse vegetation. PEIR projects may uncover sensitive natural community alliances where they have not been evident before, or potential sensitive natural community alliances that have yet to be fully analyzed and classified. Therefore, we recommend that the ecoregion tables of “Vegetation and Habitat Types within the Treatable Landscape” be updated if and when this occurs. This is a long term project and updated environmental resource information should be available to contractors, agencies, and the public through an online clearinghouse as recommended in comment “5a” above.

O18-11

9. CalVTP vegetation treatments are suggested stated as one element of a system of increased fire resilience in California (VTP objectives #1). Additional details are needed to describe how CalVTP will help inform the public and public officials about the role of home hardening, improving escape routes, improving communications systems, etc. so that the CalVTPs is understood as one of many practices needed to achieve to improve fire resilience in California.

O18-12

The PEIR Introduction describes the proposed CalVTP “as one component of the range of actions being implemented by the state to respond to California’s wildfire crisis.” Also that “the state’s approach to the crisis includes an array of strategies, such as cost-effective home hardening, expanded evacuation capacity, comprehensive emergency planning, and improved land use practices, as well as investment in new suppression and response equipment and resources, use of technology tools, and establishment of strong utility oversight.” The Program Description describes numerous ways that the CalVTP would interface with the public to minimize nuisance, inform the public of upcoming prescribed burn days, etc. However, there is inadequate information provided about how CalVTP will also help inform the public and local government that vegetation fuel reduction is just one component and that the public and local government have a role in improving fire resilience in California, too.

O18-12
cont.

Because of the numerous interactions with the public, other agencies, and local government, CalVTP will become a very visible program in locales where vegetation fuel treatments are taking place. Therefore, it is recommended that CalVTP projects communicate all the ways to limit fire risk as an adjunct to regular contact with local government, neighborhood associations, and the public at large.

Thank you for the opportunity to comment on the draft PEIR and for your consideration of our comments.

Sincerely,

Andrea Williams

Andrea Williams
President

Jim Hanson

Jim Hanson
Conservation Chair



August 9, 2019

via email CalVTP@bof.ca.gov

Board of Forestry and Fire Protection
Attn: CalVTP
PO Box 944246
Sacramento, CA 94244-2460

Subject: Draft Program Environmental Impact Report for California Vegetation Treatment Program
(Comments)

To the Board:

Greenspace – The Cambria Land Trust is grateful for the opportunity to comment on the Draft Program Environmental Impact Report for the proposed California Vegetation Treatment Program. Greenspace’s mission is to protect and enhance the San Luis Obispo County’s North Coast area’s ecological systems, cultural resources and marine habitats through land acquisition and management, public education and advocacy.

O19-1

Cambria is located in one of three natural stands of rare Monterey Pine. As such, the forest deserves and requires special consideration in vegetation clearing. While removing invasive vegetation is important to the forest ecology, care must be taken to protect trees, wildlife and riparian areas.

Cambria has a Forest Management Plan, but funds to implement it have never been allocated. The plan provides a guide for well-designed and effective forest management projects. It includes forest treatment prescriptions and techniques appropriate to the Monterey Pine Forest and its terrain.

O19-2

The forest is effectively owned by the individual lot owners. Monterey pine forest covers approximately 3,500 acres in and around the community of Cambria. About 2,300 acres of the Cambria forest remains undeveloped; an additional 1,200 acres intergrades with developed areas. The oversight of a forest manager would be invaluable in keeping the forest healthy and preventing catastrophic fire.

THE GREENSPACE BOARD OF DIRECTORS

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Effective management of California’s native Monterey pine forests is of great concern because it is a unique plant community with a naturally limited distribution. In addition, the ecological conditions that support California’s native Monterey pine populations also support several other special-status plant and wildlife species in addition to the coastal live oak. Like Monterey pine, many of these species are restricted to specialized habitats along the coast.

O19-3

Specific Comments

Page 3.6-25. The Monterey Pine is not listed in Table 3.6-3 “Vegetation and Habitat Types within the Treatable Landscape for the Central California Coast Ecological Section” which would identify the Monterey Pine as part of sensitive natural communities. Monterey Pine, *Pinus radiata*, is on the International Union for Conservation of Nature’s Red List of Threatened Species and is listed as Endangered. The PEIR in BIO-3 Table 1a does show it as a “Special-Status Plant Species Known or with Potential to Occur in the Central Coast Ecological Section (261A) with the Treatment Areas”. The California Coastal Commission considers native Monterey pine forest ecosystems Environmentally Sensitive Habitat Area. The California Coastal Act section 30240 states “(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.” Section 30240 of the California Act states: Environmentally sensitive habitat areas; adjacent developments (a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas. We also cite FISH AND GAME CODE - FGC:

O19-4

DIVISION 2. DEPARTMENT OF FISH AND WILDLIFE [700 - 1940]

(Heading of Division 2 amended by Stats. 2015, Ch. 154, Sec. 21.)

CHAPTER 10. Native Plant Protection [1900 - 1913] (Chapter 10 added by Stats. 1977, Ch. 1181.)

1900. The intent of the Legislature and the purpose of this chapter is to preserve, protect and enhance endangered or rare native plants of this state. The Legislature finds that many species and subspecies of native plants are endangered because their habitats are threatened with destruction, drastic modification, or severe curtailment, or because of commercial exploitation or by other means, or because of disease or other factors. (Added by Stats. 1977, Ch. 1181.)

1901. The department shall establish criteria for determining if a species, subspecies, or variety of native plant is endangered or rare. As used in this chapter, “native plant” means a plant growing in a wild uncultivated state which is normally found native to the plant life of this state. A species, subspecies, or variety is endangered when its prospects of survival and reproduction are in immediate jeopardy from one or more causes. A species, subspecies, or variety is rare when, although not presently threatened with extinction, it is in such small numbers throughout its range that it may become endangered if its present environment worsens.(Added by Stats. 1977, Ch. 1181.) We recommend the Monterey Pine be included in Table 3.6-3 and all relevant instances to protect it.

Page 3.11-5. The Monterey Pine Forest is omitted from the description of the Central Coast Hydrologic Region section and suggest it be included due to its significance.

O19-5



Page 4-5. "The annual acreage treated by federal agencies outside the SRA is summarized in Error! Reference source not found.." (Section 4.3.4) Please correct this link in the document.

O19-6

Appendix BIO-1. In the Descriptions of CWHR Types, we recommend that additional language be added to the Ecological Description for the "Closed-Cone Pine-Cypress" Classification to refer to the existence of fog in this habitat.

O19-7

Page 3.3-6. The PEIR states "...that treatments implemented under the proposed CalVTP, they are exempt from local government plans, policies, and ordinance and the PEIR assumes that any vegetation treatments proposed by local or regional agencies under the CalVTP would be consistent with the local plans...". We see the following potential conflicts with SPR AD-3 as follows:

Title 24 Code - San Luis Obispo County Local Coastal Plan

23.05.030 - Grading Permit Review And Approval

c. Grading adjacent to Environmentally Sensitive Habitats. Grading shall not occur within 100 feet of any Environmentally Sensitive Habitat except: (1) Where a setback adjustment has been granted as set forth in Sections 23.07.172d(2) (Wetlands) or 23.07.174d(2) (Streams and Riparian Vegetation) of this title; or (2) Within an urban service line when grading is necessary to locate a principally permitted use and where the approval body can find that the application of the 100- foot setback would render the site physically unsuitable for a principally permitted use. In such cases, the 100-foot setback shall only be reduced to a point where the principally-permitted use, as modified as much as practical from a design standpoint, can be located on the site. In no case shall grading occur closer than 50 feet from the Environmentally Sensitive Habitat or as allowed by planning area standard, whichever is greater.

d. Landform alterations within public view corridors. Grading, vegetation removal and other landform alterations shall be minimized on sites located within areas determined by the Planning Director to be a public view corridors from collector or arterial roads. Where feasible, contours of finished grading are to blend with adjacent natural terrain to achieve a consistent grade and appearance

O19-8

23.05.036 - Sedimentation and Erosion Control a. Sedimentation and erosion control plan required:

Submittal of a sedimentation and erosion control plan for review and approval by the County Engineer is required when: (1) Grading requiring a permit is proposed to be conducted or left in an unfinished state during the period from October 15 through April 15; or (2) Land disturbance activities, including the removal of more than one-half acre of native vegetation are conducted in geologically unstable areas, on slopes in excess of 30%, on soils rated as having severe erosion hazard, or within 100 feet of any water course shown on the most current 7-1/2 minute USGS quadrangle map

23.05.042 - Drainage Plan Required - No land use or construction permit (as applicable) shall be issued for a project where a drainage plan is required, unless a drainage plan is first approved pursuant to Section 23.05.046. Drainage plans shall be submitted with or be made part any land use, building or grading permit application for a project that: a. Involves a land disturbance (grading, or removal of vegetation down to duff or bare soil, by any method) of more than 40,000 square feet



23.05.060 - Tree Removal - The purpose of these standards is to protect existing trees and other coastal vegetation from indiscriminate or unnecessary removal consistent with Local Coastal Plan policies and pursuant to Section 30251 of the Coastal Act which requires protection of scenic and visual qualities of coastal areas. Tree removal means the destruction or displacement of a tree by cutting, bulldozing, or other mechanical or chemical methods, which results in physical transportation of the tree from its site and/or death of the tree.

23.05.062 - Tree Removal Permit Required - No person shall allow or cause the removal of any tree without first obtaining a tree removal permit, as required by this section:

a. When required. Plot Plan approval (Section 23.02.030), is required before the removal or replacement of any existing trees except for tree removal under circumstances that are exempt from tree removal permit requirements pursuant to subsection b. of this section, and except for the following types of tree removal, which are instead subject to Minor Use Permit approval:

- (1) Riparian vegetation near any coastal stream or wetland. (See Section 23.07.174 for additional standards);
- (2) Proposed for removal when not accompanied by a land use permit for development;
- (3) Located in any appealable area as defined by Section 23.01.043c;
- (4) Located in any Sensitive Resource Area (where the identified resources are trees) as shown on official combining designation maps (Part III of Land Use Element);
- (5) Where tree cutting will cumulatively remove more than 6,000 square feet of vegetation as measured from the canopy of trees removed

Greenspace - The Cambria Land Trust recognizes vegetation management of invasive weeds is especially important in the forest. Vegetation management needs to focus on discouraging regrowth of invasives and re-establishment of native plants. Vegetation removal must also avoid damaging riparian areas such that stream banks can be eroded. Further damage to the forest can cause the spread of invasive plants that increase the risk of fire. We are available to discuss our comments and recommendations.

Sincerely,

Andrea Wogsland
Executive Director

O19-8
cont.

O19-9

August 9, 2019

California Board of Forestry and Fire Protection
Attn: California Vegetation Treatment Program
PO Box 944246
Sacramento, CA 94244-2460

RE: Comments on the Draft Program Environmental Impact Report for the Proposed California Vegetation Treatment Program

The Nature Conservancy (the Conservancy) is an international nonprofit organization dedicated to conserving the lands and waters on which all life depends. We seek to achieve our mission through science-based planning and implementation of conservation strategies that provide for the needs of people and nature. The Conservancy's science is leading the way in better defining the problems facing our forests and the necessary solutions by setting out a scientific case for ecological forestry as the linchpin strategy for reducing the risk of megafires in our forests, prioritizing watersheds for restoration with respect to biodiversity value and risk to communities, and working with partners to invest in ecological forestry.

The Conservancy supports ecologically-based forest management that promotes forest health and resilience in fire-prone forests such as the Sierra Nevada. Ecologically-based forest management involves thinning treatments that focus on removing over-abundant small diameter trees and other surface and ladder fuels while maintaining mature forest cover, including fire-resilient large trees, and the use of prescribed and managed wildfire. Forest thinning and controlled burns are proven, cost-effective strategies to reduce the risk of high-severity megafires and promote healthier, more resilient forests. Science shows that ecological thinning and prescribed burning, together, can effectively change wildfire behavior. The pace and scale of ecologically-based forest management needs to be significantly increased, given the magnitude and urgency of the problem. Our team has completed several reports that describe the values of ecological forestry¹, the benefits of partner-based approaches to forest restoration², and the avoided costs of preventative forest management³.

The Conservancy works with the California Department of Forestry and Fire Protection (CAL FIRE) as well as other state, federal, local, and private entities to reduce the risk and impacts of future megafires in California's fire prone forests. The Conservancy supports the objectives of the California Vegetation Treatment Program (CalVTP) and the expressed role of vegetation treatment in implementing state policies and plans for wildfire risk reduction, greenhouse gas (GHG) reduction, and management of natural and working lands. In particular, the Conservancy supports the CalVTP's goal to substantially increase the use of prescribed burning as a fuels reduction and restoration tool in our fire-prone forests.

O20-1

¹ https://www.scienceforconservation.org/assets/downloads/WildfireForestResilience_2019_Kelsey_2.pdf

² https://www.scienceforconservation.org/assets/downloads/FrenchMeadowsLessons_2019.pdf

³ https://sierranevada.ca.gov/wp-content/uploads/sites/236/2019/05/MACA_Full_Report.pdf

To further improve the CalVTP, we offer the following suggestions and recommendations.

Prioritize Durable Landscape Scale Treatments

The recent drought and the 130 million dead or dying trees in the Sierra Nevada that followed underscored how over-stocked, fire starved and unstable California’s inland forests are today. However, through a substantial increase in the use of ecological forestry⁴ including prescribed fire, we can increase the resilience and health of our forests. The expected benefits are well-documented and include the provisioning of clean air and clean water, stable and well-paying jobs for residents of rural communities, conservation of critical wildlife habitat and stabilization of massive carbon reservoirs. For these reasons, the Conservancy recommends that a large proportion of the CalVTP’s annual treatment target (i.e. 250,000 acres per year) focus on forest and associated woodland systems that are highly departed from their pre-settlement fire return intervals.

O20-2

Treatment Maintenance. The CalVTP notes that regrowth of vegetation reduces the effectiveness of fuels treatments over a relatively short period of time (e.g. 5 – 10 years). To help ensure the benefits of upfront investments are not lost, the Conservancy supports additional funding for the creation and maintenance of durable, landscape scale treatments.

O20-3

Prioritize Communities and Large Forest Landscapes. Building on Governor Gavin Newsom’s Executive Order N-05-19, we recommend that proposed activities within the wildland-urban interface (WUI) and fuel break treatments (i.e. Figures 2-4 and 2-7 of the CalVTP) be further prioritized based on the people and assets known to be a greatest relative risk. Mitigating the risk of wildfire impacts to lives and property starts at the scale of individual homes, businesses and infrastructure; its effectiveness increases if projects are also completed in established defense and threat zones as defined by CAL FIRE.

O20-4

In addition, projects should be prioritized to ensure that multiple individual treatments are likely to add up to an effective hazardous fuels management strategy for a given community and/or watershed. Landscapes should be identified and prioritized where treatments will result in a high return on investment over the next 10-20 years. We suggest CAL FIRE consider further prioritizing ecological restoration treatments intended to bolster WUI and fuel break treatments by using the Conservancy’s Sierra Blueprint for forest restoration⁵.

Public Engagement

Because the CalVTP is a statewide document, project-level conditions may not always match the generalized conditions contemplated in the CalVTP, and the programmatic environmental impact report (PEIR) may not adequately capture likely site-specific impacts. There will also be instances when expert advice and public input can help tailor project design elements to minimize impacts to sensitive natural resources within the framework of the PEIR. In both these situations, local and/or regional knowledge can improve project design, the application of mitigation measures and the effectiveness of the fuels treatments themselves. For these reasons, the Conservancy recommends the Board of Forestry develop public notice provisions for inclusion in the PEIR Program Description (Chapter 2). These provisions

O20-5

⁴ https://www.scienceforconservation.org/assets/downloads/WildfireForestResilience_2019_Kelsey_2.pdf

⁵ <https://www.scienceforconservation.org/products/sierra-blueprint>

should go beyond the filing of a Notice of Determination for individual projects and facilitate broad local and regional awareness of upcoming projects, providing sufficient advanced notice for members of the public, public agencies, and other stakeholders to comment on whether the project and its likely impacts are within the scope of the CalVTP.

The Board of Forestry should also develop language for inclusion in Chapter 2 that establishes criteria and a process for project proponents to conduct additional public outreach. Such outreach should be reserved for potential impacts for which local factors and/or expertise may be important to consider.

In addition, proposed, active and completed projects should be monitored and tracked online to allow stakeholders the opportunity to evaluate progress in meeting local or regional hazardous fuels reduction goals, including essential follow up maintenance treatments. An online tracking tool would demonstrate the progress towards meeting the state’s vegetation management and wildfire safety goals.

O20-5
cont.

Ensure Resilient Landscapes

The CalVTP should include the retainment and recruitment of large trees as part of the Standard Project Requirements (SPRs) to ensure large, fire-resilient trees are retained wherever possible. The Conservancy recommends adding additional resiliency language to SPR BIO-1: Review and Survey Project-Specific Biological Resources.

O20-6

Limit the Use of Herbicides and Carefully Consider Cultural Practices

Limit Herbicide Use. CalVTP treatments will likely be near populated areas and/or domestic water supplies. For this reason, we suggest CAL FIRE consider herbicide application as a last resort among the list of vegetation management treatments options. If herbicide use is determined to be the only effective treatment, we recommend the least toxic formulations be used and that applications be as localized as possible. Further, we recommend the SPRs explicitly require the avoidance of herbicide use in areas known to be utilized by indigenous tribes to cultivate food stocks and other essential plant materials (e.g. those used to create baskets).

O20-7

O20-8

Carefully Consider Cultural Practices. We suggest the CalVTP further consider the seasonality of prescribed fire use (e.g. spring versus fall burning) with reference to tribal knowledge. The Conservancy recommends adding this consideration to SPR CUL-7: Cultural Resource Training.

O20-9

Chaparral and Coastal Scrub

Many of the shrublands in southern California identified in the CalVTP have burned in wildfires over the past two decades are still undergoing fire recovery. We recommend that such areas be carefully evaluated during project development to avoid exacerbating invasive species problems and/or further simplifying habitat. We also suggest mapping recently burned areas and the areas of chaparral and scrub habitat to assist with identifying the appropriate spatial scale at which type conversion will be evaluated.

O20-10

Desert Scrub Habitat. Desert scrub habitats are not adapted to fire or other mechanical or manual fuel treatments and should be removed from the Ecological Restoration treatment type unless the treatment is focused on non-native plant removal⁶.


O20-11

Prevent Spread of Plant Pathogens. The SPR BIO-6: Prevent Spread of Plant Pathogens should include reference to riparian woodland tree pests (shot hole borers and pathogens that spread them) and include retaining downed/cut wood in place and ensuring it is not removed from the project site.

O20-12

Thank you for the opportunity to comment on the CalVTP and we look forward to assisting with implementation.

Sincerely,



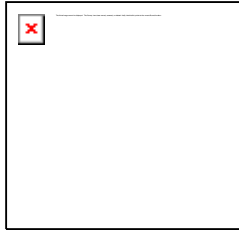
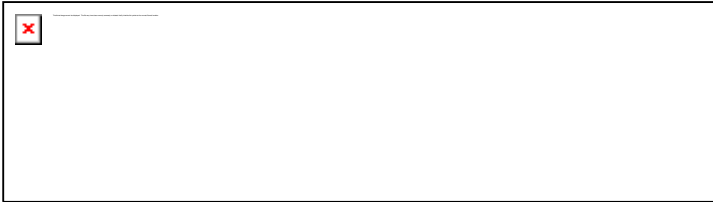
Jay Ziegler
Director of External Affairs and Policy
The Nature Conservancy

⁶ Safford, Hugh D.; Van de Water, Kip M. 2014. Using fire return interval departure (FRID) analysis to map spatial and temporal changes in fire frequency on national forest lands in California. Res. Pap. PSW-RP-266. Albany, CA: U.S. Department of Agriculture, Forest Service, Pacific Southwest Research Station. 59 p.

Hannigan, Edith@BOF

From: Judy Villablanca <judygrobv@gmail.com>
Sent: Friday, August 9, 2019 6:58 PM
To: CALVTP@BOF; Judy Villablanca
Subject: Comments on California Vegetation Treatment Draft Program EIR

Warning: this message is from an external user and should be treated with caution.



Board of Forestry and Fire Protection
ATTN: Edith Hannigan, Board Analyst
1416 9th Street, Room 1506-14
Sacramento, CA 95814

9 August 2019

**Re: The California Vegetation Treatment Program Draft Program EIR
State Clearinghouse number 2019012052**

Dear Members of the Board, Executive Officer Matt Dias, Deputy Secretary of Forest Resources Management Jessica Morse, Senator Hannah-Beth Jackson, and Edith Hannigan,

The Malibu Monarch Project does not support the draft PEIR.

There is no need for the ongoing proposed destruction of the chaparral. There is solid documentation that clearing of the chaparral only increases invasive grasses and mustard which are the real accelerants in wildfire. Therefore this plan actually increases the risk of wildfire. These proposed actions will adversely affect both the flora and fauna of the chaparral and coastal sage scrub ecosystems.

O21-1

Manuel removal of invasives, particularly prior to their seeding and growth in early spring which suppress emergence of native plants, is the protective and sustainable action for these ecosystems.

O21-2

Hardening structures with known methods, restricting development in high risk areas of the wildland urban interface, burying electrical wires, and excluding use of equipment and practices known to spark a fire on red flag days would clearly temper our exposure to wildfire and keep the wildland safer as well.

O21-3

We support the analysis by the Chaparral Institute of the flaws and misstatements in the draft PEIR.] 021-4

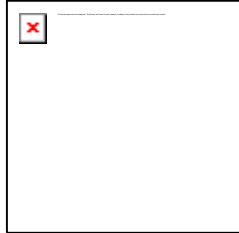
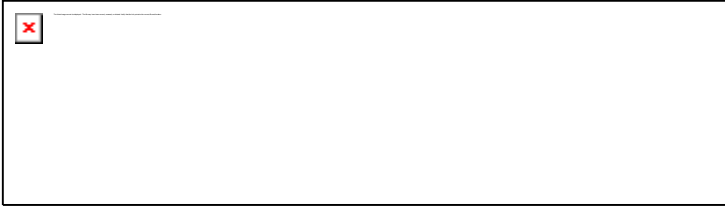
A new and scientifically driven plan must be developed.

Malibu Monarch Project
Georgia Goldfarb
Judy Villablanca
Sandy Glover

Hannigan, Edith@BOF

From: Judy Villablanca <judygrobv@gmail.com>
Sent: Friday, August 9, 2019 3:51 PM
To: CALVTP@BOF
Cc: Patt Healy; Georgia Goldfarb, MD; Sandy Glover; Judy Villablanca
Subject: Comments regarding California Vegetation Treatment Program Draft EIR (State Clearinghouse number 2019012052)

Warning: this message is from an external user and should be treated with caution.



Board of Forestry and Fire Protection
ATTN: Edith Hannigan, Board Analyst
1416 9th Street, Room 1506-14
Sacramento, CA 95814

9 August 2019

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Manuel removal of invasives, particularly prior to their seeding and growth in early spring which suppress emergence of native plants, is the protective and sustainable action for these ecosystems.

Hardening structures with known methods, restricting development in high risk areas of the wildland urban interface, burying electrical wires, and excluding use of equipment

O21-5

and practices known to spark a fire on red flag days would clearly temper our exposure to wildfire and keep the wildland safer as well.

We support the analysis by the Chaparral Institute of the flaws and misstatements in the draft PEIR.

A new and scientifically driven plan must be developed.

Malibu Monarch Project
Georgia Goldfarb
Patt Healy
Judy Villablanca
Sandy Glover

O21-5
cont.

August 9, 2019

From Willits Environmental Center
630 South Main Street
Willits, CA 95490
707-459-4110, or 707-459-2643
wece@sbcglobal.net

To: CalVTP
P.O. Box 944246
Sacramento, CA 94244-2460
CalVTP@bof.ca.gov

Re: Comments on the CalVTP PEIR

Dears Sirs/Madames;

The Willits Environmental Center would like to submit the following comments on the proposed CalVTP Program Environmental Impact Report. In addition to our comments below, we include by reference the CalVTP PEIR comments of the Sierra Club and those of the Center For Biological Diversity.

O22-1

The Willits Environmental Center supports a combination of the No Action Alternative and actions that focus on fire-prone areas of denser population, and infrastructure installations that serve densely populated areas.

Based on our experience reviewing CEQA and NEPA analyses, is not possible to make a meaningful assessment of the environmental impacts of “treating”, i.e. reducing or eliminating vegetative cover, in over 20 million acres of the State at a rate of 250,000 acres per year (and cumulatively with the work of other agencies, 500,000 acres per year). So, unfortunately, we must reject this environmental impact review as at best misguided and at worst a cynical effort to get through a legally required process without serious intent to examine consequences and alternatives.

O22-2

This review should at least analyze separately the impacts of each proposed treatment for each ecosystem type, of which there are hundreds in California’s world-renowned natural ecosystems.

Since this proposal would expand (by 3500 times!) ongoing fire risk reduction vegetation removal in scale and methodology, this review should at least contain assessments of the environmental consequences of these on-going treatments. If approximately 7,000 acres per year are “treated” in various situations, this document could provide analyses of the environmental consequences of those treatments on water quality, soil biology, relative humidity in the area, species diversity changes including from the micro to the macro level, and affects on human

O22-3

exposure to fire risk at intervals of one year, two years, five, ten, etc. following the “treatment”. The examples of on-going treatments provided in the document tell nothing other than that vegetation was in fact removed. Because CalFire has been involved in fire risk reduction activities and in the actual fire fighting and its aftermath, CalFire or other State agencies should be accumulating data and experience that could provide some factual description of what the proposal’s impacts would be on the ground and support this analysis and justification for the Alternatives selections. It does not. In fact, the document provides no evidence that the proposed plan will meet the goals of protecting life, property and natural resources.

O22-3
cont.

O22-4

We object to expanding the vegetation removal methodologies to include mastication and the use of herbicides by any method. The former has no comparable process in the natural world in terms of the pace, scale and mechanized breakdown and may cause unintended negative impacts on numerous species that rely on slower and organic breakdown processes, which this analysis fails to consider. This methodology could also be a potent agent in spreading plant diseases. The latter, herbicide use, has a massive and growing body of documented toxicity to unintended targets including humans. This document fails to address this research in any depth or breadth. For example, there is no analysis of the consequences to employees of daily exposure to chemical drift or other forms of unavoidable contact other than to assure the reader that the product manufacturers’ application recommendations will be adhered to. These usual assurances of implementing BMP’s and other platitudes have failed to adequately protect people or the environment from harm thus far from the use of herbicides, including some of the eleven herbicides anticipated to be used, such as glyphosate, which herbicide is now recognized as a probable carcinogen. Beyond humans, herbicides kill micro and macro invertebrates critical to plant survival. That poisoning ripples up through the ecosystem weakening the health of the entire system. Herbicides have impacts that are potentially devastating, especially if the ecosystem comes under increasing stress. They have no place in this proposal.

O22-5

We object to the use of Waste Discharge Waivers as a way to “ramp up” the number of acres “treated” and to fast-track vegetation removal. Such short term expediency endangers water quality and aquatic ecosystems. Removing vegetative cover and using mechanized equipment will leave more compacted soils and soils with less protection from drying heat and winds and less protection from the impacts of heavy rainfall without the benefit of an intervening dense canopy. These are the very conditions under which waste discharge requirements should be strictly applied, not waived.

O22-6

The PEIR fails to address the Migratory Bird Act. The Act prohibits the destruction of nesting and rearing habitats of migratory and resident birds throughout the State including all habitats targeted for vegetation removal in the proposed CalVTP. In adherence to the Act, vegetation removal would not be allowed for several months from early Spring through late Summer depending on the particular habitat. Ground level vegetation and dense thickets, vegetation types specifically targeted in fire risk reduction activities, is especially critical to many species of migratory and resident bird species, several of which are special status species, and some of which are threatened or endangered species. In an effort to specifically remove this vegetation

O22-7

type, this plan could disturb and in fact destroy habitat and protected species directly if implemented during nesting and rearing seasons, and indirectly by attempting to remove certain habitats altogether.

O22-7
cont.

The PEIR fails in every regard to conduct a cumulative analysis of the proposed CalVTP. This failure is understandable. The task is absurd, that of assessing the cumulative impacts of removing fire fuels (anything that burns with some ease) from over 20 million acres of the State of California, which encompasses thousands of unique and infinitely complex natural ecosystems and populated by some 40 million humans. The question of how to reduce fire risk and protect the ecosystem and contribute to a healthy and hopefully resilient future must be addressed on a site by site basis.

O22-8

The proposed CalVTP fails to assemble and consider a true range of Alternatives, despite the introductory recitation of the purpose and parameters of CEQA's range of Alternatives requirements. The authors and initial reviewers of the proposed CalVTP reject several thoughtful and practical alternatives that meet all of the criteria in the CEQA guidelines. These additional alternative address most of the goals of the proposal and they are practically doable. Examples are: reducing the number of acres to be treated; focusing on the wildland/urban interface and not on the very rural sparsely populated areas of the State; excluding the use of herbicides as a treatment option; retaining the current case-by-case, site-by-site CEQA review. The proposed plan presenters/reviewers reject all of these and other suggested alternatives because they would not achieve the 250,000 acre per year (500,000 acre per year in combination with the work of other agencies and entities) set by executive order of the Governor.

O22-9

CEQA is meant to give decision makers all possible information and prod them into thorough consideration of the consequences of a project in order to make a reasoned decision before acting. Governor Brown did not have the benefit of CEQA review. We now have that opportunity to examine his proposal. If a plan at the proposal stage, as this one is, is locked into certain rigid parameters prior to CEQA review, the intent of CEQA is violated, and it becomes a meaningless exercise and a waste of time and public money. To reject the above suggested wider range of practical alternatives that could clearly achieve the programs' goals of protecting life, property and the natural environment on the basis that it doesn't meet the Governor's hoped for 500,000 acres of "treatment" per year, ignores the CEQA guidelines, and violates one of the most critical aspects of CEQA which is to consider real alternatives.

O22-10

Meeting the Governor's goal of "treating" 500,000 acres per year may in fact devastate vast swaths of the State's natural ecosystem. It could debilitate ecosystems' natural resiliency in the face of climate change, and endanger the lives and property of millions of Californians. It could accelerate climate change effects by unintentionally undermining the natural diversity and resiliency of the State's natural ecosystems to adapt to climate change.

O22-11

Therefore, to summarize, the Willits Environmental Center supports the No Action Alternative in combination with prioritizing fire risk reduction activities where population centers are adjacent

O22-12

to especially fire-prone environments. Further, we recommend that CalFire and other agencies involved in fire risk reduction through vegetation removal carry out those activities with a case-by-case CEQA review. Perhaps most importantly, we recommend that each treatment include thorough follow-up observations and record keeping so that each treatment becomes a laboratory that adds to the agencies', the publics' and elected officials' understanding of how Californians can best co-exist with our varied and precious ecosystems in a manner that we and they can survive and contribute to curbing the worst impacts of a changing climate.

O22-13

O22-14

We look forward to your responses to these comments at the above address. Thank you.

Sincerely,

Ellen Drell, for the Willits Environmental Center



CALIFORNIA
NATIVE PLANT SOCIETY

Letter
O23

August 9, 2019

Board of Forestry and Fire Protection
Attn: CalVTP
PO Box 944246
Sacramento, CA 94244-2460

By electronic transmission to: CalVTP@bof.ca.gov

RE: Comments on the Draft Program Environmental Impact Report for the Proposed Statewide Vegetation Treatment Program – CalVTP

To the members of the Board of Forestry and Fire Protection:

The California Native Plant Society appreciates the opportunity to provide comments and recommendations in response to the California Board of Forestry's (the Board, or BoF) 2019 Draft Environmental Impact Report for the California Vegetation Treatment Program (CalVTP or PEIR).

The California Native Plant Society (CNPS) is a non-profit environmental organization with over 10,000 members in 35 Chapters across California and Baja California, Mexico. CNPS' mission is to protect California's native plant heritage and preserve it for future generations through application of science, research, education, and conservation. CNPS works closely with decision-makers, scientists, and local planners to advocate for well-informed policies, regulations, and land management practices.

CNPS has advocated ecologically appropriate vegetation management of forests, shrublands, and grasslands across California for decades. It is imbued within the mission and vision of our organization. We have participated in the review of a statewide Vegetation Treatment Program (VTP) since at least 2005. During each draft VTP iteration, we have advocated increasing the pace and scale of prescribed fire as an ecological restoration tool in forests where too infrequent fire threatens forest health, while at the same time advocating a decrease in prescribed fire as a vegetation treatment tool on chaparral and coastal sage scrub dominated landscapes, where too frequent fires threaten shrubland habitats.

We are encouraged to see the 2019 CalVTP acknowledge that, even at increased in pace and scale, vegetation treatments represent only a part of what is needed to address the current state of wildfire preparedness in California (see CalVTP at p. 1-1). Simultaneously with vegetation treatment, California must commit both resources and actions that will ensure that its citizens can harden their homes against ember ignition, create and maintain appropriate defensible space, have an effective alert system when danger approaches and the means to evacuate to safety, understand and practice ways to reduce unintentional ignitions, and that will provide land-use decision-makers the wherewithal to decide when and where not to approve WUI-expanding development in high fire-hazard areas.

O23-1

The current 2019 CalVTP is an improvement over previous versions, however there are significant issues that still need to be resolved before our organization can support certification of the PEIR. We provide both general and chapter-specific comments below.

O23-1
cont.

1. The CalVTP needs an effective means of public notice, public input, and public tracking of Project Specific Analysis (PSAs).

In order to build and maintain broad public support, raise public awareness, and avoid local controversy and backlash, it is essential that such an extensive vegetation management program be designed, publicized, and implemented with transparency. In addition, due to the magnitude of the cumulative effects of the CalVTP, we strongly recommend that the state develop and maintain a transparent, tracking system for present and future vegetation treatment projects in order to account for annual acres treated, and help assess whether, cumulatively, these actions contribute positively or negatively toward the goal of a fire and climate resilient California. Over time, the CalVTP could be adapted based on findings of such assessments. While the CalVTP references an existing system that tracks acres treated by CalFIRE and contracting counties, it is clear the data collected is incomplete and this system needs improvement (see CalVTP Chapter 2.3.1 at p. 2-2). We believe designing the tracking system aligns with the scope of the Forest Management Task Force and the Ecological Performance Measures Work Group.

There needs to be a clear and effective process for the submittal, review, approval, and subsequent tracking and monitoring of projects. Such a process needs to include:

- timely notice to the interested public that a project has been proposed;
- an opportunity for public input on the proposed project;
- consultation with California Department of Fish & Wildlife (CDFW) and the State Water Board (SWRCB) on project design to ensure that the “fuel reduction project protects water resources and wildlife habitat while addressing fire behavior and public safety” consistent with PRC 4123¹;
- Consultation and coordination with local tribes and traditional cultural practitioners, where appropriate;
- Identification of PSA-certifying entity;
- tracking of proposed, ongoing, and completed projects in a publicly available online dashboard, to inform evaluation of cumulative impacts and track progress toward state goals.

O23-2

The process as currently described in the CalVTP lacks public notice or an opportunity for public input. This non-transparent approach, combined with the massive scale of the proposed PEIR, is a recipe for community conflict and acrimony. CNPS continues to commit resources to educate our members and the general public about the need to address unnatural fuel conditions and improve ecosystem resiliency. These efforts to build public support for mechanical treatments,

¹ Section 4123 of the Public Resources Codes reads:

When selecting a fuel reduction project, the department [CalFIRE] shall collaborate with the State Water Resources Control Board and the Department of Fish and Wildlife to ensure the design of the fuel reduction project protects water resources and wildlife habitat while addressing fire behavior and public safety.

prescribed fire, and other vegetation treatments could be quickly undermined if the public has no advanced knowledge of, or opportunity to comment on, projects that may directly affect their community or local region. It is essential to provide a clear mechanism for informing the public of proposed projects. This is likely best accomplished through an online portal where the public can subscribe to receive notifications of projects proposed in their region of interest, and also see what other projects have been approved or completed.

There must also be a meaningful opportunity for public input on proposed projects. The Project Specific Analysis will be the first time an interested party has a clear description of the proposed action and they must be afforded an opportunity to engage with the process in a meaningful manner. A comment period consistent with existing CEQA standards, and beginning when the Project Specific Analysis is available and notification is sent to parties who have indicated interest in projects in that region, will build and maintain community support for vegetation management projects without causing meaningful delay. Further, the project proponent and the reviewing agencies will gain insight from citizens who may have knowledge about the project area or who may have insight about conditions that would be affected by a project. CNPS has demonstrated this can be a constructive, collaborative effort between concerned local citizens and local fire crews during the implementation of California’s 2019 Emergency Fuels Reduction projects (e.g., North Fork American, North Orinda, and Ponderosa West Fuel Reduction projects).

O23-2
cont.

We believe providing transparency and an opportunity for engagement will help build consensus in our effort to create a more resilient California. Establishing a clear process for public input – which assures that feedback reaches the project proponent, the appropriate local representatives from DFW, the Regional Water Board, and the CalFire unit, as well as the approving entity – will build broader social acceptance of the CalVTP and improve individual projects.

2. The CalVTP must articulate collaboration between CalFIRE, CDFW, and SWRCB during PSA review.

The following language was established into state statute (at Public Resources Code section 4123) in June 2019, after the draft was written.

4123. When selecting a fuel reduction project, the department [CalFIRE] shall collaborate with the State Water Resources Control Board and the Department of Fish and Wildlife to ensure the design of the fuel reduction project protects water resources and wildlife habitat while addressing fire behavior and public safety.

O23-3

The CalVTP must incorporate language that clearly states CalFIRE will collaborate with CDFW SWRCB during PSA review of future project activities to reflect this new law.

3. Clarify the decision-making official for individual projects

The CalVTP it is not clear about who determines whether or not a PSA meets the criteria for programmatic approval. The PEIR needs to more clearly articulate the review and approval process, including who has the final authority and responsibility to determine whether individual projects are consistent with the PEIR and appropriate for programmatic approval. A graphic flow chart illustrating decision tree scenarios when a) CalFIRE is the lead agency, and b) when

O23-4

another entity contracts with CalFIRE would be helpful to illustrate how PSA determinations will be made.

O23-4
cont.

4. The CalVTP needs to plan for maintenance of treated areas over time

Once treated, the vegetation will regrow. As stated in the PEIR, on forested lands, treated areas will reestablish nearly to pre-treatment conditions within 8 years (see CalVTP Chapter 2.5.1 at p. 2-23), yet there is no consideration or analysis within the PEIR of follow-up activities that will need to be done to maintain desired conditions.

O23-5

The state must establish a process for monitoring the status of projects at least 10 years post treatment to determine treatment effectiveness and whether the areas still provide desired conditions, and for identifying what activities and resources are necessary to maintain desired conditions.

5. RPFs are not equivalent to qualified botanists or qualified plant ecologists in all aspects of project-level planning and monitoring, especially PSA, SPR, and MM considerations for rare plants, and rare natural communities.

Consideration of botanical resources at the project level will require the knowledge and experience of qualified plant ecologists, botanists, wildlife biologists, archaeologists, and others specialized in their disciplines to survey, design, and monitor critical aspects of successful and effective vegetation treatment activities. This is particularly relevant during implementation of Standard Project Requirement (SPR) measures SPR BIO-1 and SPR BIO-7.

Insufficiently planned projects can result in compensatory mitigation requirements, loss of critical wildlife habitat, type conversion to flashy weed vegetation, and an increase in long term vegetation management efforts.

Within its Project Description, the CalVTP describes an equivalency between a registered professional forester (RPF) and other qualified personnel:

O23-6

Qualified Registered Professional Forester (RPF) or Botanist: To be qualified, an RPF or botanist would 1) be knowledgeable about plant taxonomy, 2) be familiar with plants of the region, including special-status plants, 3) have experience conducting floristic botanical field surveys as described in CDFW “Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities” (current version dated March 20, 2018), or experience conducting such botanical field surveys under the direction of an experienced botanical field surveyor, 4) be familiar with the California Manual of Vegetation (Sawyer et al. 2009 or current version), and 5) be familiar with federal, state, and local statutes and regulations related to plants and plant collecting. The project proponent will review the resume and approve the qualifications of RPFs or botanists.

[2019 CalVTP Chapter 2.7.5 at p. 2-35]

While Registered Professional Foresters can be excellent at their craft, no one person knows enough about every aspect of plant ecology required to achieve CalVTP objectives to substitute for those who are expert in individual disciplines, this is especially true for botanical resources

whose ecological needs are extremely diverse and often site-specific. To underscore our concerns regarding the CalVTP's assumed equivalency between RPFs and qualified botanists, we refer to the November 15, 2018 letter from CDFW to the BOF, attached for reference, detailing on-going lapses and failings regarding consideration of botanical resources during development and approval of timber harvest plans (THPs), which are prepared by RPFs and approved by CalFIRE. CDFW's findings include:

Botanical scoping and survey processes, and the application of protection measures to avoid significant adverse impacts to botanical resources have been employed inconsistently in timber harvesting plans...It is unclear whether botanical resources are being adequately addressed during plan review process and if plan-specific protection measures are effective....Further, landscape-level data for plant populations and plants' responses to timber harvesting is either not collected or is inefficiently used to guide management recommendations. As submitted to CAL FIRE, plan-specific botanical protection measures often employ a one-size-fits-all approach, which may not reflect the diversity of California's native plants and plant communities and their varied responses to timber harvesting.

[November 15, 2018 letter from CDFW to BOF, p. 2-3]

Treating up to 250,000 acres annually, statewide while preserving California's rich biodiversity and maintaining clean air and water will require far more than silvicultural prescriptions, conversant knowledge of California's forest practice rules, or the singular understanding of even the most knowledgeable and experienced RPFs. We strongly recommend that botanists meeting the qualifications described by CDFW (guidelines reference) be consulted during development, monitoring, and mitigation of vegetation treatment activities.

6. Mitigation Measure requirements for plant species and communities (MM BIO-1a-c and MM BIO-3b) must include consultation with qualified botanists. Compensatory mitigation requirements and implementation must be less ambiguous

For the reasons we present above in #5, we reiterate the need for a qualified botanist to be consulted when making project design decisions and project impact determinations related to rare native plant species and communities. We especially highlight this need as it relates to the following CalVTP Mitigation Measures:

MM-BIO-1a

If listed plants are determined to be present through application of SPR BIO-1 and SPR BIO-7, the project proponent will avoid and protect these species by establishing a no-disturbance buffer around the area occupied by listed plants...[t]he no-disturbance buffers will generally be a minimum of 50 feet from listed plants, but the size and shape of the buffer zone may be adjusted if a qualified RPF or botanist determines that a smaller buffer will be sufficient to avoid killing or damaging listed plants or that a larger buffer is necessary to sufficiently protect plants from the treatment activity. The appropriate buffer size will be determined based on plant phenology at the time of treatment (e.g., whether the plants are in a dormant, vegetative, or flowering state), the individual species'

O23-6
cont.

O23-7

vulnerability to the treatment method being used, and environmental conditions and terrain.

[2019 CalVTP Chapter 3.6.3 at p. 3.6-132]

While a 50' buffer around rare plants could be sufficient depending on activity, both MM BIO-1a and MM BIO-1b provide latitude to decrease or increase buffer size. Microclimate requirements for listed species and rare non-listed species must be considered when determining buffer zones. For example, if vegetation treatments result in drying of microhabitats that are dependent upon shade and moisture, even though the buffer may be greater than 50' then there is an impact. A qualified botanist must be consulted when making buffer determinations when applying SPR-BIO1, SPR-BIO7, and/or MM BIO-1a and MM BIO-1b.

MM-BIO-1b

For the reasons explained above

If non-listed special-status plant species (i.e., species not listed under ESA or CESA, but meeting the definition of special-status as stated in Section 3.6.1 of the Program EIR) are determined to be present...A qualified RPF or botanist with knowledge of the special-status plant species habitat and life history will review the treatment design and applicable impact minimization measures (potentially including others not listed above) to determine if the anticipated residual effects of the treatment would be significant under CEQA....

[2019 CalVTP Chapter 3.6.3 at p. 3.6-132]

Determining how much impact to a special-status plant would be significant will require consultation with a qualified botanist.

MMBIO-1a and MM-BIO-1b

The only exception to this mitigation approach is in cases where it is determined by a qualified RPF or botanist that the special-status plants would benefit from treatment in the occupied habitat area even though some of the non-listed special-status plants may be killed during treatment activities. If it is determined that treatment activities would be beneficial to special-status plants, no compensatory mitigation will be required.

Determining when and where such treatment benefits are possible in order to rely on this exception must occur in consultation with a qualified botanist. In addition, requirements for monitoring and reporting of special-status plant conditions upon which this exception would be based should not be ignored even if there is a claim (by qualified botanist) that the vegetation treatment benefits the listed species. Documentation and success criteria must still be required.

MM-BIO-1c and MM-BIO-3b

The CalVTP language directing compensatory mitigation for both special-status plant species (MM-BIO-1c) and rare natural communities (MM-BIO-3b) must be more clear and less ambiguous regarding compensatory mitigation ratio requirements, implementation and enforcement requirements, and remedial actions that must occur if/when requirements are not met.

O23-7
cont.

O23-8

Specifically, the phrase, “in perpetuity” must be added to the requirement to preserve rare plant populations via compensatory mitigation measure in MM-BIO-1c.

Additionally, compensatory mitigation actions and benchmarks associated with MM-BIO-1c and MM-BIO-3b must include remedial actions that shall occur if/when mitigation benchmarks or success criteria are not met, and clearly identify which entity(ies) will be responsible to ensure these measures occur.

O23-8
cont.

Lastly, both compensatory mitigation-related plant measures refer to establishing compensatory mitigation at “sufficient quantities” (MM-BIO-1c) or at a “sufficient ratio” (MM-BIO-3b) to offset the loss of either rare plant species or communities. This language is too vague. The CalVTP must articulate compensatory mitigation ratio requirements to be assessed for loss of listed or special-status native plants, and for loss of sensitive natural communities.

O23-9

7. Minimize herbicide use

CNPS recognizes that limited, spot-specific herbicide use can be an effective tool for controlling invasive non-native plants (weeds) that impact native vegetation. However, herbicide, like other vegetation treatments, has potential adverse effects. The decision of whether or not to use herbicide in a specific vegetation treatment project must be site-specific, and based on an evaluation of herbicide and alternative treatments. Herbicide treatments should have clear and achievable objectives that are target species-specific, preferably including a gradual reduction or phase-out of the need for continued intervention.

O23-10

Chemical treatments can result in adverse consequences to biodiversity, water quality, and public health. Herbicides should in most cases be the tool of last resort due to the potential for contamination, accidents, health impacts, synergistic effects, and many other potential impacts. We recommend that significant additional constraints be inserted into the PEIR to reduce risk and to avoid broad, programmatic approval and use of herbicides.

When herbicides are employed, herbicide labels should be followed. Triclopyr, for example, volatilizes and drifts. The drift can kill susceptible plants at distance. A 50-foot rare plant avoidance buffer for herbicide use may not be far enough depending on the herbicide and potential for drift, air temperature, etc. Monitoring (including of non-target species) and reporting should also be required for any herbicide use.

O23-11

We urge that any programmatic approval of the CalVTP for herbicide use should be limited to removal of invasive non-native plants, where alternative treatment methods are not feasible. Herbicide treatments intended to eliminate vegetative cover across broad areas must go through a site-specific CEQA analysis, rather than the expedited programmatic approval process of the CalVTP.

O23-12

8. The foundation for the Environmentally Superior Alternative and a supportable CalVTP

We feel strongly that a modified Alternative C, amended to include Ecological Restoration treatments, more constrained herbicide use, greater transparency and opportunity for public input, and a project tracking system could form the building block to a supportable CalVTP.

O23-13

9. Treatment Activities

WUI Fuel Reduction

The CalVTP describes how forest ecosystem restoration activities would be designed to approximate natural habitat conditions, processes, and values to those occurring prior to the period of fire suppression (see CalVTP Chapter 2.3.2 at p. 2-3). Ecological Restoration treatment design could also be incorporated into the "outer edges" of the 1.5-mile wide WUI treatment areas where the modeled WUI areas feather into California's wildlands. Further, we believe it is critical that ecological restoration be designed, overseen, and monitored by qualified plant ecologists.

CalVTP Figure 2-3 (Chapter 2.5.1 at p.2-9) illustrates an example WUI Fuel Reduction Treatment, intended for projects outside of PRC 4291's 100-foot defensible space zone and within the modeled WUI zone. The example in Figure 2-3 depicts a treatment area well within the pictured structure's defensible space zone, and shows vegetation removed to mineral soil beneath limbed trees, presenting at once a confusing and unnecessarily severe treatment example.

We believe it would be more helpful for the CalVTP to include illustrations presenting a range of WUI project examples that would clearly illustrate WUI fuel reduction objectives while simultaneously providing examples of how even WUI fuel reduction projects can retain ground cover vegetation that provides additional benefits, including retention of some habitat qualities, and reduced probability of invasive, non-native weed infestation.

When used without justification, the WUI fuel reduction practice illustrated in figure 2-3 is contrary to both retaining biodiversity and the long term fuel reduction objectives of the CalVTP. We recommend the draft CalVTP be amended to include photo examples that illustrate



2019 CalVTP Figure 2-3

Example of WUI treatments with all ground vegetation removed and using native herbaceous vegetation for weed completion and habitat values.



Source: California Native Plant Society 2019

the range of native surface vegetation that is possible, acceptable, even preferred, to meet CalVTP objectives. We provide a few images here that illustrate our point, and which our CNPS East Bay Chapter has shared with the Orinda, CA Fire Department while providing information to local fire crews designing and implementing one of the 35 Emergency Fuel Reduction projects

O23-14

(North Orinda Fuel Reduction project). The current photo examples provided in CalVTP Chapter 2 should be considered outlier treatments that should only be used with the understanding that complete removal of native herbaceous vegetation to bare mineral soil can result in compensatory mitigation requirements, loss of critical wildlife habitat, type conversion to flashy weed vegetation, and an increase in long term vegetation management efforts. Retaining native ground vegetation, as well as habitat-supporting native shrubs, is an acceptable practice.

Land managers can retain low-growing native herbaceous vegetation in WUI treatments, such as in oak woodlands, by specifying that native herbaceous vegetation shall remain. Intact, low-growing, herbaceous native vegetation (such as bracken fern, snowberry, native blackberry) tends to remain green, help prevent conversion to weedy flashy fuels, and provide wildlife habitat.



Habitat-supporting native shrubs, such as Toyon (*Heteromeles* sp.), Coffeeberry (*Frangula* sp.), Gooseberry and Currant (*Ribes* sp.), Ceanothus sp., Elderberry (*Sambucus* sp.), Snowberry (*Symphoricarpos* sp.), etc., that do that do not pose a significant fuel source after oak limbing, or are outside of the drip line of trees, can remain.

Photo: Retained California Currant (*Ribes sanguineum*) outside of the drip line of nearby oaks. The plant was marked with a bright “Do Not Cut” ribbon during vegetation treatment in a Shaded Fuel Break. California Native Plant Society 2019

O23-14
cont.

Fuel Breaks – Non-shaded fuel break



2019 CalVTP Figure 2-5 Example of non-shaded fuel break with no remaining native vegetation

O23-15

On non-shaded fuel breaks, land managers can retain low-growing native herbaceous vegetation, including native grasses and low, non-resinous shrubs and forbs, such as in chaparral, especially if they help prevent erosion, conversion to weedy flashy fuels, and provide wildlife habitat. Also, some habitat-supporting native shrubs, such as Toyon (*Heteromeles sp.*), Coffeeberry (*Frangula sp.*), Gooseberry and Currant (*Ribes sp.*), Ceanothus sp., Elderberry (*Sambucus sp.*), Snowberry (*Symphoricarpos sp.*), etc., can remain that do that do not pose a significant fuel source after thinning or shortening.

O23-15
cont.

Fuel Breaks - Shaded Fuel Breaks



Source: California Native Plant Society 2019

2019
CalVTP
Figure 2-
6.

O23-16

Land managers can retain low-growing native herbaceous vegetation in WUI treatments, such as in oak woodlands, by specifying that native herbaceous vegetation shall remain. Intact, low-growing, herbaceous native vegetation (such as bracken fern, snowberry, native blackberry) tends to remain green, help prevent conversion to weedy flashy fuels, and provide wildlife habitat. Also, habitat-supporting native shrubs, such as Toyon (*Heteromeles sp.*), Coffeeberry (*Frangula sp.*), Gooseberry and Currant (*Ribes sp.*), Ceanothus sp., Elderberry (*Sambucus sp.*), Snowberry (*Symphoricarpos sp.*), etc., that do that do not pose a significant fuel source after oak limbing, or are outside of the drip line of trees, can remain.

Canopy retention for treatment activities on forest lands

The CalVTP states:

*The WUI fuel reduction, ecological restoration **and non-shaded fuel break** treatment types would inherently retain some vegetation within treatment areas. Establishing a non-shaded fuel break would require complete removal of vegetation within the limited area of the fuel break. Untreated vegetation surrounding the fuel break within forest land would remain intact. Although, treatment activities would alter forest land through vegetation removal, the area would generally support 10 percent of native tree cover thereby maintaining consistency with the definition of forest land as defined by PRC Section 12220(g). Treatment activities under the CalVTP would not result in the loss of forest land or conversion of forest land to a non-forest use. This impact would be less than significant. [2019 CalVTP Chapter 3.3.3 at p. 3.3-7]*

O23-17

We believe the highlighted text in the first sentence quoted above is a clerical error and should instead read, “shaded fuel break”. This error appears again in Table ES-1 on page ES-10 of the CalVTP Executive Summary.

O23-17
cont.

The CalVTP must clarify whether or not a WUI fuel reduction project areas on forested lands would reduce the canopy to < 30% cover. Doing so would increase, rather than decrease the fire risk to nearby communities by increasing the wind tunnel effect through the reduced canopy. While California Forest Practice Rules define forested lands as maintaining 10% or more native tree cover, treating to less than 30% canopy cover could actually create greater fire risk than intended. Regardless of intent, a treatment on forested lands resulting in minimum 10% tree cover as per PRC Sec. 12220(g) would not constitute an Ecological Restoration treatment.

O23-18

Fuel Break efficacy in chaparral

Syphard et al. (2011) conducted a spatial analysis of the Los Padres National Forest in southern California and concluded that fires stopped at fuel breaks 46 percent of the time. [2019 CalVTP Chapter 2.5.1 at p. 2-12]

This CalVTP statement summarizes Syphard et al.’s 2011 findings in a potentially misleading way. It should read, "Syphard et al. (2011) conducted a spatial analysis of the Los Padres National Forest in southern California and concluded that fires stopped at fire crew-accessed fuel breaks 46 percent of the time. As written, the reader is mistakenly left with the notion that fuel breaks *per se* stop fires 46 percent of the time, which no study has found to be the case. The CalVTP must be amended to reflect this finding more precisely.

O23-19

Ecological Restoration

Ecological restoration would also improve range and forage on private property, thereby increasing land management options for private landowners. [2019 CalVTP Chapter 2.5.1 at p. 2-16]

This statement is ambiguous and concerning as written. While this may be true, it could also apply to activities that convert shrublands to grasslands in order to increase range and forage on private property. This would not represent ecological restoration. The CalVTP needs to be amended to provide an example of what this is referring to.

O23-20

Incorporating Ecological Restoration treatments needs to be discussed more consistently throughout the PEIR. There are opportunities to include this co-equal objective in general statements regarding CalVTP goals:

...which would support the objective to increase in the pace and scale of project approvals in a manner that includes environmental protections. [2019 CalVTP Chapter 3.1 at p. 3-1]

Not just "in a manner that includes environmental protections," but even more, “in a manner the includes environmental protections *and cumulatively addresses fire and climate resilience across California's forests, grasslands, and shrublands.*”

And when considering treatments that restore to historical conditions;

"Ecological Restoration: Generally, outside of the WUI in areas that have departed from the natural fire regime as a result of fire exclusion, ecological restoration would focus on restoring ecosystem processes, conditions, and resiliency by moderating uncharacteristic wildland fuel conditions to reflect historic vegetative composition, structure, and habitat values."

[2019 CalVTP Chapter 2 at p. 2-7]

one must include considerations of how the effects of climate change, and of changed circumstances will influence outcomes. For example, historic vegetative composition may not be appropriate or achievable via some treatment activities in all environments. Climate change effects must be taken into account in considering restoration potential and goals, and the pace and scale of restoration actions.

O23-20
cont.

Changed conditions could confound well-intentioned ecological restoration treatments. For example, returning fire regimes to historic frequencies on the North Coast (including Native American burning) given the current assemblage of non-native grasses, may actually increase, not decrease non-native plants. *Holcus lanatus* and *Anthoxanthum odoratum* are two highly invasive, non-native perennial grasses that readily spread following burning. This presents another example where ecological restoration considerations must be site-specific, and how pre-treatment planning and qualified botanists are critical to project success.

10. Updates to rare plant and rare natural community databases must be consulted

The CalVTP makes several references to project proponents consulting the CNDDDB, the Manual of California Vegetation, 2nd Edition (MCV2), the rare plant species tables provided in Appendix BIO-3, and the sensitive species and communities lists by provided by ecoregion in Chapter 3.6. These data are helpful and all but the CNDDDB represent static lists of dynamic natural resources, as is addressed in the footnote to page 3.6-16, which we quote below for emphasis:

Given the large geographic area of the treatable landscape and anticipated use of this PEIR over the long-term, Appendix BIO-3 cannot identify every special-status species potentially affected by later CalVTP treatment activities. After certification of this PEIR, species status may change, taxonomic classification or scientific nomenclature may change, and new species may be designated as special status. If a proposed later treatment project would impact a species that meets the definition of special status in this PEIR but is not listed in Appendix BIO-3, the project could qualify for a "within the scope" finding if the potential impacts on the species' life history group are adequately considered in the PEIR, pursuant to State CEQA Guidelines sections 15152 and 15168, and any applicable mitigation is imposed, as explained in the Project Specific Analysis Instructions (see Appendix PD-3).

O23-21

We also urge future treatment activities to consult the Manual of California Vegetation Online source, which maintains the most updated natural communities data for California at

[\[http://vegetation.cnps.org/\]](http://vegetation.cnps.org/).

11. Determining versus assuming presence / absence of rare plants via SPR-BIO-7

SPR-BIO-7 states:

Special Status Plants- Surveys to determine the presence or absence of special-status plant species will be conducted in suitable habitat that could be affected by the treatment and timed to coincide with the blooming or other appropriate phenological period of the target species (as determined by a qualified RPF or botanist), or all species in the same genus as the target species will be assumed to be special-status.

The highlighted phrase at the end of the above statement is unclear. It seems to suggest that if all species of the same genus as a target special-status taxon are assumed to all be special-status, then a project where that plant genus occurs would document and treat those plants as special status plants according to SPRs and presumably MM-BIO-1(a-c).

O23-22

Doing so will likely over-compensate presence of rare plants species within a project area. Why would this assumption need to happen if adequate botanical surveys performed by a qualified botanist were done to inform project design? The highlighted phrase adds more confusion and concern to the CalVTP and we recommend removing it.

12. Chaparral and Coastal Sage Scrub (CSS)

CNPS has long-acknowledged the need for and the ecological benefits of appropriately thinning forestlands by reducing the volume of small diameter trees and understory vegetation that has accumulated during more than a century of forest fire suppression, and that can serve as ladder fuels during a forest fire. At the same time, we have and continue to stress how increased human ignitions, climate change, and drought have led to an unhealthy excess of fire in California's chaparral and coastal sage scrub (CSS) landscapes. In these areas, which occur predominantly in southern California, too-frequent fire-return intervals lead to type-conversion from chaparral / CSS to invasive, non-native grasslands. Vegetation treatments in these landscapes do not lead to increased health or resilience of the natural landscape and though Ecological Restoration treatments are modeled for southern California shrublands, the CalVTP fails to explain how such treatments would provide benefit to either the chaparral / CSS natural plant communities, or the wildlife that inhabit them.

O23-23

As detailed by over a decade of publications, reports, and comments from fire ecologists, academics, and several conservation organizations who specialize in chaparral ecosystems, vegetation treatments in chaparral and CSS landscapes degrade the natural resources, and often with little or no fire suppression benefit. Rather, where reducing community wildfire exposure is the goal in Southern California shrublands, yet another recent study concludes that vegetation treatment is a low priority action. Rather, ignition prevention, land use and zoning, and home protection are all high or highest priorities.²

CNPS remains committed to finding vegetation management solutions that work for both California's native flora and for keeping Californians fire-safe. At the same time, we do not understand how investing resources in creating a system of fuel breaks across southern California's chaparral and CSS landscapes will provide enough fire-fighting benefit (safe,

² Evers, C. R., Ager, A. A., Nielsen-Pincus, M., Palaiologou, P., & Bunzel, K. (2019). Archetypes of community wildfire exposure from national forests of the western US. *Landscape and Urban Planning*, 182, 55-66.

strategic deployment of fire crews during non-extreme weather fires in the WUD) to balance the well-documented challenges that come with our inability to maintain that same fuel break network, or mitigate the habitat impacts that result. Our organization genuinely seeks solutions that can keep Californian's fire-safe and that can preserve California's diverse native flora, and commit to finding solutions that will result in an effective, statewide CalVTP.

CNPS views the CalVTP within this broader context of creating more fire-safe communities and a more fire-resilient California by addressing land-use decision-making and building practices, as well as vegetation. We remain committed to working to create a supportable CalVTP with the BOF, CalFIRE, and other California agencies and stakeholders to achieve reduced fire risk, increased forest ecological resilience, while simultaneously protecting the rich biodiversity represented within our shared public trust resources.

Respectfully,



Greg Suba
Conservation Program Director, CNPS

Attachment:

- CDFW letter to BOF re: failure of THPs to consider botanical resources adequately

O23-23
cont.

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State of California – Natural Resources Agency
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EDMUND G. BROWN JR., Governor
 CHARLTON H. BONHAM, Director



November 15, 2018

RECEIVED

11/15/2018

Mr. Matt Dias, Executive Officer
 California Board of Forestry and Fire Protection
 PO Box 944246
 Sacramento, CA 94244-2460

Dear ^{Matt} Mr. Dias:

2018 PRIORITIZATION OF FOREST PRACTICE RULE UPDATES FOR BOTANICAL RESOURCES

The California Department of Fish and Wildlife (CDFW) requests that the California Board of Forestry and Fire Protection (Board) consider reviewing the California Forest Practice Rules (Cal. Code Regs., tit. 14, § 895.1 et seq.) to augment the rules for evaluating impacts to botanical resources related to timber harvesting. In recognition of the botanical questions that routinely arise during the timber harvesting review process, CDFW convened an internal working group in early 2017 to review the Forest Practice Rules related to botanical resources and the management of botanical resources on private timberlands. The outcome of this working group is CDFW’s recommendation to augment the Forest Practice Rules for botanical resources to make the timber harvesting review process more effective and efficient.

Clear direction in the Forest Practice Rules will increase the likelihood that potentially significant impacts to botanical resources will be addressed by applicants prior to timber harvesting plan (plan) submittal, and reduce the time and effort necessary to complete plan review. A significant proportion of CDFW’s review effort is dedicated to identifying potential impacts to botanical resource issues, and comments often recommend routine scoping, surveying, or protection. Appendix 3 illustrates some of the potentially significant, adverse impacts that may occur during timber harvesting operations. Many of these impacts could be reduced to a level below significant through routine best management practices implemented during plan preparation and implementation. Augmenting the Forest Practice Rules specific to botanical resources would minimize impacts and increase efficiency for agency and stakeholder plan participants.

More thorough plan disclosure of botanical resources via the Forest Practice Rules has the added benefit of leading to more flexible, effective management strategies for these resources. Thorough documentation of botanical resources, including species’ locations and monitoring of known populations, will contribute to a better understanding of how botanical resources respond to timber harvesting. Such information would allow CDFW and stakeholders to focus review and management efforts on a smaller subset of species needing specific protection, resulting in more defensible and effective

management practices over time.

Background and Need

California has more plant species than any other state in the nation (approximately 6,500 native species), and more than one-third of these are found nowhere else in the world (CNPS 2018). However, 284 species, subspecies, and varieties of native plants are designated as rare, candidate, threatened, or endangered by state or federal law (CDFW 2018a), and over 2,000 more plant taxa are considered to be of conservation concern (CDFW 2018b). According to California Natural Diversity Database (CNDDDB) spatial records, approximately 12,904 special-status plant occurrences have been documented in forested ecosystems (see Appendix 1). There is also a high diversity of plant communities in California, in which 53 percent are considered potentially sensitive (1,347 out of 2,555 plant associations are designated a State Rank of 1-3) (CDFW 2018c).

California law related to timber harvesting establishes the Legislature's intent in the Forest Practice Act that timber harvesting be conducted via "an effective and comprehensive system of regulation" while protecting natural resources (Pub. Resources Code, §§ 4512 & 4513). Likewise, the Forest Practice Rules state "the goal of forest management on a specific ownership shall be the production or maintenance of forests which are healthy and naturally diverse, with a mixture of trees and under-story plants..." (Cal. Code Regs., tit. 14, § 897, subd. (b)(1)). In 2012, Assembly Bill (AB) 1492 passed with direction from the California Legislature to identify areas to improve efficiencies and protect natural resources during the timber harvesting review process (Pub. Resources Code, § 4629.2).

Agencies and land managers have tried to address gaps in the current Forest Practice Rules related to botanical resources through development of guidance documents. In 2005 CDFW developed timber-specific botanical survey guidelines (CDFW 2005) to address many of the common botanical issues that arise during reviews and inspections. A 2009 memorandum issued by the California Department of Forestry and Fire Protection (CAL FIRE 2009), describes practices to address "special-status plants" (rare, threatened or endangered listed species, or species that meet the criteria of California Environmental Quality Act (CEQA) Guidelines §15380(d)) during the scoping process for timber harvesting plans. Landowners address botanical resources through various mechanisms, such as project-specific surveys and protection measures, and may also implement property-wide management plans or agreements.

Botanical scoping and survey processes, and the application of protection measures to avoid significant adverse impacts to botanical resources have been employed inconsistently in timber harvesting plans. In 2016, 44 percent and in 2017, 37 percent of first review comments from CDFW's Region 1 Interior Timberland Conservation Program, were specific to eliciting information about botanical resources missing from

applicants' plans. Commonly addressed topics are shown in Appendix 2.

It is unclear whether botanical resources are being adequately addressed during plan review process and if plan-specific protection measures are effective. Because the Forest Practice Rules do not contain disclosure and protection standards specific to botanical resources, protection measures have been applied inconsistently. Further, landscape-level data for plant populations and plants' responses to timber harvesting is either not collected or is inefficiently used to guide management recommendations. As submitted to CAL FIRE, plan-specific botanical protection measures often employ a one-size-fits-all approach, which may not reflect the diversity of California's native plants and plant communities and their varied responses to timber harvesting.

Healthy plant communities are heterogeneous and resilient environments, adapted to dynamic ecological conditions. In recognition of changing landscape conditions associated with timber harvesting, as well as with other factors such as climate change and severe fires, botanical best management practices need to evolve. While there will always be a need for botanical surveys (i.e. when new species are described, to determine if plants have colonized unoccupied habitat, or when projects are proposed in areas that have never been surveyed) many timberland owners have already expended considerable effort to locate botanical resources on their properties. Having years of botanical surveys on many areas of private timberlands available can allow for a shift in resources towards the active management of botanical resources. Active management practices, compared to common hands-off approaches will benefit the plants while also allowing flexibility in conducting timber operations. CDFW suggests the Board develop a framework for botanical surveys, and shift the focus of botanical resource protection from comprehensive inventorying and avoidance of species, to targeted studies and active management.

Conclusion

California has many unique and rare botanical resources that are in need of protection and management. However, the current Forest Practice Rules' omission of scoping, mitigation, and management practices for botanical resources creates uncertainty and results in avoidable impacts to these resources. Augmenting the Forest Practice Rules to recommend routine scoping, surveying, and protection of botanical resources will provide clear direction to applicants prior to plan submittal, reduce the time and effort necessary for CDFW and other review team agency staff to complete plan review, and lead to more flexible, effective management strategies for these resources.

CDFW asks that the Board consider this request to prioritize the evaluation of existing Forest Practice Rules pertaining to botanical resources during the 2019 rule-making session. CDFW has been working to evaluate botanical regulatory changes for several months and would welcome the opportunity to discuss our findings with the Board. CDFW is committed to working with the Board and stakeholders to develop efficient and

Mr. Matt Dias, Executive Officer
California Board of Forestry and Fire Protection
November 15, 2018
Page 4

effective botanical rules.

Please see the CDFW Native Plant Program website at:
<http://wildlife.ca.gov/Conservation/Plants> for more information on rare plant biology,
laws, and best management practices. Additional information specific to timber
harvesting review is provided at: <http://wildlife.ca.gov/conservation/timber>.

If you have questions about this letter or would like further information, please contact
Ms. Isabel Baer, Timberland Conservation and Native Plant Program Manager, at
(916) 651-3110 or isabel.baer@wildlife.ca.gov; or me, at (916) 653-3861 or
richard.macedo@wildlife.ca.gov.

Sincerely,



Richard Macedo, Branch Chief
Habitat Conservation Planning Branch

cc: J. Keith Gillless, Ph.D., Chair
California Board of Forestry and Fire Protection
PO Box 944246
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California Department of Fish and Wildlife

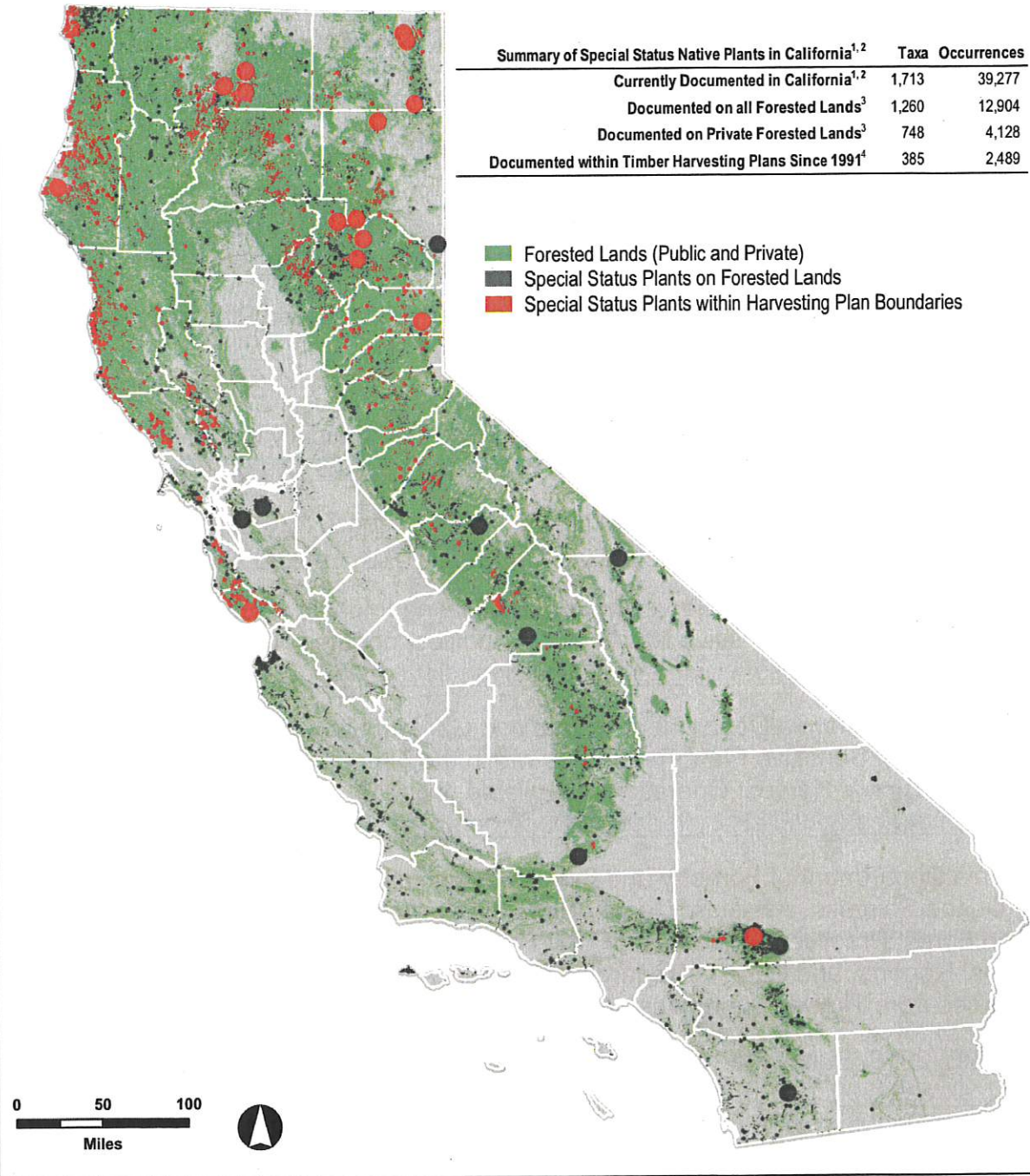
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Appendix 1. Special Status Native Plants Documented on Forested Lands in California 1, 2



- 1) Data derived from the California Natural Diversity Database (CNDDDB), accessed 6/29/2018 (CDFW, 2018d). The CNDDDB is a presence-only database, no inference can be made regarding lands that have never been surveyed. For more information regarding the CNDDDB see Bittman's article in Fremontia (2001).
- 2) Special Status Plants in this map include plants listed or proposed for listing under the Federal Endangered Species Act (ESA), the California Endangered Species Act (CESA), the Native Plant Protection Act (NPPA) and/or California Rare Plant Rank (CRPR) Rank 1 and 2. See CDFW's 2018 protocols for more in-depth description of "Special Status Plants" (CDFW, 2018d).
- 3) Data are approximate, private forested lands derived from subtracting public lands (BLM, 2018) from forested lands (USGS, 2016).

Appendix 2. Topics Commonly Addressed by CDFW During Plan Review for Botanical Resources	
Botanical report general	<ul style="list-style-type: none"> • Missing prior consultation information or incorrect information provided • Report mistakenly truncated
Scoping	<ul style="list-style-type: none"> • Entirely missing from plan • Coverage inadequate and missing plants (a minimum 9-quad search is recommended; however, plants other than those captured in the 9-quad search may have potential to occur in the plan area) • Suitable habitat disclosure inadequate/rationale inaccurate • Sensitive natural communities not addressed • Includes incorrect species' names and/or rankings • Missing, or unclear • Not conducted to most current CDFW protocol level, or of equivalent quality • Spatial coverage omissions, e.g., proposed roads, harvest units, and or high potential habitat omitted, meadow restoration • Density too sparse throughout habitats • Timing inadequate • Sensitive natural communities likely present and need further assessment and disclosure • Resulting survey plant list includes incorrect species' names and/or rankings
Sensitive species	<ul style="list-style-type: none"> • CEQA Guidelines §15380 species inadequately addressed vs. Federal and State listed species • Disclosure of California Rare Plant Rank (CRPR) 3s and 4s lacking
Positive findings	<ul style="list-style-type: none"> • Disclosure details inadequate/missing - CNDDDB form (or equivalent population data) submission required to CDFW per CEQA (Pub. Resources Code § 21003 subd. (e)). • Mitigation measures inadequate/unclear, CDFW suggests consultation to help address this • Adequate defaults needed for future surveys or if additional rare plants found during future operations, until consultation with CDFW occurs • Sensitive natural communities mitigation measures inadequate, CDFW suggests consultation to help address this • Maps of positive findings inadequate or unclear • Maps with positive findings missing or not included in Section II

Noxious weeds	<ul style="list-style-type: none"> • Present and need to be addressed to assess potential significant adverse impacts
Plan other	<ul style="list-style-type: none"> • General disclosure inadequate, what operations will occur on non-timbered habitat, CDFW cannot assess risk to plants • General format issues, discrepancies between botany in different sections (I - V) of the plan
Cumulative impacts	<ul style="list-style-type: none"> • Herbicide cumulative impacts and/or other concerns • Revise plan to include impacts to botanical resources in Section IV
NTMP	<ul style="list-style-type: none"> • Section II need provision or clarification for subsequent NTMP scoping/survey updates in Section II
Reports not submitted with plan	<ul style="list-style-type: none"> • Missing specification that report will be amended into the plan appropriately • - Missing specification that botanical report will be submitted to CDFW, a sufficient number of days prior to operations to allow agency review of the botanical report or as soon as complete • Missing language specifying CNDDDB forms (or equivalent population data) will be submitted to CDFW per CEQA [Pub. Resources Code §21003 subd. (e)]. • NTMP missing provision for subsequent NTMP scoping/survey updates in Section II • Clarification needed that botanical reports are required for negative surveys

Appendix 3. Examples of Adverse Impacts of Timber Operations on Special-Status Plants

<i>Timber Operation</i>	<i>Impact</i>
Road/ landing/ crossing construction	Crushing with equipment → direct mortality or injury Permanent or temporary loss of habitat
Timber felling	Crushing with equipment or felled trees, or trampling → direct mortality or injury
Tractor yarding	Crushing with equipment → direct mortality or injury Soil disturbance → creates conditions favorable to weeds Soil compaction → physiological stress ^a ; creates conditions favorable to weeds
Tree removal ^b	Reduced shade → physiological stress Vegetation community changes → loss of host species for special-status parasitic plants Vegetation structural changes → increased mammalian herbivory; modification of fire frequency and intensity Decreased relative humidity → physiological stress
Use of logging roads	Dust → reduced photosynthesis, reduced pollination
Water drafting	Reduced water availability → physiological stress
Herbicide application	Direct mortality or injury
Pile burning	Direct mortality or injury
Soil ripping	Direct mortality or injury
Replanting	Eventual excess shade if tree density increased → physiological stress
Construction spoils disposal	Plants buried → direct mortality or injury Introduction of weed seeds
Rock quarry	Permanent or temporary loss of habitat Dust → reduced photosynthesis, reduced pollination

Notes:
 a. Physiological stress can lead to plant mortality.
 b. Some environmental changes, such as tree canopy removal, may be beneficial to some species in some circumstances.



Forest Landowners OF CALIFORNIA

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November 21, 2018

Dr. Keith Gilles, Chairman
Board of Forestry and Fire Protection
1416 Ninth Street
Sacramento, CA 95814

RECEIVED

11/21/2018

Dear Chairman Gilles and Members of the Board:

In response to the October 3, 2018 request for suggestions for Board priorities, Forest Landowners of California submits the following comments.

As background, Forest Landowners of California, FLC, represents non-industrial forest landowners throughout the state of California. Our membership owns and manages about 350,000 acres of timberland in all of the forested regions of the state. Most of FLC's landowners own and manage parcels ranging from 10 to more than 100,000 acres but the median range is 80 to 400 acres. Prior to offering specific suggestions, we believe that it is important to have an understanding of the demographics of the state's non-industrial owners.

Non-industrial owners number about 202,000 in the state according to the U. S. Forest Service. They own approximately 3,000,000 acres of timberland and an additional 4,370,000 acres of other forest land according to the most recent FRAP data. For sake of policy and regulatory analysis, it is reasonable to assert that many of these are on smaller properties, e.g., 10 acres or less, marginally suitable for forest management except for possible fuels management in the Wildland Urban Interface, the WUI. Assuming for discussion purposes, the population that might manage their land for periodic commercial timber harvest is 50,000 owners. Based upon estimates of FLC and California Tree Farm membership data, the number of owners actively managing their forest lands for fiber, wildlife and forest resiliency is likely in the range of 1,500 to 3,000 owners. This is only 3 to 6 percent of the potential active landowners, and as little as 1 to 1.5 percent of the total non-industrial ownership base.

In contrast to the larger industrial class of ownerships, the largest portion of non-industrial owners hold their property for a number of non-monetary reasons. They include recreation, wildlife habitat, preservation of natural settings, creation a family legacy, and long-term investment. Income from timber management activities is often sporadic and not a major source of income to offset annual operating costs.

FLC believes the Board should set two types of priorities.

The first is focused on the broader policy issues and expertise available from the Board and staff as well as the Board's "Bully Pulpit" as leaders in forest policy and regulation. These include:

- Collaboration with and advising the California Air Resources Board regarding health and safety issues from both wildfire, such as the Tubbs fire in 1987 and the Carr and Camp fires in 2018, and the potential use of prescribed fire to reduce the wildfire risk during times when fire can have devastating effects due to high temperatures and dry fuels. This will likely require temporary relaxation of current air quality standards for prescribed burning and possibly consideration of limiting other sources to permit the prescribed burns and construction of small biomass facilities.
- A second issue for the Board of Forestry and the Air Resources Board is the byzantine and costly requirements to participate in the Carbon Sequestration market. Most non-industrial owners will never be able to sustain or even incrementally increase the value of a working forest based on the current prices in the carbon market. Current participants and consultants indicate that inventory requirements, the 100 year sequestration period, and the required contribution to the insurance pool, have precluded participation from nearly all landowners who have less than 10,000 acres. A relaxation of the current requirements including the time requirements with a commensurate reduction in the quantity available for sale seems possible if a goal is to voluntarily increase the current pace and scale of carbon sequestration to offset carbon emissions from other sectors of the economy.
- Working with the California Fish and Game Commission, to find alternatives to the current policy of treating candidate species as if they were listed and requiring mitigation by landowners, while the California Department of Fish and Wildlife (CDFW) completes an assessment of the risk to species. It also seems appropriate to consider potential reductions in mitigation where forest management is not identified as responsible for a decline in species populations, e.g. Townsend's Big-eared Bat (mining activities) or Foothill Yellow Legged Frog (development and agriculture in Southern California).
- Collaboration with and advising the California Public Utilities Commission (CPUC) regarding the future of biomass as an alternative energy source even with tolling mechanism to subsidize the transportation of fuel to either Biomat or Bioram facilities. If the goal is to reach 1,000,000 acres on private, state and federal lands a large portion of the dead trees due to mortality, ladder fuels and small trees removed will likely be useful for any product except biomass given the lack of infrastructure for paper and other products such as OSB. Many landowners would like to do biomass harvests but have no manufacturing infrastructure close enough to make harvest economically feasible.
- While SB 1260 helped to reduce the potential liability issue for those interested in using prescribed fire, the availability and cost of insurance remains a significant impediment on use of prescribed fire on non-industrial forest lands.

The second area involves specific actions that the Board can pursue to facilitate regulatory efficiency. The Board is currently engaged in some of these efforts. FLC requests that these efforts will remain high priorities during the coming year.

- Stocking Standards – It is fairly evident from the research that the 300 point count standard is too high and needs to be reduced. The William Main project will be offering suggestions to the Board in the near future. The Basal area stocking standards should be

reviewed as well. Perhaps as a reduction as a part of fuels management efforts along major ridges or in the WUI. Additional flexibility in the Basal Area standards may be appropriate for landowners who wish to use unevenaged silvicultural systems especially as a part of NTMP harvest document where previous harvests have left trees of poor form or poor spacing that resulting in both short and long-term growth.

- NSO safe harbor – Especially for non-industrial landowners with smaller parcels, the time constraints and cost of the current NSO survey protocol often make harvest impractical or uneconomic especially with the rapidly fluctuating timber market. It is our understanding that the agencies (Cal Fire, CDFW and USFWS) are working on some type of Safe Harbor Agreement for smaller landowners, but it has not been circulated to the practitioner community for comment or input. FLC would also urge the Board to work the CDFW and the Legislature to initiate an experimental extermination policy for Barred Owls in California if the NSO and CSO are to be maintained. The preliminary results from Oregon and Washington are likely applicable to California and could possibly delay a further decline in NSO populations for an extended period.
- Streamlined NTMP – The NTMP has been authorized as a “light touch” alternative, requiring the use of an unevenaged silvicultural system, to the THP process since the early 1990s. It is estimated that more than 800 NTMPs have been approved since that time. The median range of an NTMP is approximately 300 to 400 acres in size. The cost of the plans has increased dramatically throughout time due to new rules, inventory complexity, and increased scrutiny by the regulatory agencies. However, a review of violations issued by Cal Fire since the inception of the program indicates violations average about 4 per year across the state, and affects about 15 percent of the approved plans since the NTMP alternative was approved. Additional preliminary analysis and discussion with Cal Fire staff suggests that most of these issues are related to administrative issues, e.g. lack of a completion report, and not field violations, e.g. silviculture or WLPZ violations. FLC would suggest that the Board consider a streamlined NTMP for landowners with less than 200 acres that encourages greater participation in active forest management that will potentially reduce wildfires, increase Carbon Sequestration, while protecting wildlife habitat and Water Quality.

FLC will provide constructive suggestions and additional comments and data to the Board if requested by Board members or staff.

Respectfully submitted,



Lawrence D. Camp
FLC Legislative Committee Co-chair
RPF No. 1698



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Sent via email: CalVTP@bof.ca.gov

August 9, 2019

Attn: CalVTP
Board of Forestry and Fire Protection
PO Box 944246
Sacramento, CA 94244-2460

Ladies and Gentlemen:

RE: Public Comments--on DPEIR—Proposed Statewide Vegetation Treatment Program

We appreciate the opportunity to comment on the California Statewide Vegetation Treatment Program (VTP). We are fully aware of “Climate Change” influences, air and water quality issues, fire devastation and a desire to diminish harmful effects on people property, and natural resources. However, we object to not only “overkill” of any fuel reduction treatments but also any “streamlining” or other process that may reduce what should be required CEQA analysis, especially when dealing with heritage trees (including but not limited to oak species and other beneficial woodlands) and wildlife habitat. The public must be informed of proposed VTP’s and be able to submit comments on any such plans.

O24-1

Others have submitted comments voicing similar and more in-depth concerns regarding VTP destruction and/or the need for full CEQA analysis in many instances, with which we concur. Below are other areas of concern that must be mitigated.

O24-2

Logging and “thinning.” Too often, logging and thinning operations have been not only ineffective in stopping fires, but also extremely destructive relative to long-term fire reduction and damage created. Where operations were granted permits to “take” only up to very specific diameter trees (and leave all larger), evidence has shown a total lack of compliance or workaround with loophole language. Heritage oaks and other species with large diameters could be limbed up, but instead, very large stumps (trees that should have been left standing), often with thin, new flammable, annual “sprouts,” are the result. If on-site operational enforcement cannot be provided, then hefty bonds should be required of all operators to ensure compliance with permits.

Fuel Breaks. Fuel breaks are being created that (currently) range from 100 yards to over one mile in width and multiple miles in length. Additionally, those huge breaks must be maintained every year or they are useless. Heritage trees, important forage plants, wildlife habitat and shelter (from elements and/or predators) are lost and essentially gone forever. Even with such drastic measures, assurances of fire suppression or diminishment in high winds (fire tornadoes, etc.) and ember ignitions are never guaranteed. Fuel breaks need to be assessed as to their need relative to effectiveness and non-fire risk soundness.

O24-3

Wildlife Habitat. The loss of wildlife habitat with VTP activities, catastrophic fires, and complete disruption of species' forage (including migration and/or not being fully restored for decades), and more, must be mitigated properly. One possible mitigation for any type of wildlife habitat area destroyed via fires or VTP or related activities, should be a complete prohibition of any wildlife killing or "take" within such areas until the areas have been fully restored. For example, in the case of a fuel break, which is assumed to be in perpetuity, wildlife is deprived of basic needs and exposed to both human and natural predators (increased lines of sight in what may be or become corridors, etc.). Banning any type of take or killing both within those areas and a minimum of one mile outside or surrounding those areas must be considered as mitigation.

O24-4

Alternatives. Local agencies that approve home construction or other property improvements in potential fire zones—many, if not most, in rural areas—apparently need mandates to require: defensible space, non-combustible construction materials, private or public roads that are not "dead ends" (must have a minimum of two "escape" routes); and other life- and property-saving benefits, if indeed that is a goal of the VTP. In flood plains, usually construction is either not allowed or minimal with losses expected of less valuable structures. Similar restrictions should be considered in the any possible VTP areas.

O24-5

Thank you for considering our views,



Marilyn Jasper
CVF Board of Directors

Salo Sciences, Inc.
PO Box 40811
San Francisco, CA 94140
<https://salo.ai>



Letter
O25

August 9, 2019

Board of Forestry and Fire Protection
Attn: CalVTP
PO Box 944246
Sacramento, CA 94244-2460

Re: Draft Program Environmental Impact Report Regarding a Proposed Statewide
Vegetation Treatment Program

Dear Board of Forestry and Fire Protection,

We would like to thank the Board of Forestry and Fire Protection (the Board) for crafting an ambitious forest restoration program, CalVTP, and for the opportunity to submit public comments. We are writing on behalf of Salo Sciences, Inc., a conservation technology company founded by two forest ecologists based in San Francisco, CA. We map forest change by combining ecological science, satellite imagery & artificial intelligence, supporting conservation and climate mitigation efforts by government agencies and non-profit organizations. Salo's co-founders have a combined 25 years of experience in ecological remote sensing, and are working now on mapping California's forests. We hope our unique perspective will help the Board strengthen CalVTP prior to its implementation.

O25-1

California's forests are one of our most precious natural resources: they provide 60% of the state's clean water; they're home to both the world's tallest and most massive trees, which are capable of storing carbon at higher densities than tropical rainforests; they provide habitat for threatened and endangered wildlife and flora; and they provide access to recreation and jobs for millions of people. But these once-resilient ecosystems have been taxed by catastrophic wildfires, extensive tree mortality, and climate change, threatening their stability. A comprehensive and bold forest restoration plan must be put into action, and the ambitious target of 250,000 acres of annual forest restoration proposed under the CalVTP is a step in the right direction.

However, this unprecedented increase in the pace and scale of forest restoration needs proper safeguards to ensure responsible and effective ecosystem management. One major safeguard currently missing from CalVTP is a program to monitor the progress of these restoration projects. Thirty percent of the projects will involve the selective removal of trees by mechanical or manual means (Chapter 2, Sec 2.5.3), but contractors performing restoration work have a financial incentive to remove large diameter trees because they carry a higher market value. Overharvesting large diameter trees undermines the goals of the CalVTP, and the state cannot just assume that every contractor will follow the exact guidelines of the program. A system that is able to comprehensively monitor every acre of

O25-2

restoration is needed to disincentivize overharvesting and provide accountability when such actions do occur.

O25-2
cont.

Unfortunately, the draft PEIR for the CalVTP says very little about project monitoring, except:

Effectiveness or validation monitoring after application of a treatment may be performed to the extent feasible, recognizing fiscal constraints, the need for ongoing access to property, and staff availability. (Chapter 2, Sec 2.6.1)

O25-3

This lack of a robust monitoring protocol along with dedicated funding is a major shortcoming of CalVTP, one that risks the credibility and integrity of the system. Monitoring is needed to prevent abuse and fraud, and to provide specific feedback on which treatment prescriptions are most effective. State agencies, regulators, and the citizens of California must have confidence that a nearly 10-fold increase in active forest management does not lead to unintended forest degradation. Only comprehensive and regular monitoring using remote sensing techniques can provide that security.

Ground based monitoring (e.g., regular site visits, spot-checks) alone is not sufficient for a program of this size. Airborne and satellite-based monitoring, which can map all of the state's forests in detail, is needed to comprehensively and regularly evaluate treatment progress. Ground-based monitoring is unable to cover the hundreds of thousands of acres that will be treated each year, and is an inefficient and expensive way to conduct a comprehensive landscape assessment.

Fortunately, the technology and science for robust and cost-effective forest monitoring have made tremendous strides over the last decade:

- Public access to active remote sensing systems, such as radar and lidar, has dramatically increased. These sensors tend to be highly sensitive to forest structure, enabling direct measurements of changes in forest properties important to restoration.
- New commercial satellite companies, like Planet, now provide daily, high-resolution & statewide imagery at a fraction of the cost of previous commercial systems.
- Machine learning algorithms have advanced to the point where reliable identification of forest change and mapping of forest properties is not only possible, but accurate and efficient.
- Greater access to cloud computing resources has enabled rapid satellite-based mapping and monitoring and at an unprecedented scale.

O25-4

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While there is still active scientific and technological development in the field, the methods for forest monitoring are mature enough for operational deployment. For example, Salo Sciences is piloting a forest restoration monitoring system with The Nature Conservancy this year as part of the 2.4 million acre Tahoe Central Sierra Initiative. Using the advances in science and technology outlined above, the monitoring system is designed to detect and evaluate the effectiveness of treatment prescriptions in near real-time. This type of system can easily scale to cover all of California's forests, and could be used to map, monitor & curb unauthorized harvest practices while ensuring forest treatments achieve the desired forest stand structure.

The PEIR notes that "...the geospatial tracking efforts within CAL FIRE are constantly progressing and...would continue to improve over time." While the small team of FRAP personnel at CAL FIRE are highly trained and talented geospatial scientists, mandating they perform comprehensive and regular monitoring without allocating the appropriate funding and personnel resources would overwhelm their already substantial workload. We see an opportunity for a third party to provide comprehensive monitoring services independent of any state agency, and at a fraction of the cost of building such a system through the state. FRAP or another agency group could provide independent oversight of the monitoring outputs produced by the third party.

If California is serious about managing forests to support the state's climate change goals, there needs to be a commitment to monitoring the impacts of the CalVTP in a systematic way. Fortunately, the information gathered by a monitoring system can also be leveraged to support the work of other state agencies, including creating detailed forest carbon removal estimates. These data can be integrated with data that CARB and other agencies are collecting and processing, helping to evaluate the impact of these activities on the state's carbon balance.

Thank you for considering our comments. We look forward to working with the Board to improve the CalVTP as it develops.

O25-5

David C. Marvin, PhD
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August 9, 2019

Board of Forestry and Fire Protection
Attn: CalVTP
PO Box 944246
Sacramento, CA 94244-2460

By electronic transmission to: CalVTP@bof.ca.gov

RE: Comments on the Draft Program Environmental Impact Report for the Proposed Statewide Vegetation Treatment Program – CalVTP

Thank you for the opportunity to comment on the Draft Program Environmental Impact Report for the Proposed Statewide Vegetation Treatment Program, commonly known as CalVTP. Our organizations work extensively throughout the forested regions of California, and these group comments primarily address the CalVTP as it affects the vegetative communities that occur in the forested regions of the state. We also provide suggestions for program implementation that are applicable statewide

We are broadly supportive of increasing the pace and scale of forest restoration activities and other actions to moderate extreme fire behavior, reduce the risk of high severity wildfire to communities, and help increase the stability of carbon stored on the landscape. Over time, using planned and managed fire, and other vegetation management techniques, can help restore a more natural forest structure and fire regime and moderate the large smoke and GHG emission events that have become more common in recent years.

O26-1

However thoughtful planning and implementation will be essential to ensure that actions minimize harm, and maximize benefits to ecological resiliency and improved fire outcomes.

O26-1
cont.

While these comments address the CalVTP PEIR, effective implementation of this statewide program will require actions beyond simply certifying the PEIR. We include a number of suggestions about overall program structure, and we look forward to further conversation to assist in effective implementation.

Public Notice of Proposed Projects, and Interagency Review

In order to build and maintain broad public support, raise public awareness, and avoid local controversy and backlash, it is essential that such an extensive vegetation management program be designed, publicized, and implemented with transparency. In addition, due to the magnitude of the cumulative effects of the CalVTP, there needs to be a clear and effective process for the submittal, review, approval, and subsequent tracking and monitoring of projects. Such a process needs to include:

- timely notice to the interested public that a project has been proposed;
- an opportunity for public input on the proposed project;
- consultation with DFW and the Water Board on project design to ensure that the “fuel reduction project protects water resources and wildlife habitat while addressing fire behavior and public safety” consistent with PRC 4123¹;
- Consultation and coordination with local tribes and traditional cultural practitioners, where appropriate;
- approval by CalFire; and,
- tracking of proposed, ongoing, and completed projects in a publicly available online dashboard, to inform evaluation of cumulative impacts and track progress toward state goals.

O26-2

The process as currently described in the CalVTP lacks public notice or an opportunity for public input. This non-transparent approach, combined with the massive scale of the proposed PEIR, is a recipe for community conflict and acrimony. Our conservation organizations have worked for years to educate our members and the general public about the need to address unnatural fuel conditions and improve ecosystem resiliency. These efforts to build public support for mechanical treatments, prescribed fire, and other vegetation treatments could be quickly undermined if the public has no advanced knowledge of, or opportunity to comment on, projects that may directly affect their community or local region. It is essential to provide a clear mechanism for informing the

¹ Section 4123 of the Public Resources Codes reads:

When selecting a fuel reduction project, the department [CalFIRE] shall collaborate with the State Water Resources Control Board and the Department of Fish and Wildlife to ensure the design of the fuel reduction project protects water resources and wildlife habitat while addressing fire behavior and public safety.

public of proposed projects. This is likely best accomplished through an online portal where the public can subscribe to receive notifications of projects proposed in their region of interest, and also see what other projects have been approved or completed.

There must also be a meaningful opportunity for public input on proposed projects. The Project Specific Analysis will be the first time an interested party has a clear description of the proposed action and they must be afforded an opportunity to engage with the process in a meaningful manner. A comment period consistent with existing CEQA standards, and beginning when the Project Specific Analysis is available and notification is sent to parties who have indicated interest in projects in that region, will build and maintain community support for vegetation management projects without causing meaningful delay. Further, the project proponent and the reviewing agencies will gain insight from citizens who may have knowledge about the project area or who may have insight about conditions that would be affected by a project.

O26-2
cont.

Precluding project-specific input from the public may seem like a way to accelerate implementation, but runs counter to the fundamental goal of CEQA of providing an opportunity for the public to have a voice in projects that will affect their communities and region. Further, we believe providing transparency and an opportunity for engagement will help build consensus in our effort to create a more resilient California. Establishing a clear process for public input – which assures that feedback reaches the project proponent, the appropriate local representatives from DFW, the Regional Water Board, and the CalFire unit, as well as the approving entity – will build broader social acceptance of the CalVTP and improve individual projects.

Review by the Department of Fish and Wildlife and Regional Water Board

It is important to note that while the Draft PEIR was being prepared, the Legislature added §4123 to the Public Resources Code to ensure that fish, wildlife and water resources are protected when fuel reduction projects are implemented.

“When selecting a fuel reduction project, the department [CalFire] shall collaborate with the State Water Resources Control Board and the Department of Fish and Wildlife to ensure the design of the fuel reduction project protects water resources and wildlife habitat while addressing fire behavior and public safety.” - *Public Resources Code 4123*

O26-3

We suggest the establishment of a clear, required process that includes early consultation with these Trust agencies on each proposed project. This is a key opportunity to establish public faith and support in such a massive habitat modification program.

Tracking of projects over time- In order to assure that the public understands the scope of the CalVTP and the state’s broader vegetation management efforts, as well as to help state

O26-4

agencies assess the cumulative effects of these efforts, there should be a real-time, publicly accessible, online portal showing currently proposed and already completed projects. In addition to providing a central information portal to assist the state in monitoring for adverse cumulative impacts, this web interface can convey to the public progress toward the state’s ambitious vegetation management and fire safety goals. This should be coordinated with and inclusive of the project tracking effort being developed by the Forest Management Task Force.

O26-4
cont.

Clarify the decision-making official for individual projects

The CalVTP it is not clear about who determines whether or not a project specific analysis (PSA) meets the criteria for programmatic approval. The PEIR needs to more clearly articulate the review and approval process, including who has the final authority and responsibility to determine whether individual projects are consistent with the PEIR and appropriate for programmatic approval.

O26-5

Planning for maintenance over time

- We recommend that the state prioritize projects (e.g., in grant programs) where the project has a plan for future maintenance to maintain effectiveness;
- We suggest that to the degree feasible the state establish a process for checking on the effectiveness of projects 10-20 years post treatment, to evaluate effectiveness of the effort and identify projects that are no longer providing the desired conditions.

O26-6

Minimize herbicide use

Herbicides can play a role in controlling invasive species, but the CalVTP should not become a vehicle for the widespread use of herbicides for routine vegetation maintenance. Chemical treatments can result in adverse consequences to biodiversity, water quality, and public health. Herbicides should in most cases be the tool of last resort due to the potential for contamination, accidents, health impacts, synergistic effects, and many other potential impacts. Our organizations urge that significant additional constraints be inserted into the PEIR to reduce risk and to avoid opposition to the CalVTP from organizations and concerned members of the public who oppose broad, programmatic approval of chemicals. Site specific conditions, the risks associated with different herbicide formulation ingredients, application methods, and other factors can vary significantly.

O26-7

It is our collective input that any programmatic approval of the CalVTP for herbicide use should be limited to removal of invasive non-native plants, where alternative treatment methods are not feasible. Herbicide treatments intended to eliminate vegetative cover across broad areas should go through a site specific CEQA analysis, rather than the expedited programmatic approval process of the CalVTP.

We appreciate the opportunity to review the draft CalVTP. We believe that appropriate implementation of such an ambitious effort will require significant additional state effort –

beyond certifying the PEIR – and we look forward to collaborating to ensure appropriate review, tracking, and monitoring of the vegetation management program, achieving broad benefits such as reduced fire risk and increased ecologic resilience, while simultaneously protecting our shared public trust resources.

O26-7
cont.

Regards,

Paul Mason
Vice President, Policy and Incentives
Pacific Forest Trust

Craig Thomas
Director
Fire Restoration Group

Kim Delfino
California Director
Defenders of Wildlife

Chris Morrill
Executive Director
California Wilderness Coalition

John Buckley
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Central Sierra Environmental Resource
Center

Greg Suba
Conservation Director
California Native Plant Society

Susan Britting, Ph.D.
Executive Director
Sierra Forest Legacy

Rico Mastrodonato
Government Affairs Director
Trust for Public Land

Steven Frisch
President
Sierra Business Council

Karen Buhr
Executive Director
California Association of Resource Conservation Districts

Cc: Jennifer Montgomery, Director, Forest Management Task Force
Jessica Morse, Deputy Secretary of Forest Resources Management

August 9, 2019

Board of Forestry and Fire Protection
Attn: CalVTP
PO Box 944246
Sacramento, CA 94244-2460

By electronic transmission to: CalVTP@bof.ca.gov

RE: Comments on the Draft Program Environmental Impact Report for the Proposed Statewide Vegetation Treatment Program – CalVTP

Thank you for the opportunity to comment on the Draft Program Environmental Impact Report for the Proposed Statewide Vegetation Treatment Program, commonly known as CalVTP. Safe Alternatives for our Forest Environment (SAFE) and the Northcoast Environmental Center (NEC) work throughout Northwest California and are intimately familiar with vegetation management and fire in our region.

We are broadly supportive of increasing the pace and scale of forest restoration activities and other actions to moderate extreme fire behavior, reduce the risk of high severity wildfire to communities, and help increase the stability of carbon stored on the landscape. Over time, using planned and managed fire, and other vegetation management techniques, can help restore a more natural forest structure and fire regime and moderate the large smoke and greenhouse gas emission events that have become more common in recent years. However thoughtful planning and implementation will be essential to ensure that actions minimize harm, and maximize benefits to ecological resiliency and improved fire outcomes.

O27-1

While these comments address the CalVTP PEIR, effective implementation of this statewide program will require actions beyond simply certifying the PEIR. We include a number of suggestions about overall program structure, and we look forward to further conversation to assist in effective implementation.

Eliminate herbicide use

The CalVTP should not become a vehicle for the use of herbicides for vegetation maintenance. Chemical treatments will result in adverse consequences to biodiversity, water quality, and public health.

It is SAFE and the NEC’s position that while we support the goals of most of the program, the use of chemical herbicides is a threat to wildlife, plants and human communities and should not be used. The known dangers of these chemicals far out way any possible benefit from their use. In Humboldt and Trinity Counties there is widespread opposition to the use of herbicides. In fact, in Trinity County herbicides are classified as a public nuisance

O27-2

Project Design

Projects should be designed to have benefit to the environment and achieve the goals of the project over the long term. These designs should reflect specific local conditions. Fuels reduction projects, for example, should be done in a way that provides long term success such as those achieved with roadside shaded fuel breaks. This has long term financial benefit as well, because retreatment is not necessary for many years.

O27-3

Public Notice of Proposed Projects, and Interagency Review

In order to build and maintain broad public support, raise public awareness, and avoid local controversy and backlash, it is essential that such an extensive vegetation management program be designed, publicized, and implemented with transparency. In addition, due to the magnitude of the cumulative effects of the CalVTP, there needs to be a clear and effective process for the submittal, review, approval, and subsequent tracking and monitoring of projects. Such a process needs to include:

- timely notice to the interested public that a project has been proposed;
- an opportunity for public input on the proposed project;
- consultation with DFW and the Water Board on project design to ensure that the “fuel reduction project protects water resources and wildlife habitat while addressing fire behavior and public safety” consistent with PRC 4123¹;
- Consultation and coordination with local tribes and traditional cultural practitioners, where appropriate;
- approval by CalFire; and,
- tracking of proposed, ongoing, and completed projects in a publicly available online dashboard, to inform evaluation of cumulative impacts and track progress toward state goals.

O27-4

The process as currently described in the CalVTP lacks public notice or an opportunity for public input. This non-transparent approach, combined with the massive scale of the proposed PEIR, is a recipe for community conflict and acrimony. Our conservation organizations have worked for years to educate our members and the general public about the need to address unnatural fuel conditions and improve ecosystem resiliency. These efforts to build public support for mechanical treatments, prescribed fire, and other vegetation treatments could be quickly undermined if the public has no advanced knowledge of, or opportunity to comment on, projects that may directly affect their community or local region. It is essential to provide a clear mechanism for informing the public of proposed projects. This is likely best accomplished through an online portal where the public can subscribe to receive notifications of projects proposed in their region of interest, and also see what other projects have been approved or completed.

¹ Section 4123 of the Public Resources Codes reads:

When selecting a fuel reduction project, the department [CalFIRE] shall collaborate with the State Water Resources Control Board and the Department of Fish and Wildlife to ensure the design of the fuel reduction project protects water resources and wildlife habitat while addressing fire behavior and public safety.

There must also be a meaningful opportunity for public input on proposed projects. The Project Specific Analysis will be the first time an interested party has a clear description of the proposed action and they must be afforded an opportunity to engage with the process in a meaningful manner. A comment period consistent with existing CEQA standards, and beginning when the Project Specific Analysis is available and notification is sent to parties who have indicated interest in projects in that region, will build and maintain community support for vegetation management projects without causing meaningful delay. Further, the project proponent and the reviewing agencies will gain insight from citizens who may have knowledge about the project area or who may have insight about conditions that would be affected by a project.

O27-5

Precluding project-specific input from the public may seem like a way to accelerate implementation, but runs counter to the fundamental goal of CEQA of providing an opportunity for the public to have a voice in projects that will affect their communities and region. Further, we believe providing transparency and an opportunity for engagement will help build consensus in our effort to create a more resilient California. Establishing a clear process for public input – which assures that feedback reaches the project proponent, the appropriate local representatives from DFW, the Regional Water Board, and the CalFire unit, as well as the approving entity – will build broader social acceptance of the CalVTP and improve individual projects.

Review by the Department of Fish and Wildlife and Regional Water Board

It is important to note that while the Draft PEIR was being prepared, the Legislature added §4123 to the Public Resources Code to ensure that fish, wildlife and water resources are protected when fuel reduction projects are implemented.

“When selecting a fuel reduction project, the department [CalFire] shall collaborate with the State Water Resources Control Board and the Department of Fish and Wildlife to ensure the design of the fuel reduction project protects water resources and wildlife habitat while addressing fire behavior and public safety.” - *Public Resources Code 4123*

O27-6

We suggest the establishment of a clear, required process that includes early consultation with these Trust agencies on each proposed project. This is a key opportunity to establish public faith and support in such a massive habitat modification program.

Tracking of projects over time- In order to assure that the public understands the scope of the CalVTP and the state’s broader vegetation management efforts, as well as to help state agencies assess the cumulative effects of these efforts, there should be a real-time, publicly accessible, online portal showing currently proposed and already completed projects. In addition to providing a central information portal to assist the state in monitoring for adverse cumulative impacts, this web interface can convey to the public progress toward the state’s ambitious vegetation management and fire safety goals. This should be coordinated with and inclusive of the project tracking effort being developed by the Forest Management Task Force.

O27-7

Clarify the decision-making official for individual projects

The CalVTP it is not clear about who determines whether or not a project specific analysis (PSA) meets the criteria for programmatic approval. The PEIR needs to more clearly articulate the review and approval process, including who has the final authority and responsibility to determine whether individual projects are consistent with the PEIR and appropriate for programmatic approval.

O27-8

Planning for maintenance over time

- We recommend that the state prioritize projects (e.g., in grant programs) where the project has a plan for future maintenance to maintain effectiveness;
- We suggest that to the degree feasible the state establish a process for checking on the effectiveness of projects 10-20 years post treatment, to evaluate effectiveness of the effort and identify projects that are no longer providing the desired conditions.

O27-9

We appreciate the opportunity to review the draft CalVTP. We believe that appropriate implementation of such an ambitious effort will require significant additional state effort – beyond certifying the PEIR – and we look forward to collaborating to ensure appropriate review, tracking, and monitoring of the vegetation management program, achieving broad benefits such as reduced fire risk and increased ecologic resilience, while simultaneously protecting our shared public trust resources.

(Credit to Paul Mason and Pacific Forest Trust for much of our input)

Thank you

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Letter
O28



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August 9, 2018

Board of Forestry and Fire Protection
Attn: CalVTP
PO Box 944246
Sacramento, CA 94244-2460
By email to CalVTP@bof.ca.gov

RE: Draft Program Environmental Impact Report for the proposed California Vegetation Treatment Program

Dear Ms Hannigan and all:

We appreciate the opportunity to comment on the Draft Programmatic Environmental Impact Report for The Vegetation Treatment Program Of the California State Board of Forestry and Fire Protection ("DEIR/PEIR," "VTP," "Cal Fire").

The California Native Plant Society (CNPS) and its San Diego Chapter ("CNPSSD") promotes sound plant science as the backbone of effective natural areas protection. We work closely with decision-makers, scientists, and local planners to advocate for well informed and environmentally friendly policies, regulations, and land management practices. Our focus is on California's native plants, the vegetation they form, and climate change as it affects both. CNPS support appropriate land management practices to sustain California native plant species, both on properties dedicated to that purpose (e.g. State, Federal, County, or local and private conservation parks or preserves) and other properties, private and public, where native plants, especially where their continued survival helps provide ecological and genetic buffers for their survival, should catastrophic events destroy them in protected areas.

San Diego Audubon Society ("SDAS") has been involved in protecting and advocating for wildlife, habitat, and the conservation of natural for decades. Our work has included leading habitat restoration projects, training community and educating school children. Over the years we have worked with a number of partners including the CA Department of Fish and Wildlife ("CDFW"). We provide expert advice on wildlife issues, especially those related to birds.

We strongly agree that fire and invasive species are critical issues that must be actively managed. However, **we strongly recommend that this DEIR NOT be certified, due to lack of substantial evidence to support contentions and conclusions**

O28-1

made throughout the document, due to substantial procedural lapses and irregularities, as well as the issues we list below. We further contend that the PEIR cannot serve the purpose for which it was apparently designed, and propose more workable solutions for Cal Fire’s consideration.

In analyzing the DEIR, we found many issues, including:

1. Problematic Description of the Fire Problem
2. Failure to notify all responsible Parties
3. What are the space and time boundaries of the project, and was the right environmental document used?
4. The PEIR is too small for the job it proposes
5. CEQA procedural lapses and irregularities, as well as failure to analyze critical issues
6. How the DEIR deals with native plants issues
7. How the DEIR deals with wildlife issues
8. How the DEIR deals with climate change
9. How the DEIR deals with impacts from prescribed fires

O28-1
cont.

The following groups of questions are based on the concerns listed above. We formally request that the Cal Fire fully consider and respond to our questions in an effort to improve the Draft DEIR by clarifying, among other things, its purpose, rationale, and management structure. Note that this letter contains similar material to CNPSSD comment letters on previous versions of the DEIR, sent February 15, 2013, May 31, 2016, and January 9, 2018. Those letters also included requests to the Cal Fire to respond to the questions these letters raised. The Cal Fire never responded to those requests, which is unfortunate, as many of those questions were specifically designed to help the Cal Fire write a better DEIR. As a result, the current DEIR repeats its predecessors' mistakes, and the same criticisms still apply. To provide a complete record, all previous comment letters are attached to this letter. **Why did Cal Fire squander so much time and good will in developing the current document? Why does it insist on trying to bury the past by saying it will only respond to comments on the current rendition, instead of making constructive use of this history?**

O28-2

ISSUE 1. THE PROBLEMATIC DESCRIPTION OF THE CALIFORNIA’S FIRE PROBLEM

We questioned statements in the introduction about fire in California in the VTP Introduction, pp. 1-1 to 1-4. Since the official Cal Fire source was offline (see below), we turned to Wikipedia, which fortunately summarized previously available Cal Fire data about the fires in California, by year. We looked only at fires from 2008-2018. The summary data are presented in Table 1 on the next page.

The most important point is that, between 2008 and 2018, California dealt with between 4,923 and 9,907 fires every year. Of these fires, only between 17 and 95 grew to burn more than 1,000 acres. **This says that California’s firefighters are extremely good at what they do right now, and that at least 98% of all fires in any given year are kept to under two square miles (1,280 acres). Is this correct?**

O28-3

Is the fire threat getting worse? The VTP cherry-picks data from 2010-2018 to make this case. Unfortunately, 2008 was the second-worst year in the last 12 years in terms of acres burned, while 2009 was the second worst year in total number of fires.

Table 1. Summary fire data from 2008 to 2018, per Wikipedia, as scraped from Cal Fire official documents. Total acres burned per year and number of fires/year are self explanatory. Wikipedia broke out fires >1000 acres, which here are labeled “Big Fires.” Invariably, only a few big fires (2-8) accounted for over 50% of the total acres burned that year in each state. The Big Fires accounted for 95-96% of all acres burned, even though they are always less than 2 percent of the number of fires in the state.

Year	Total Acres Burned/Yr	#Fires/Yr	Number of “Big Fires” (>1,000 Acres)	Number of Big Fires that burned >50% of total acres/yr	Percent of Total Acreage Burned by Big Fires
2008	1,593,690	4,923	95	8	92.36%
2009	422,147	9,159	38	2	96.49%
2010	109,529	6,554	17	6	63.68%
2011	168,545	7,989	24	4	87.70%
2012	869,599	7,950	43	4	82.34%
2013	601,625	9,907	28	3	87.86%
2014	625,540	7,865	37	4	84.13%
2015	893,362	8,745	23	5	77.61%
2016	669,534	7,349	33	6	75.37%
2017	1,381,405	9,133	61	7	92.97%
2018	1,893,913	8,527	58	5	83.17%

O28-3
cont.

Why were these data not included in the VTP? What does the longer-term record say about how fires vary in the state.

Not all fires are equal. Every year, California experiences many tiny fires and a few extreme monsters, a “fire ants and Godzilla” distribution. This is illustrated in Wikipedia’s list of fires that were over 1,000 acres, called “Big Fires” in Table 1 above. As noted, there were only 17 to 95 of these fires every year, or less 2% of the total number of fires. **Unfortunately, “Big Fires” burned between 75 and 97% of the total acres burned every year. Worse, the biggest 2-8 fires each year (The “Godzillas”) burned 50% of the total acreage burned in California that year.**

This is why the metaphor of “fire ants and Godzilla” is apt. If all of the fires Cal Fire deals with every year are tiny “fire ants,” the firefighting strategic equivalent of applying insecticide (putting out small fires) is the best answer, and California’s firefighters are extremely good at this already, without the VTP.

The problem is that “fire ant” measures don’t work on Godzilla. Techniques that are effective in extinguishing small fires are ineffective in dealing with wind-blown wildfires, whose total energy release (around 10¹⁷ joules) is on the same scale as the winds in a medium-sized hurricane. **There’s a scaling problem with assuming that humans can stop this kind of energy release, even if they’re trained wildland firefighters. In a majority of cases, weather changes eventually halt the biggest fires. Is this generally correct?**

Unfortunately, this leads to an awkward dilemma. If the VTP focuses Cal Fire on the 99% of smaller fires and ignores the big fires, then a) they're wasting time, money, and people, because small fires are already well-controlled by existing programs, and b) they are not following the governors' orders,. If the VTP focuses on big fires, it may spend huge amounts of money, time, and resources on massively destructive clearances that do not prevent huge fires from wreaking havoc each year.

Is the VTP supposed to deal with California's "Wildfire Crisis?" From reading the VTP, the answer is YES. This is in the first sentence of the first paragraph, referring to Gov. Newsom's Wildfire Strike Force ("California is experiencing a wildfire crisis. As noted in a report of the Governor's Wildfire Strike Force (2019):¹ Climate change has created a new wildfire reality for California"). Also, referring to the Strike Force: "Governor Newsom has directed a strike force to develop a comprehensive strategy to address the wildfire crisis, including reducing the severity of wildfires through continued investments in fire mitigation, vegetation management, and other strategies to reduce fuels." :² **The purpose of the VTP appears to be dealing with all fires, large and small, wind-driven or not wind-driven, extreme or not. Is this correct?**

Does the VTP actually propose to deal with the biggest fires? From the introduction, both YES and NO.

Supporting dealing with the biggest "Godzilla fires" are sections like:

- "former Governor Brown issued Executive Order (EO) B-52-18, which mandates a substantial increase in the pace and scale of vegetation treatments in California to reduce wildfire risk" If Cal Fire follows orders, they should be reducing wildfire risk.
- "The proposed CalVTP directs the implementation of vegetation treatments to reduce wildfire risks and avoid or diminish the harmful effects of wildfire on the people, property, and natural resources in the state of California. To counteract decades of fire suppression and mitigate the effects of climate change, vegetation treatments would be designed to reduce hazardous vegetative fuels, improve protection from wildfire through strategically located fuel breaks, and mimic a natural fire regime using prescribed burning. In addition, ecosystem restoration activities would be designed to approximate natural habitat conditions, processes, and values to those occurring prior to the period of fire suppression. The proposed CalVTP is one of the tools intended to achieve the mandated increase in the pace and scale of fire fuel reduction efforts across the state and respond to the wildfire crisis."
- "The proposed CalVTP is one element of the comprehensive response by federal, state, and local agencies, as well as community organizations and private citizens, to address wildfire risk statewide, and it would serve as the primary vegetation management component of the range of actions underway throughout the state to reduce risks to life, property, and natural resources."

Arguing that the VTP will NOT deal with the biggest fires are sentences like:

¹ Governor Newsom's Strike Force. 2019 (April 12). *Wildfires and Climate Change: California's Energy Future*. Available: <https://www.gov.ca.gov/wp-content/uploads/2019/04/Wildfires-and-Climate-Change-California's-Energy-Future.pdf>. Accessed April 17, 2019.

² Governor Newsom's Strike Force. 2019 (April 12). *Wildfires and Climate Change: California's Energy Future*. Available: <https://www.gov.ca.gov/wp-content/uploads/2019/04/Wildfires-and-Climate-Change-California's-Energy-Future.pdf>. Accessed April 17, 2019.

O28-3
cont.

- “While vegetation treatments under the CalVTP may not be able to slow or halt the extreme fires, most fires that occur within the state are not highly wind driven, and the proposed vegetation treatments can help slow and suppress them. Vegetation treatments can also play a valuable role in containing the more extreme fires, when weather conditions shift, wind subsides, and fire intensity decreases.”
- “Vegetation treatment at the landscape scale is focused on reducing the likelihood of a ground fire increasing in intensity and helping fire responders more easily contain a fire. Certain wind and weather conditions lead to high-intensity, fast-moving, wind-driven wildfires. Although the most individually destructive, these extreme fires represent a small number of the total fires that occur each year.”

O28-3
cont.

It appears, therefore, that the VTP wants to have it both ways. It proposes doing the vegetation treatments under the rubric of controlling the biggest wildfires to meet the governors’ order and SB 632. However, it acknowledges that this approach won’t actually work to ameliorate the impacts of the biggest fires.

Unless the VTP is going to deal with the biggest, extreme, wind-driven wildfires, should we have the VTP? What specific actions will the VTP take to make vulnerable California property and people safe from the biggest extreme, wind-driven wildfires? How will it measure both the effectiveness of and failures of these actions?

The VTP obfuscates sources using misleading statements in making its case. One of the many issues in reading this DEIR is that the Cal Fire documents were all inaccessible at the links provided in the references. Why did Cal Fire act in a way that hid the documentation that supported this PEIR, a document that both the governor and the legislature are pushing for?

O28-4

Then there are problematic statements within the DEIR itself. One example is: “In the last several decades, more than 75 percent of forested areas and other woody vegetation types burned less frequently than historic averages, resulting in the buildup of fire fuel”. This is actively misleading, because the mean fire return interval is many decades, so in the last few decades, one would expect no fires based on “historic averages” alone. In fact, reality is exactly the opposite. There are thousands of fires per year, at least some of which burn woody vegetation. Additionally, chaparral and coastal sage scrub, especially in southern California, have burned more often than is good for them. **What would a statement on fire return intervals, based on a multi-decade perspective, actually say about fire trends in the last few decades? What vegetation types have experienced less fire than we currently think is necessary? What vegetation types have burned too frequently**

O28-5

Another misleading statement is “[s]ince 2010, the number of wildfires occurring annually has been increasing, as has the number of acres burned.”) is misleading, given the 9,159 fires that burned in 2009 or the 1,593,690 acres that burned in 2008. **Why was analysis confined to between 2010 and 2018, considering that the VTP has been under consideration in something like its current form since the 1990s?**

O28-6

There is also the following: “[m]uch of this increase in acreage, especially in 2017 and 2018, is the result of record-setting fires primarily driven by wind, such as the Thomas and Northern California wildfires (2017) and the Camp and the Mendocino Complex fires (2018).” The fires that burned over 100,000 acres between 2008 and 2018 are presented in Table 2 on the next page. The years 2017 and 2018 did have enormous

O28-7

Table 2. Fires between 2008 and 2018 that burned over 100,000 acres.

Rank	Fire	Acres	Year
1	Mendocino Complex	459,123	2018
2	Thomas	281,893	2017
3	Rush	271,911	2012
4	Rim	257,314	2013
5	Carr	229,651	2018
6	Klamath Theater Complex	192,038	2008
7	Basin Complex	162,818	2008
8	Station	160,577	2009
9	Camp	153,336	2018
10	Rough	151,623	2015
11	Happy Camp Complex	134,056	2014
12	Soberanes	132,100	2016
13	Iron Complex	105,805	2008

O28-7
cont.

fires, but the problem with 2018 is that it had three of them, which appears to be unusual, when normally there are one or two per year of this scale (as in 2003, 2007, 2008). **Do two years make a trend? Are they the predictable, if worrisome, result of having a massive drought followed by a wet year? Or are they within the normal pattern of variation seen in California across the last century?**

This is a central problem that runs throughout the VTP. It purports to cover the impacts of an enormous program, but

- **How will effectively prevent the majority of damage from wildfires when it admits it cannot control the extreme fires that cause that damage?**
- **Why does it focus on efforts to deal with the 98%+ of small fires that are already controlled by the brave and skilled efforts of current firefighters?**
- **Why does it render the whole scheme problematic by making cited references unavailable, cherry-picking supporting data, and making misleading statements about the true nature of the problem?**

O28-8

O28-9

O28-10

ISSUE 2. FAILURE TO NOTIFY ALL RESPONSIBLE AGENCIES

The fundamental problem is that the DEIR named some but not all of the Responsible Agencies under the VTP. From P. 1-16: “State and local agencies that may seek to approve or issue permits for implementation of treatment activities under the proposed CalVTP **include but are not limited to the following...**”[emphasis added]

The standard, under CEQA section 15082: “(a) Notice of Preparation. Immediately after deciding that an environmental impact report is required for a project, the lead agency shall send to the Office of Planning and Research and **each responsible**

O28-11

and trustee agency [emphasis added] a notice of preparation stating that an environmental impact report will be prepared.”

Why was no effort made to compile a complete list of Responsible Agencies and notify them? How will Responsible Agencies not included on the list be notified that they had a responsibility to comment on this DEIR? Will they be given a chance to comment before they are expected to run the VTP, and will those comments matter? Were all the Responsible Agencies listed in the DEIR notified? Where is the evidence that this occurred? Will the existing PEIR be recirculated once all Responsible Agencies have been identified? When will this happen?

O28-11
cont.

ISSUE 3. WHAT ARE THE SPACE AND TIME BOUNDARIES OF THE PROJECT, AND WAS THE RIGHT ENVIRONMENTAL DOCUMENT USED?

3.A. Which are the correct maps for the VTP and the DEIR? The maps presented in the actual document have a scale of about one square mile per pixel. **Are these the official, correct Project maps?** Unfortunately, when this coarse-scale map is transposed onto a finer-scale map of some regions, it appears that the VTP proposes to treat federal land (see figure 1A-1C below).

O28-12



Fig 1A. A portion of Figure 1-1 (p. 1-2 of the VTP), blown up to show the area around the LA/Ventura County line. Yellow is state Responsibility Area for the VTP, green is outside that. The individual pixels are about 1 mile wide



Fig 1.B. The same area showing the parcels within the Santa Monica Mountains National Recreation Area (SMMNRA, <https://www.nps.gov/samo/playourvisit/southwestern-park-sites.htm>). The darker green areas are part of SMMNRA. A simple comparison shows that 1A unambiguously has State Responsibility Areas overlaying the federal lands of the National Recreation Area.



Figure 1C. An overlay of the VTP onto the SMMNRA. Even blurry, it's quite possible to see how parts of Zuma and Trancas Canyon (right) and Circle X Ranch (upper center) are overlaid by the VTP, and SMMNRA areas in Deer Creek Park (right) and Malibu Springs (center, on the county line) appear entirely within the SRA for the VTP.

But there are another set of maps. On July 25, 2019, Ms. Edith Hannigan emailed out the following: "An online viewer for the CalVTP's proposed treatable landscape is now online: <https://calfire-forestry.maps.arcgis.com/apps/webappviewer/index.html?id=78782787ae4d459e8cb313141a5c41be>. Thank you."

O28-12
cont.

Is this online map the official Project map? If so, does this mean that the VTP PEIR was only complete as of July 25, 2019? What does that do to the timing of the 45 day review period?

This appears to create a dilemma. Either the Project boundaries include federal land, in which case an EIS or an EIR/S is also needed, or the PEIR was incomplete until July 25, 2019, and that is when the 45 day comment period should have begun, assuming that the entire list of responsible agencies was known and they were all informed of their responsibility. Which is correct? What measures do the Project proponents propose to solve these issues?

O28-12
cont.

3.B. Why are there treatment areas proposed outside the State Responsibility Area?

Looking only at southern San Diego County in the online map of treatable areas³, there are numerous examples of fire breaks proposed within City limits (Figure 2 A-C next pages). Some of these errors were present in the VTP version 4 map (Fig 2D). One example (Figure 2E) is particularly annoying, as the fire breaks proposed above “Deer Canyon” (center of image) are in an ecological preserve known as Del Mar Mesa, which is the only place of its kind in California and decidedly not a fire threat to the residents on its north side. Worse, the area south of the fire breaks contains an ecological reserve owned by CDFW and CalTrans mitigation land, as well as the National Wildlife Refuge plots, which may not be accurate either but are close. Finally, as in many other areas on the map, the VTP contemplates treatments within roads, in this case, in the road bed of Highway 56 (Figure 2.E).

O28-13

Do the fuel breaks shown outside the Treatable Areas represent areas the VTP is supposed to treat? If so, what is the actual area of the VTP, and were all neighbors and responsible and trustee agencies notified? If not, how does removing inaccurate treatments from the map affect discussions of treatment acreage? Given that these mistakes have propagated between versions of the VTP and DEIR, what guarantees can be given that these issues will be fully resolved before the VTP is approved?

ISSUE 4. DOCUMENT SCALE INADEQUATE FOR THE PROGRAM

4.A The PEIR is too small a document for the Project. California is inarguably the most complicated state in the US, whether the complexity is biodiversity (California is a global biodiversity hotspot⁴), socio-political, geographic, geologic, or in the massive infrastructure of aqueducts, power grids, farms, forests, and cities that allow over 38,000,000 people to live here. Worse, climate change is affecting everything, from water availability to fire behavior.

O28-14

Writing a programmatic EIR ("PEIR") is about analyzing the predictable, cumulative impacts of a program. Writing a PEIR for a program that proposes a diverse

³ <https://calfire-forestry.maps.arcgis.com/apps/webappviewer/index.html?id=78782787ae4d459e8cb313141a5c41be>.

⁴ Myers, N., Mittermeier, R. A., Mittermeier, C. G., da Fonseca, G. A. B., and J. Kent. (2000). Biodiversity hotspots for conservation priorities. *Nature*, 403(6772), 853-858.

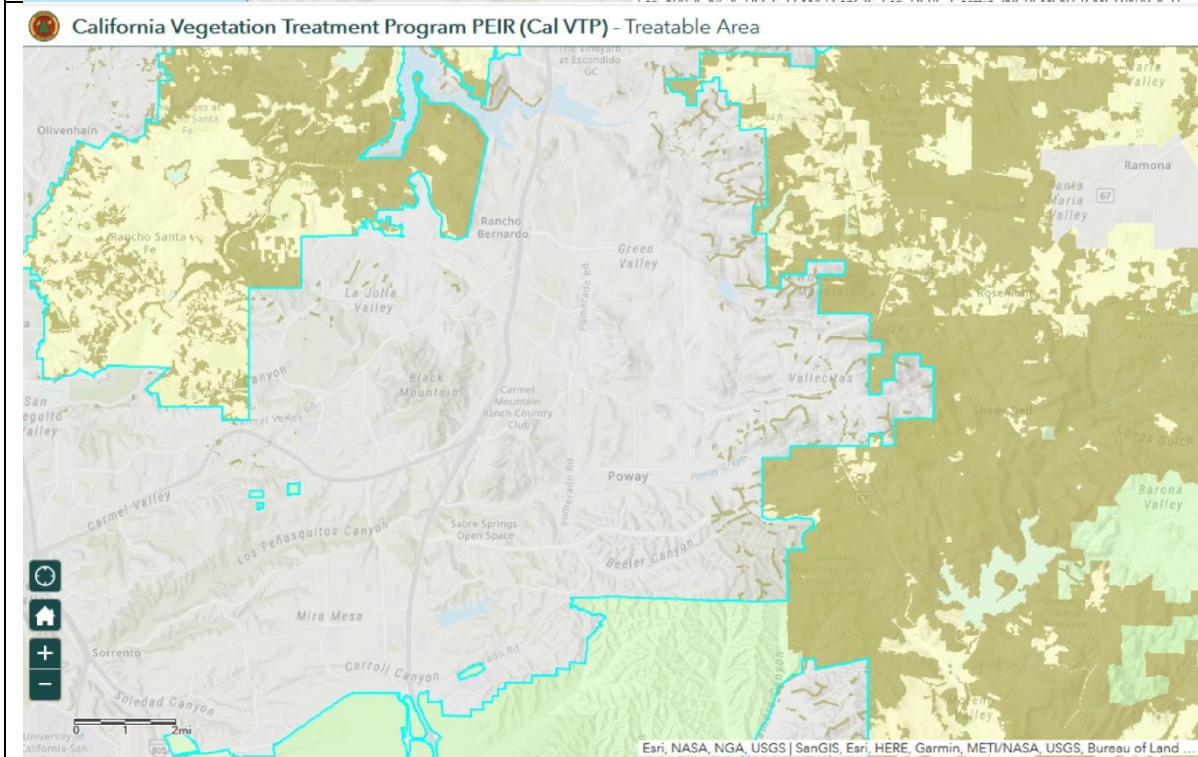
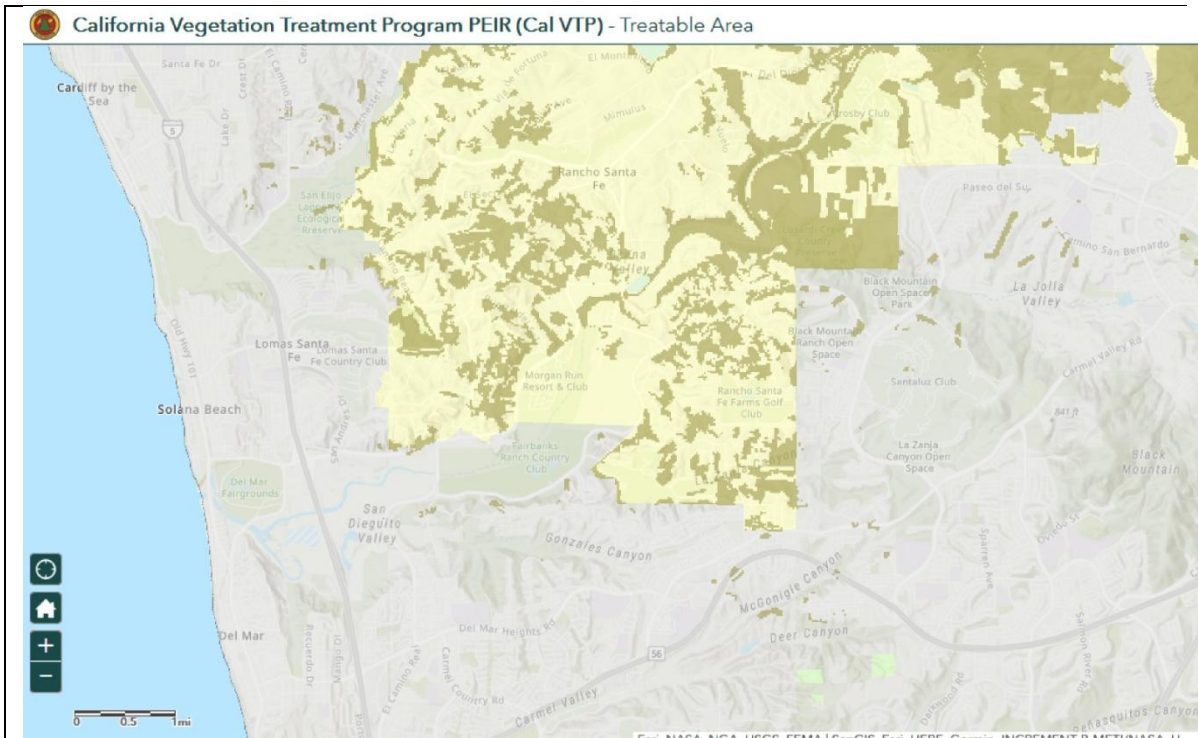


Figure 2A-B. Images from online VTP treatment map, showing treatment areas (brown) State Responsibility areas (yellow), Federal Responsibility Areas (green), and Local Responsibility Areas (Gray). There should be no brown treatment areas inside gray areas, yet there are a large number of apparent fire breaks proposed.

O28-13
cont.

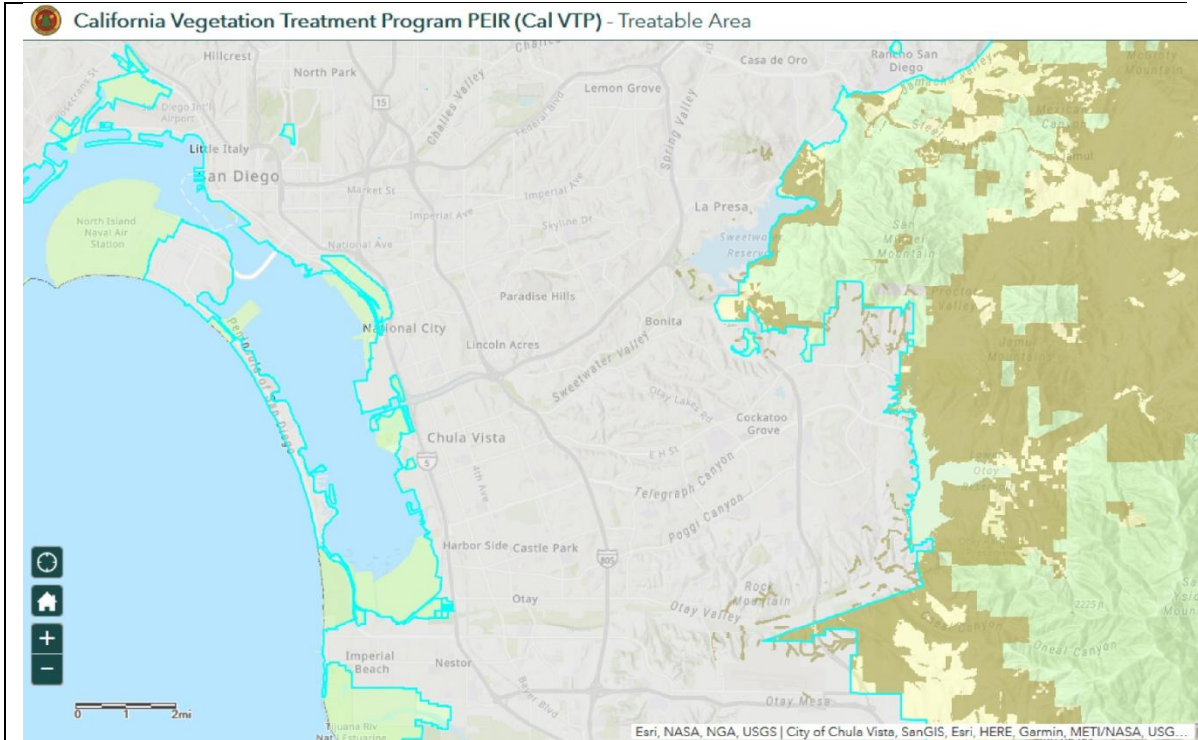


Figure 2C. The southern part of San Diego County, showing brown treatment areas inside gray Local Responsibility Areas.

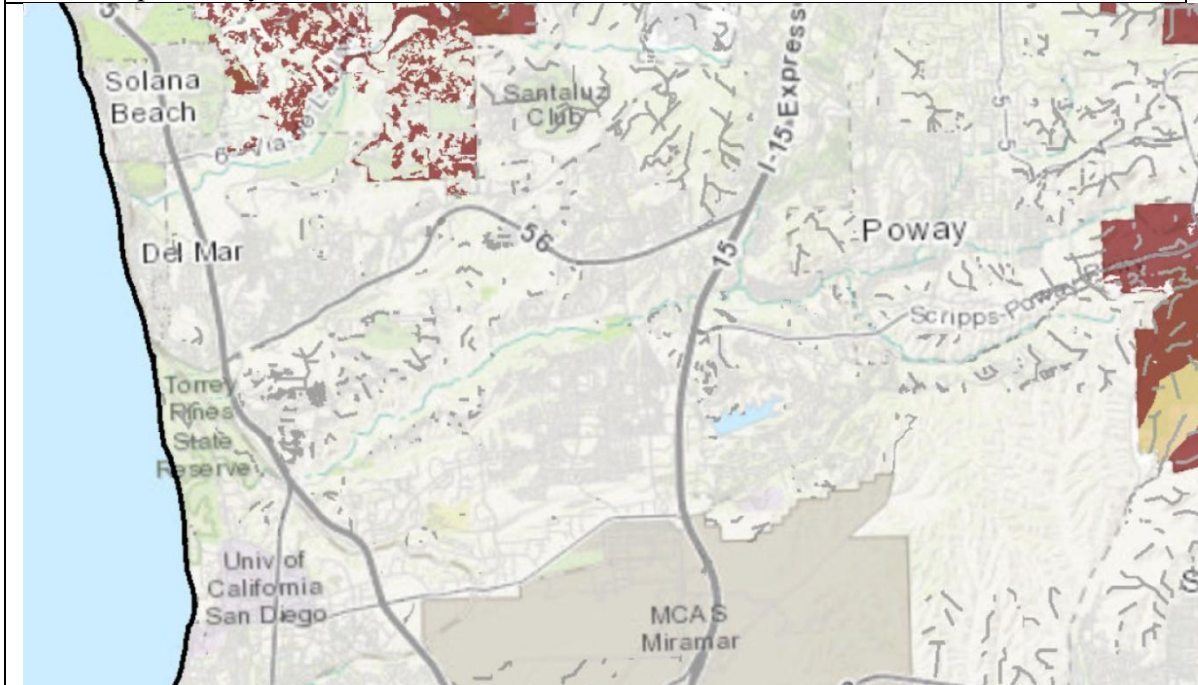


Figure 2D. A screen shot from the corresponding map in the VTP version 4 (2017) showing that some of the treatment areas mapped in Figure 2A were present in the previous version, although some have been deleted.

O28-13
cont.

ment Program PEIR (Cal VTP) - Treatable Area

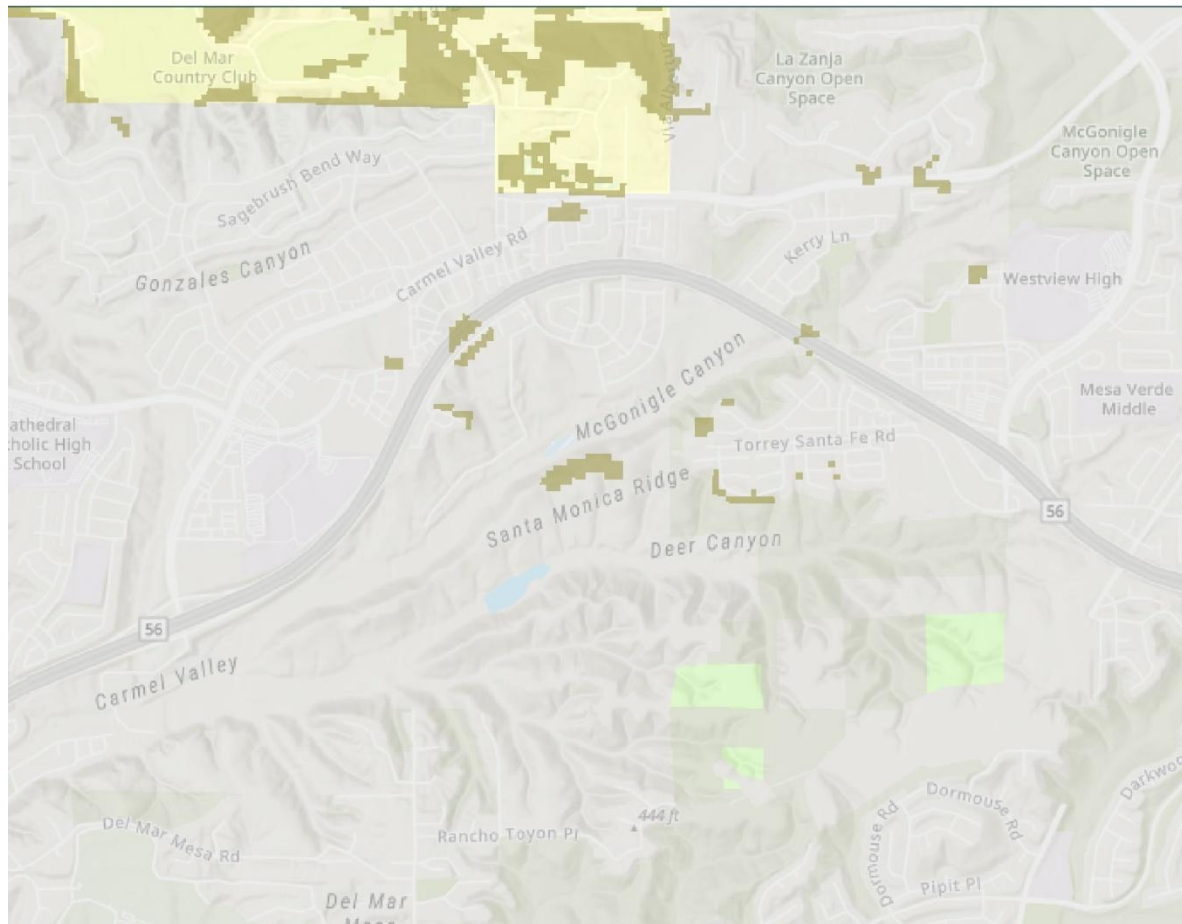


Figure 2E. An enlargement of Figure 2A, showing problematic (and ineffectively tiny) fuel treatments around Del Mar Mesa (labeled “Deer Canyon”), and fuel treatments in the roadway of Highway 56. It also fails to show the CDFW Ecological Reserve parcels near the green areas, nor the Caltrans land between them.

O28-13
cont.

set of activities across 23% of California is a truly titanic undertaking that the writers of the DEIR did not engage in.

The main body of the DEIR is only 672 pages long, almost 80 pages *shorter* than the previous iteration, which was 751 pages long. To show why this is a problem, compare it to the natural resources management plan and Mitigated Negative Declaration for 1,092 acres of urban park in San Diego, which was 159 pages long⁵. The DEIR, supposedly an analysis of a long-term program that proposes to treat up to 250,000 acres per year indefinitely with 220 Cal Fire Employees, across a 20,300,000 acre chunk of the State Responsibility Area (with some overlap into jurisdictions like the City of San Diego), is only 5.5 times longer than a routine local management document that deals with a few miles of trail. There is no way the DEIR can provide adequate analysis in so short a length, and it does not. The scale of the DEIR is orders of magnitude too small for the VTP.

Another, grotesque way to visualize the problem is that each of the 672 pages supposedly analyzes impacts to 372 acres per page of the 250,000 acres to be treated every year. Or possibly it analyzes the 20,300,000 acres of treatable acreage at 30,208 acres analyzed per page. At 250 words/page, that is 120 acres of impacts analyzed per word.

4.B. Why this matters. As we understand it, the courts have ruled that "[a]n accurate, stable and finite project description" in an EIR is necessary to analyze its impacts, and a "truncated project concept" violates CEQA.⁶ While exhaustive detail is unnecessary, CEQA mandates that EIR project descriptions should be sufficiently detailed, and sufficiently accurate, to permit informed decision making.⁷ **Given that the DEIR does exactly the opposite of what CEQA policy states and courts support, why was the DEIR written that way? Would it not have been better to follow CEQA and relevant case law?**

Program Environmental Impact Reports (PEIR) like this DEIR are supposed to analyze impacts "as specifically and comprehensively as possible."⁸ Indeed, the role of a PEIR is two-fold: it includes "more exhaustive consideration" of impacts, mitigation, and alternatives than an individual project EIR could include, and it considers cumulative impacts⁹. It is designed to "eliminate repetitive discussions of the same issues and focus the later EIR or negative declaration on the actual issues ripe for decision at each level of environmental review." Projects that tier off a PEIR are supposed to supplement the analysis only. CEQA "does not excuse the lead agency from adequately analyzing reasonably foreseeable significant environmental effects of the project and does not justify deferring such analysis to a later tier EIR or negative declaration."¹⁰ Also, "[d]esignating an EIR as a program EIR also does not by itself decrease the level of

⁵ City of San Diego (2015). Carmel Mountain/Del Mar Mesa Natural Resources Management Plan and Trail System.

⁶ Sacramento Old City Association. v. City Council (1991), Rio Vista Farm Bureau v. County. of Solano (1992)

⁷ CEQA Guidelines § 15124

⁸ CEQA Guidelines, 15168(a), (c)(5)

⁹ CEQA Guidelines, 15168(b)(1)-(2).

¹⁰ CEQA Guidelines 15152(b)

O28-14
cont.

O28-15

O28-16

O28-17

analysis otherwise required in the EIR.”¹¹ Programmatic EIRs must contain “extensive, detailed evaluations” of a plan’s impacts on the existing environment.

The DEIR’s avoidance of in-depth analysis of predictable project-level impacts, predictable cumulative impacts of projects within the same area, and predictable cumulative impacts as a result of repeated projects on the same parcel in the same area is contrary to CEQA’s direction on the contents of EIRs and of programmatic EIRs in particular. **Why was the DEIR written so contrary to CEQA’s instructions on the contents of a PEIR? What concrete steps can be taken to fix this profound shortcoming?**

O28-17
cont.

CEQA does not allow agencies to use a PEIR defer analysis of a plan’s impacts to some future EIR for specific projects contemplated by that plan. The courts have ruled that environmental review must take place before project approval, and specifically that, in a programmatic EIR, tiering "is not a device for deferring identification of significant environmental impacts that the adoption of a specific plan can be expected to cause."¹² **Given that the DEIR does exactly the opposite of what CEQA policy states and courts support, why was it written as it was? Would it not have been better to follow CEQA and case law? What concrete steps can be taken to revise this PEIR so that it performs the job of the PEIR: accurately describing the VTP’s area, it’s scope, the impacts each project will predictably cause, the cumulative impacts that multiple projects will cause, analysis of these predictable impacts in reasonable detail, avoidance or mitigation of impacts, and a comprehensive listing of unmitigable impacts?**

O28-18

What effects will the PEIR’s brevity have on the Projects that tier off of it? By deferring analysis to individual projects, doesn’t the PEIR actually *increase* the amount of work that needs to be done on individual projects? Isn’t this precisely opposite the goal of the PEIR, which is to simplify the process that individual projects have to go through?

As it is, the Project’s utility is in question. Its boundaries are in question. Which map is correct and official is in question. Whether all responsible agencies were notified is in question. Whether all sensitive species were properly identified is in question. Whether the Program EIR creates enough detail that any EIR can be tiered off it is in question. When it sunsets is unknown. **What exactly is the VTP? Can it be described accurately? Will that description remain stable year to year? What are its precise boundaries each year, and when will it end? Does Cal Fire, at this point, have a concrete plan for what will happen if the VTP is approved, in terms of what treatment will happen where for the next ten years? If that plan exists, why is it not in the VTP or the DEIR?**

O28-19

4.C. Some of what is missing from the VTP. The VTP breaks California down into nineteen ecoregions; it proposes three types of fuel management treatments, at the Wildand Urban Interface (WUI), on fire breaks, and as ecological restoration; it proposes a five treatment activities including prescribed burns (purportedly half of the treatments), grazing with non-native herbivores, mechanical clearance, clearance by hand, and herbicide application. Just a simple combinatorial analysis, 19 ecoregions times 3

O28-20

¹¹ CEQA Guidelines 15160.

¹² Stanislaus Natural Heritage Project v. County of Stanislaus (1996)

management treatments times 5 treatment activities, leads to 285 different possible scenarios. What is presented in chapter 3 is an anecdotal tour mentioning things that have happened under some treatments, often with contradicting factors. This does not provide an in-depth, programmatic analysis of the impacts of the VTP in any place or time. **Where is the quantitative analysis of the impacts of all 285 scenarios? What will happen when, where, why, how often, what factors will determine which treatment is used, what are the impacts of each scenario, what are the cumulative impacts, and what can be done on a programmatic level to avoid or mitigate those impacts?**

O28-20
cont.

4. D. The scale of treatment is extreme. The VTP seeks to treat 250,000 acres per year going up to 500,000 acres annually in five years, with over 480 prescribed burns alone per year averaging 260 acres each, and overseen by a small workforce of around 200 specialists. This is huge (250,000 acres is 390 square miles, larger than San Diego’s 372 square miles, and between the Carr and Thomas fires in total size), but it is not clear if it is appropriate. For example, if every one of the 20,300,000 acres "appropriate for a treatment" were to be treated just once, it would take over 81 years (20,300,000 acres/250,000 acres per year), which is clearly inadequate for any kind of sustained vegetation management, and it fits the natural fire return interval for many types of chaparral (implying the vegetation would “self-treat” with fire without any treatment at all). Clearly the VTP actually intends to treat a small subset of land "appropriate for a treatment," but the actual parcels to be treated are not discussed, mapped, or analyzed, and may not be known yet. **If the actual parcels are not yet known, how can anyone write a PEIR that offers any useful analysis that is consistent with CEQA? How can land owners, their neighbors, and government programs that cover parcels be informed when a VTP project that tiers off this DEIR is proposed for a parcel?**

O28-21

Why is the VTP frame of reference the entire State Responsibility Area, and not the acres treated per year? The problem here is that, on an annual basis the VTP is proposed to treat 250,000 acres/year, The point here is that there's little reason to assume that the VTP can implement treatments in its entire, modeled treatment area in a time span that is relevant to either modifying fire behavior (clearing twice per century or less?) or fiddling with vegetation characteristics (one treatment per century?). **The key question is, what can the VTP do each year to meet its objectives in a useful way? Why was this not even evaluated, let alone used as the frame of reference for evaluating alternatives?**

ISSUE 5. CEQA PROCEDURAL LAPSES AND IRREGULARITIES AS WELL AS FAILURE TO ANALYZE CRITICAL ISSUES

5.A. The DEIR misinterprets the role of the Lead Agency and Responsible Agencies under the VTP. This will cause implementation problems. The problem starts at P. 1-16:“Under CEQA, responsible agencies are state and local public agencies other than the lead agency that have the authority to carry out or approve a project or that are required to approve a portion of the project for which a lead agency is preparing or has prepared an EIR.” This is incomplete, albeit a correct reading of CEQA Section§ 21069. What is

O28-22

missing is the definition of lead agency (§ 21067): “Lead agency” means the public agency which has the principal responsibility for carrying out or approving a project which may have a significant effect upon the environment.” **Why was the unique role of the lead agency not included in the analysis?**

Page 1-16 continues: “There are many local, regional, and state agencies with land ownership or land management responsibilities on public land the treatable landscape that seek to reduce wildfire risk and would carry out vegetation treatments under the CalVTP. In this PEIR, a responsible agency is also referred to as a “project proponent,” which, for the purposes of this PEIR, is a public agency funded by CAL FIRE grants or with land ownership/management responsibilities in the treatable landscape and seeking to implement vegetation treatments consistent with this PEIR for CEQA compliance. The CalVTP PEIR will be available for the responsible agencies to use for CEQA compliance when they are seeking to approve treatment projects that are consistent with the CalVTP.”

“Agencies that own large portions of land within the SRA or may approve or issue permits for implementation of treatment activities under the CalVTP and are considered responsible agencies pursuant to CEQA and possible project proponents, are listed below. Other types of agencies that own or manage lands within the SRA that could act as responsible agencies (project proponents) under the CalVTP include state agencies, cities, counties, water and irrigation districts, conservation districts, park and open space districts, conservation agencies, community service districts, utility districts, flood control districts, water agencies, transportation authorities, cemetery districts, and airport districts.

“Trustee agencies are state agencies with legal jurisdiction over natural resources affected by a project that are held in trust for the people of the state of California. Trustee agencies under the CalVTP include CSP, CDFW, the University of California, and the California State Lands Commission.

“State and local agencies that may seek to approve or issue permits for implementation of treatment activities under the proposed CalVTP include but are not limited to the following....(a long list of cities, counties, and agencies follows.)

This novel interpretation, which effectively deputizes all other state agencies to approve VTP permits, causes a host of problems:

- From elsewhere in CEQA (§ 21080.4), the lead agency is responsible for determining whether an EIR is required for a Project and immediately providing a Notice of Determination to all responsible agencies. **Where is the statute language that allows Responsible Agencies to determine what level of CEQA review a Project is subject to? Isn't this the sole task of the lead agency?**
- **Equally, where is the language in CEQA that allows project proponents to autonomously determine what level of CEQA review a project requires? Isn't that the exclusive purview of the Lead Agency?**
- **Why does the DEIR assume that any Responsible Agency has the staff, budget, or resources to carry out the lead-agency roles on the VTP?** This is a logistics question. The VTP proposes a novel CEQA checklist, with a novel CEQA process, under a PEIR that utterly fails to provide sufficiently detailed analyses that projects can tier off of.. Because it fails to use a conventional CEQA methodology and requires decision makers to be intimately familiar with the VTP in order to complete

O28-22
cont.

O28-23

an application, it would require agencies to hire specialists whose sole job is to work on the VTP.

Cal Fire’s previous experience with the Vegetation Management Program and previous iterations of the VTP demonstrates that Cal Fire has insufficient capacity to carry out that program now. **Where is the evidence that Cal Fire has, or can develop the capacity, to handle this volume?**

There is no evidence in the DEIR that any analysis was made of the impact this new program will cause to the proposed “Project Proponents.” **What are the impacts of “deputizing” other agencies in this way? What level of additional staffing and resources will this require? Where are the funds for this surge coming from? What are the impacts, both short term and long term, of forcing other agencies to divert resources to the VTP? Where is the analysis to show that any so-called “Project Proponent” can afford to staff up for this effort?**

O28-23
cont.

5.B. The objectives are problematic. It is not clear that the VTP can attain these objectives, and it appears that some of them contradict each other. Worse, they seem to be specifically tailored so that the Objective of the VTP is to carry out the VTP as written, and nothing else can therefore suffice. This fails to provide any useful alternative, nor does it provide much room to fix the obvious flaws in the VTP.

O28-24

There are issues with some of the objectives too. As given on Page 2-1, the objectives are:

- 1. serve as the vegetation management component of the state’s range of actions underway to reduce risks to life, property, and natural resources by managing the amount and continuity of hazardous vegetative fuels that promote wildland fire consistent with California’s 2018 Strategic Fire Plan (Board and CAL FIRE 2018).

As detailed in response letters by the Endangered Habitats League and Chaparral Institute, there is ample evidence that vegetation treatments more than perhaps 100 feet from structures do little or nothing to protect lives and property. There is ample evidence, from the Thomas and Camp fires, among others, that managing the amount and continuity of vegetation played no role in slowing the spread of those extreme, wind-driven fires. As noted above, extreme, wind-driven fires are responsible for at least half the acreage burned each year, and large fires burn up to 98% of the vegetation each year. **How will managing amount and continuity of vegetation reduce risks to life and property? For that matter, how will they reduce risks to natural resources, if the threat to these is also from extreme, wind-driven wildfires?**

O28-25

- 2. substantially increase the pace and scale of vegetation treatments to contribute to achieving a statewide total of at least 500,000 acres per year on non-federal lands, consistent with the Governor’s Executive Order B-52-18, which results in a target up to 250,000 acres per year after considering other types and areas of vegetation treatments;

How does the VTP resolve the apparent contradiction of treating both more than 500,000 acres per year, and less than 250,000 acres? Will this goal be modified to account for the damage caused by extreme, wind-driven fires that themselves can “treat” over 100,000 acres per year? Or will this be in addition to, adding to the lands burned, herbicided, and masticated every year?

O28-26

3. increase the use of prescribed burning as a vegetation treatment tool, consistent with the provisions of Senate Bill 1260, Statutes of 2018, and Public Resources Code (PRC) Section 4483(a);

How will the need to avoid type conversion, and with it the spread of weeds and increase in erosion, be balanced against the need to treat at least 500,000 acres? Which takes priority? Indeed, how are these objectives prioritized? What happens if some other law, like the California Endangered Species Act or the Clean Water Act, impacts the ability of Cal Fire to meet its quota?

O28-27

4. contribute to meeting California’s GHG emission goals by managing forests and other natural and working lands as a net carbon sink, consistent with the California Forest Carbon Plan (Forest Climate Action Team 2018), California’s 2017 Climate Change Scoping Plan (CARB 2017), Fire on the Mountain: Rethinking Forest Management in the Sierra Nevada (Little Hoover Commission 2018), and California 2030 Natural and Working Lands Climate Change Implementation Plan (CalEPA et al. 2019);

How will “net carbon sink” be measured or modeled? What systems will be used? What will be the accounting interval, an annual basis? Will it include standing dead biomass such as burned trees, or will trees be assumed to have been “vaporized by fire” (as in some models) so that their carbon is lost to the system, even if the dead tree is still there and storing carbon? This matters, because some models make sloppy assumptions, like assuming dead wood counts as an instantaneous carbon loss, rather than storing carbon for decades or centuries. If a dead log is assumed to be instantaneously lost, this justifies burning it for fuel. This turns something that was both a net carbon sink and a major habitat asset into emitted greenhouse gas.

O28-28

5. **Improve ecosystem health in fire-adapted habitats by safely mimicking the effects of a natural fire regime, considering historic fire return intervals, climate change, and land use constraints.**

This sounds wonderful for a few vegetation types, like open ponderosa pine forests or grasslands, where frequent ground-fires dominate. It sounds far less wonderful for lodgepole pine forests or chaparral where infrequent canopy fires dominate, and it sounds horrible for old-growth chaparral, which rarely or never burns, but which is given no special call-out in the VTP. **Why is there no consideration of the diversity of fire regimes and plant adaptations to fire within fuel types in the VTP?**

O28-29

5.C. The Project alternatives are incomplete. As noted above, the Objectives are tailored to make it difficult to consider any other program. However, since the objectives also seem to contradict each other and to contradict other executive orders and programs, such as those related to climate change, there is a need to have better alternatives.

O28-30

Specific issues include:

- **No Project Alternative:** Considering that Cal Fire has only treated at most 33,000 acres and proposes to ramp this to 250,000 to 500,000 acres (over 1000% increase), it’s fairly obvious that the Proposed Project would have greater environmental impacts. What’s less obvious is whether there would be any measurable difference in

O28-31

the behavior of extreme, wind-driven fires. **If the Proposed Project cannot meet its primary objective, isn't No Project a saner choice?**

O28-31
cont.

- **Alternative A, the reduced project.** Since Cal Fire first needs to demonstrate that it has the resources to achieve treat 250,000 acres, a cynic would argue that this might be what is achieved, given that the existing VMP has grandiose acreage goals that were never attained. Unfortunately Alternative A differs only in scale, not in the breadth of problems. Letters on previous versions addressed the problems with a smaller scale project, and they are included here for reference.
- **Alternative B** purports to treat 250,000 acres in the WUI. This seems like a great recipe for increasing sprawl, as it incentivizes large land owners to do carelessly documented projects, destroy resources, and use the degradation of their land as an excuse to develop it. **What measures would the VTP take to insure that it is not used for money-making scams, as this seems to be? What measures would the VTP take to keep from igniting extreme, wind-driven wildfires in its haste to treat large acreages rapidly?**
- **Alternative C has some desirable modifications, by prohibiting use of prescribed burning in scrublands.** This is less problematic than it looks, as a thoughtful analysis of shrubland fires, especially in southern California, indicates that they have burned far too frequently, and thus would not be subject to prescribed burns in any case. **Given that so much of the presumed treatable shrublands in the state are actually off-limits to prescribed burning due to too-frequent fires, how is this different than the Preferred Project?**
- **Alternative D would be useful in San Diego county, as there is a real dearth of vegetation that would benefit from prescribed fires at the moment. However, we do not endorse this alternative, simply because it has the other problems.**
- **Alternative E has analogous problems to Alternative D.** It ameliorates some problematic issues, but not all of them. In this case, the problem is not the use of herbicides where they are the best option, but the poor documentation of the effect of herbicides and the mandate to effectively broadcast spray to meet acres treated goals. This is analogous to giving doctors goals for how many pills of certain brands they prescribe, and we have seen how horribly wrong that went in the opioid epidemic. The problem is not the use of opioids, but the over-prescription of the drugs and the resulting, uncontrollable side effects. Introducing massive amounts of herbicides onto any landscape has similar issues, useful as herbicides are when removing some problematic invasive species.

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O28-35

O28-36

5. D. SPR AD-3 Consistency with Local Plans, Policies, and Ordinances is unclear. (p. 2-31)“The project proponent will design and implement the treatment in a manner that is consistent with applicable local plans (e.g., general plans), policies, and ordinances to the extent the project is subject to them” **Does this mean, for example, that the individual VTP projects would be subject to San Diego’s adopted NCCPs without any exemptions? Will they take into account regionally sensitive resources when working adjacent to NCCP areas? What about unadopted NCCPs in San Diego, such as the North County or East County MSCPs?**

O28-37

5.E. Chapter 4, Cumulative Impacts discussion is incomplete. Why was the cumulative impact of past fires not considered in conjunction with the VTP? Particularly in southern California, too many fires have caused type conversion of shrublands, with loss of species from the landscape and loss of habitat for sensitive species. Throughout California, extreme, wind-driven fires have made past prescribed burns and clearances moot, as those areas have subsequently been burned over. **Why is there no discussion of, or analysis of, past fires? What about other past disturbances, such as floods? If the history of human manipulation is to be accounted for, why not the history of other disturbance**

O28-38

5. F. What SPRs implement post-treatment monitoring and analysis? How are these data centrally collected and distributed? How will they be used? Will they be accessible to the public?

O28-39

5.G. Adaptive Management is mentioned in 2.6.1. Unfortunately, there seem to be no SPRs related to creating a system of adaptive management. Which SPRs will be used to implement adaptive management? If none exist, will the next EIR contain SPRs to do this? What will be in them?

O28-40

6. NATIVE PLANT ISSUES

The treatment of native plants issues is riddled with issues, starting with the trivial In The plural of plant is not vegetation, and vegetation has different issues than plants, despite the attempt of the DEIR to bundle them together), and going rapidly to the seriously non-functional. We have the following questions about how native plant issues were treated in the DEIR:

O28-41

6.A. Why was an alternative CEQA checklist proposed for dealing with biological issues? As the VTP proposes an alternative CEQA checklist, it seemed appropriate to compare it with a standard CEQA checklist¹³ (see table on next page), to analyze the difference and understand the impacts of the changes on biological resource. This comparison raised many issues, which will be handled in order.

O28-42

- **BIO-1 and BIO-2: Why was “any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, OR by [CDFW and USFWS] simplified to “Special status Plant species” and “Special-status wildlife species?”** For plants, the list in the VTP (appendix Bio-3) only shows a partial output of CNDDDB species, listing *only* species listed under State and Federal Endangered Species acts and CRPR List 1B and 2B species. It does not include CRPR List 3 and List 4, nor does it include species protected under local HCPs and NCCPs that are not on these lists. **How will both Project proponents and analysts in the lead and responsible agencies know which lists to consult without being prompted by the questions?**
- **Bio-3. Why was the statement “Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including,**

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¹³ CEQA checklist published by the Association of Environmental Professionals, 2018 edition.

Table 3. Comparison of a standard CEQA checklist with the VTP DEIR draft checklist.

Standard CEQA Checklist (AEP)	VTP PEIR Draft Checklist
Biology	Biology
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	Impact BIO-1: Substantially Affect Special-Status Plant Species Either Directly or Through Habitat Modifications Impact BIO-2: Substantially Affect Special-Status Wildlife Species Either Directly or Through Habitat Modifications
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	Impact BIO-3: Substantially Affect Riparian Habitat or Other Sensitive Natural Community Through Direct Loss or Degradation that Leads to Loss of Habitat Function
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	Impact BIO-4: Substantially Affect State or Federally Protected Wetlands
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	Impact BIO-5: Interfere Substantially with Wildlife Movement Corridors or Impede Use of Nurseries
	Impact BIO-6: Substantially Reduce Habitat or Abundance of Common Wildlife
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	Impact BIO-7: Conflict with Local Policies or Ordinances Protecting Biological Resources
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	Impact BIO-8: Conflict with the Provisions of an Adopted Natural Community Conservation Plan, Habitat Conservation Plan, or Other Approved Habitat Plan
	Other Impacts to Biological Resources: Would the project result in other impacts to biological resources that are not evaluated in the CalVTP PEIR?

O28-42
cont.

but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?” reduced to “Substantially Affect State or Federally Protected Wetlands?” One of the big problems with massive clearances is massive erosion, and this is the question where that problem would presumably be flagged for mitigation. Why were the telling details, such as filling and hydrological interruption, deleted?

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cont.

- The same problems are repeated in BIO-5, BIO-7, and BIO-8. Why not use the original language?
- **Impact BIO-6: “Substantially Reduce Habitat or Abundance of Common Wildlife.”** The VTP proposes to radically change 250,000 acres of land per year in California, and common species live there. **What does the VTP propose as mitigation for the reduction of habitat and abundance of common wildlife species within the treatment area?**

O28-45

O28-46

6.B. Issues with Fire Return Intervals (p. 2-19 and following)

- **How are natural fire return intervals determined in the VTP?** The *Manual of California Vegetation, Second Edition*, provides information on natural fire regimes by vegetation type, and provides a range of years for fire frequency. For example, chamise chaparral has a 10-100+ years, noting that (p. 318) “The alliance’s fire cycle is typically under 100 years, but shrubs can persist through long fire-free intervals. Inland stands are associated with longer fire intervals than are coastal stands. High-intensity fires can delay sprouting more than can low-intensity fires, because shrubs create few sprouts; also, high fire intensity decreases germination and seedling emergence because seeds concentrate at or near the soil surface, rendering them vulnerable to heat-kill.” **In the VTP, is the idea to always treat within the minimum fire return interval? If so, what are the impacts from consistent, frequent burning? How does the VTP propose to do this without type conversion? Is there any intention to create a sustainable fire regime? If so, how would that account for region, slope, aspect, climate, climate change, and other factors?**
- **How much of the VTP treatment area has burned more recently or frequently than its known fire return interval? How many acres proposed for prescribed fires fall under this category? When will it be safe to burn them without type conversion? Why not simply remove them from the map of treatable areas, if treating them violates the VTP?**

O28-47

O28-48

6.C. Issues with Type Conversion

- **Why definition of type conversion is to be used in the VTP?** SPR Bio-5 (p. 2-19) provides two definitions:
 1. “An ecological definition of type conversion is used in the CalVTP PEIR for assessment of environmental effects: a change from a vegetation type dominated by native shrub species that are characteristic of chaparral and coastal sage scrub vegetation alliances to a vegetation type characterized predominantly by weedy herbaceous cover or annual grasslands.”
 2. “For the PEIR, type conversion is considered in terms of habitat function, which is defined here as the arrangement and capability of habitat features to

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provide refuge, food source, and reproduction habitat to plants and animals, and thereby contribute to the conservation of biological and genetic diversity and evolutionary processes (de Groot et al. 2002). Some modification of habitat characteristics may occur provided habitat function is maintained (i.e., the location, essential habitat features, and species supported are not substantially changed).”

Which is it? The first definition suggests that type conversion is defined numerically, as a switch from dominance by native shrubs to dominance non-native forbs or annual grasses. Determining what species are dominant is a straightforward vegetation mapping exercise. The key problem is that the mapping has to be done *before AND after* the treatment, as seeds of non-natives may be in the soil, and a wet winter may bring them up to dominate what until then looked like an open shrubland.

Function is based on an expert assessment of both how animals use the vegetation before the treatment and after the treatment. **If this is used, how are essential habitat features and species supported defined? Why does the habitat value to wildlife matter more than whether the plants live or die? How are the needs of migratory wildlife considered?** A classic example of the latter is provision of fruits and seeds for migrating birds, which are fully protected under the Migratory Bird Treaty.

These are not identical systems. **Which is used? Both? How is type conversion to be detailed and quantified for each project, in both cases? Where is the mitigation discussion that details the before-and-after surveys required to determine if type conversion happened or was avoided? Where are the specifications for mitigations that would happen if type conversion occurred? How long will treatment sites be monitored? Will there be follow up with weed control and reseeded with locally native plants?**

In SPR BIO-5, the standard for avoiding type conversion in chaparral and coastal sages scrub involves leaving a minimum of 35% of existing shrubs and associated native vegetation will be retained at existing densities in patched distributed in a mosaic pattern with the treated area or the shrub canopy will be thinned by no more than 20% from baseline density (page 3.6-122). **Is this 35% of shrubs (7 out of every 20), 35% of the shrub canopy, or 35% of all cover? Was this protocol tested by vegetation ecologists? Most botanists will not agree on what 35% cover even looks like on the same plot. How will this accuracy be reliably achieved? What protocol will be used for training field workers and checking their work? Why were these details not included in the PEIR?**

How will mistakes be fixed? There is discussion of avoidance throughout the VTP, and some discussion of the risks of the large-scale assumptions they have to make for the VTP. **Where does the VTP address what will be done if the assumptions are wrong about any given impact?** Restoration is only mentioned in particular wetland scenarios, **Are there some basic restoration plans that can be included for when treatments go awry?**

6. D. What to do when botanical databases (including Appendix Bio-3) are insufficient, or when new species are named? It should be obvious is that all botanical databases are insufficient. The CNDDDB states, "[W]e cannot and do not portray the CNDDDB as an exhaustive and comprehensive inventory of all rare species and natural

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cont.

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O28-52

communities statewide. Field verification for the presence or absence of sensitive species will always be an important obligation of our customers."¹⁴ Trained botanists know this. Untrained bureaucrats do not. **Why is a database check thought to be sufficient screening?** Even when records are accurate, most plants in a nine-quad search are not found in something as small as a 260-acre plot, unless they are already known from that precise area. **How can anyone use this data alone to protect native species?** Wildlife agencies insist on focused surveys in the proper season as a way to determine the presence or absence of species thought *possibly* to occur in a site, due to a CNDDDB search turning up the possibility of the plants occurring in the area in suitable habitat. Reputable botanists also check the Consortium of California Herbaria. Impacts and mitigation are then based upon whether the plants are found, how many plants are found, where they are relative to the project, and whether the project can avoid some or all of the plants. Only then are appropriate mitigations worked out.

O28-52
cont.

It is routine to find new populations of sensitive species or even new species in areas (such as large, old ranches) that were never or rarely surveyed. The author of this letter (Dr. Landis) found what eventually turned out to be a new species of *Eriastrum* in 2007, on a wind farm project in the Tehachapis. He currently is helping with a study defining the current range of the List 1B Campbell's liverwort (*Geothallus tuberosus*), which occurs adjacent or on the proposed fuel break clearance on Del Mar Mesa, but which is not yet in the CNDDDB. The San Diego Plant Atlas, since 2003, has found over 300 new county records, 10 state records, and 2 new taxa.¹⁵ Tejonflora.org documented the new species that are being described from the Tejon Ranch. A new species of cholla was described in Riverside and Imperial County in 2014¹⁶. *Carex cyrtostachya*, described in 2013, is found in Butte, Yuba, and El Dorado Counties,¹⁷ and it is a CRPR List 1B species, as is true for the Sierran *Carex xerophila*, published in 2014,¹⁸ and for *Calystegia vanzuukiae* from El Dorado County, published in 2013.¹⁹ Table 4 below contains a list of new California taxa published since 2017. Experienced botanists know how to deal with this issue. Untrained bureaucrats do not.

6.E. Please explain why “natural communities and oak woodlands” is used throughout the document. What is unnatural about oak woodlands? Is there a better term? Also, are community and vegetation synonymous? If not, what is the difference?

O28-53

6.F. Design treatment to avoid loss or degradation of riparian habitat function is problematic. For example, [t]reatments will be limited to removal of uncharacteristic fuel loads...restore densities that are characteristic of healthy stands of the riparian

O28-54

¹⁴ <https://www.wildlife.ca.gov/Data/CNDDDB/About>

¹⁵ <http://sdnhm.org/science/botany/projects/plant-atlas/>, accessed 5/26/2016

¹⁶ Baker, M. A., & Cloud-Hughes, M. A. (2014). *Cylindropuntia chuckwallensis* (Cactaceae), a New Species from Riverside and Imperial Counties, California. *Madroño*, 61(2), 231-243.

¹⁷ Zika, P.F., L.P. Janeway, B. L. Wilson and L. Ahart (2013) *Carex cyrtostachya* (Cyperaceae), a new species of sedge endemic to the Sierra Nevada of California. *Journal of the Botanical Research Institute of Texas* 7:25–35.

¹⁸ , Zika, P.F., L. P. Janeway and B. L. Wilson (2014) *Carex xerophila* (Cyperaceae), a New Sedge from the Chaparral of Northern California. *Madroño* 61(3):299-307.

¹⁹ Brummitt, R. K. and Namoff, Sandra M. (2013) *Calystegia vanzuukiae* (Convolvulaceae), a Remarkable New Species From Central California. *Aliso* 31(1)

Table 4. New plant taxa published since 2017, with provisional CRPR listings. In the last column, “CBR” is “considered but rejected,” meaning it is too common to warrant CRPR status.

Taxon	Year Described	Provisional CRPR Rank
<i>Carex cryptosperma</i> (Cyperaceae)	2019	1B.3
<i>Chorizanthe aphanantha</i> (Polygonaceae)	2019	1B.2
<i>Lomatium kogholinii</i> (Apiaceae)	2019	1B.2
<i>Pedicularis rigginsiae</i> (Orobanchaceae)	2019	1B.2
<i>Boechera duriscula</i> (Brassicaceae)	2018	1B.2
<i>Claytonia crawfordii</i> (Montiaceae)	2018	1B.3
<i>Navarretia panochensis</i> (Polemoniaceae)	2018	1B.2
<i>Sedum marmorense</i> (Crassulaceae)	2018	1B.2
<i>Sedum paradisum</i> ssp. <i>subroseum</i> (Crassulaceae)	2018	1B.2
<i>Sedum patens</i> (Crassulaceae)	2018	1B.2
<i>Sedum rubiginosum</i> (Crassulaceae)	2018	1B.2
<i>Aphyllon epigalium</i> (Orobanchaceae)	2017	1B.2
<i>Aphyllon epigalium</i> ssp. <i>nothocalifornicum</i> (Orobanchaceae)	2017	CBR
<i>Claytonia panamintensis</i> (Montiaceae)	2017	1B.2
<i>Claytonia peirsonii</i> ssp. <i>californicus</i> (Montiaceae)	2017	1B.2
<i>Claytonia peirsonii</i> ssp. <i>yorkii</i> (Montiaceae)	2017	1B.2
<i>Claytonia peirsonii</i> ssp. <i>bernardinus</i> (Montiaceae)	2017	1B.2
<i>Claytonia serpenticola</i> (Montiaceae)	2017	4.2
<i>Erythranthe willisii</i> (Phrymaceae)	2017	1B.2
<i>Potentilla amicola</i> (Rosaceae)	2017	CBR

O28-52 cont.

vegetation types characteristic of the region.” What standard will be used to determine what is a “characteristic” amount of dead limbs and snags for any given riparian habitat? Self-thinning is a natural process, dead limbs and especially snags are a wildlife resource, and thinning out would leave an unnatural absence of this natural resource. **What is the range of natural variation both within each vegetation type at one time, and interannually, across drought and flood years? How will natural variation be accounted for, or will every treatment be to a (perhaps subjective?) average state?**

O28-54 cont.

6. G. Prescribed herbivory is also problematic. The VTP claims (p. 2-25) that prescribed herbivory will improve “plant community structure for wildlife habitat value.” This is certainly not true for old growth vegetation types, nor for the plant and animal species that depend upon old growth. **What vegetation types, plant species, and animals species would be harmed by prescribed herbivory? How will this harm be avoided?**

O28-55

6. H. Concern about thinning treatments. Any thinning is likely to reduce habitat value and open these areas up to non-native invasive species. This makes these habitats

O28-56

more vulnerable to type-conversion if there are additional stressors in play, which will be the reality both due to urbanization and climate change. They may not type-convert only as a result of treatment, but treated is likely to compound with other stressors (drought, fires, non-natives, disturbance, climate change) and ultimately cause type-conversion.

O28-56
cont.

How will compounding affects be analyzed and mitigated?

6. I. It is unclear how SPR Bio-3 will be put into practice. The three sentences (p 3.6-120) might be difficult to put into practice. For example, it expects a determination of a sensitive vegetation type PRIOR to a CDFW protocol mapping, when one would normally expect mapping efforts to turn up such vegetation types during normal work. **Is this in the correct order? How will surveyors know where to go without a map? How will the relevant GPS data be disseminated to work crews so they understand the sensitive areas, as no use is described for the mapping data? Will mapping data be used for adaptive management or any other cumulative impacts study? Has anyone talked with an experienced vegetation surveyor to determine if this SPR is adequate? What was the response if so?**

O28-57

6. I. Impacts Bio-3 has multiple issues. The paragraph describing the Significance After Mitigation is all one sentence, containing 215 words! Worse, the clauses do not all apply to the thesis of preventing damage to sensitive natural communities and oak woodlands (note the previous comment about this over-used phrase). **Why was this not turned into a bullet-pointed list? How is the hypothetical implementer of the VTP supposed to parse this sentence? Is this not contrary to CEQA § 15140?**²⁰

O28-58

Second, the phrase “to the extent feasible” is used multiple times. Typically, this is a qualifier for whether or not the project can be accomplished as a whole. However, the VTP is comprised of many independent and separate projects, so the success of one is not dependent on the success of another. Therefore, it is feasible for any given project to be abandoned due to the occurrence of sensitive habitat. Therefore, the phrase “to the extent feasible” cannot be used as a justification for causing unmitigated impacts to sensitive biological resources. **Why, then, is “to the extent feasible” used to justify unmitigated impacts to sensitive resources?**

O28-59

Third, when measure Bio-3 describes that no more than 20 percent of the native cover of a sensitive vegetation type will be removed during treatment, it does not specify whether that is a relative 20 percent or an absolute 20 percent. In some sensitive vegetation communities (such as coastal sage scrub on south-facing slopes with heavy soils, or the bouldery slopes of El Cajon Mtn containing acid igneous soils and Lakeside ceanothus) the total shrub cover is only about 20 percent because there is so much soil crust, bare ground, or boulders. Removing an absolute 20 percent of native vegetation would destroy these sensitive habitats. **Is percent cover removal a relative 20% (20% of the plants there), or an absolute 20% (shrubs removed across 20% of the area)? Where is this specified?**

O28-60

Even a relative 20 percent loss is a significant loss and could result in a substantial impact on any given vegetation type. The indirect impacts from this kind of thinning can compound and lead to permanent losses of native habitat through type

O28-61

²⁰ CEQA § 15140. “WRITING. EIRs shall be written in plain language and may use appropriate graphics so that decision makers• and the public can rapidly understand the documents.”

conversion. For instance, some old growth chaparral stands may depend on their ability to self-regulate ground surface temperature through high vegetation cover in order to resist the warming trends and droughts associated with climate change. A loss of 20 percent cover equals an increase in 20 percent sunlight hitting the ground surface. This in turn could disrupt that self-regulating function and trigger a type conversion process, as may be happening in places like Del Mar Mesa, where non-native grasses invaded under a scrub oak canopy opened by years of drought. Sometimes competition for sunlight is the only thing keeping the water-hogging non-natives out of chaparral communities.

O28-61
cont.

Shouldn't, the effect of a 20 percent vegetation cover loss be evaluated for each vegetation community to determine what long-term effects may result?

Fourth, the CDFW rarity rank does not take into account the local rarity of any given vegetation type. For instance, Coulter pine forests are considered a rank S4, statewide, but they are rare in San Diego County and in proposed treatment areas. If the VTP allowed treatment of the coulter pine forest on the ridges of Corte Madera mountain near Lake Morena, possibly the southernmost stands of coulter pine in the US, it would be considered a significant loss. **How can local rarity and the extent of species' ranges be factored into the sensitivity discussion?**

O28-62

6.J. Mitigation BIO 3 also has issues.

- In designing treatments to avoid loss of sensitive “natural communities and oak woodlands (page 3.6-146),” it is all very well to consult the literature, such as the Manual of California Vegetation Appendix 2, and Fire Characteristics (Sawyer et. al. 2009) or other best available information. **Were any human experts consulted to help explain these summaries? Shouldn't naïve project proponents be given more guidance, to understand that a range of 10-100 years does not imply that clearing every 10 years will not result in type conversion?**
- How does Mitigation BIO-3b differ from Mitigation BIO 2C? It is equally unclear. Preservation of existing habitat outside the treatment area in perpetuity implies forever. **In a changing climate? Will the habitat preserved be kept outside future VTP treatments? What legal mechanism will be used to set aside habitat? An HCCP? Who will purchase the land? Who will manage it? How will it fit into existing mitigation banks and development plans? What if (as in most of coastal San Diego County) there is no unpreserved habitat available to set aside as mitigation? What counts as comparable, especially with rarer vegetation types or sensitive species? How will this interact with local programs (such San Diego City and County's mitigation ratios) that establish ratios of greater than 1:1 for mitigation of take of many vegetation types?**
- How does mitigation BIO-3c differ from Mitigation BIO-2c and Mitigation BIO-3b? **If it is significantly different, please answer all the questions under the previous bullet point for this one as well.**

O28-63

O28-64

O28-65

6.J. Impacts to wetlands. Impacts Bio-4 proposes that the only disturbance that would occur within state and federal wetlands would be prescribed burns (wetlands would be delineated using USACE methods), and that burns would be designed to avoid loss of wetland functions and values. **Would CWA 401 and 404 or CDFW 1600 permit authorizations be required prior to prescribed burns?** These should be required to

O28-66

allow responsible agencies to review the potential for loss of wetland functions and values. These permits would be required as prescribed burns would result in a loss of wetland vegetation which is regulated by CDFW, at the least, and likely USACE. Wouldn't prescribed burns have the indirect impact of reduced sediment and water retention if vegetation is thinned due to burning?

O28-66
cont.

6.K SPR BIO-4 has issues with design treatment to avoid loss or degradation of riparian habitat function. This SPR proposes (page 3.6-120): to retain at least 75% of the overstory and 50% of the understory canopy of native riparian vegetation identified (note how vegetation is incorrectly used as the plural of plants?). Native riparian vegetation will be retained in a well distributed multi storied stand composed of a diversity of species similar to that found before the start of treatment activities. **What are the methods that will be used to gauge if 75% and 50% mentioned will be retained? What does "similar to that found before treatment" mean? Is there a proven methodology to guide crews? Will there be any training standards for crews? How can people determine if the SPR will produce the results claimed if there is no method to analyze? What is the actual plan?**

O28-67

The SPR states that ground disturbance within riparian habitats will be limited to the minimum necessary to implement effective treatments. **How is "minimum necessary" defined? Will crew members be required to be experienced or to undergo training to implement a "minimum necessary effective treatment?" What is that training? Is there a document that could be referenced?**

The SPR also states that vegetation removal that could reduce stream shading and increase stream temperature will be avoided. **How will this be determined? What is the protocol? Will data be archived and analyzed as a part of adaptive management?**

6. K. Why was no attempt made to avoid known populations of listed species, especially in highly disturbed and highly protected areas? Why was little or no attempt made to avoid highly restricted state-owned lands, such as state CDFW ecological reserves in places like Proctor Valley? With GIS, this would have been a trivial analysis: overlay proposed VTP project areas with known CNDDDB occurrences and with reserve lands, then take the places where they match out of the VTP. The Proctor Valley area, which has burned 17 times since 1910, does not need more fire or other treatment, and much of it is preserved, yet it was proposed for treatment. Why? Moreover, the lands proposed for the VTP are far more vast than the Project ever hopes to treat. CEQA requires avoidance as well as mitigation. Why was there no attempt to avoid predictable impacts by omitting them from the treatment area?

O28-68

ISSUE 7. WILDLIFE ISSUES

Just as there are plant issues, there are numerous wildlife issues.

7.A. The VTP fails to comply with SB 85 (2019). This bill requires that Cal Fire collaborate with CDFW, USFWS, and the California water board in selecting fuel reduction projects, in order to ensure that "the design of the fuel reduction project

O28-69

protects water resources and wildlife habitat while addressing fire behavior and public safety.” **Was it addressed in the VTP or DEIR? How will the VTP comply with SB85?**

O28-69
cont.

7.B. The SPRs are generalized and vague, and do not explain clear or effective measures to cover the species they list and their habitats, let alone all the species actually impacted by each project. How can SPR BIO-1, SPR BIO-2, SPR BIO-3, SPR BIO-4, SPR-BIO-5, SPR BIO-8, SPR BIO-10 and SPR BIO-11 be modified to clearly and effectively protect tree-, shrub-, ground-, and cavity-nesting wildlife, burrowing or denning wildlife, amphibians, reptiles, ungulates, and others?

O28-70

- **SPR BIO-1: Requires a vaguely described data review (e.g., vegetation mapping, databases with existing special status wildlife and plant occurrences) and a reconnaissance-level survey of the proposed treatment site (a drive-by?) in order to process the project? When even the database names are wrong (it’s CRPR, not CNPS, for example), when standard databases like CNDDDB are not named, what confidence can we have that this will even be up to the standards of a normal CEQA review? What defines reconnaissance as actually going onto the parcel at the right time of day and year to determine what is there, as opposed to driving by it at 55 mph? On a huge, diverse site that includes snags, springs, cliffs, and so forth, how can a “reconnaissance” capture all the critical details? Where are the protocol surveys? How can this measure be written to conform to current standard CEQA practice?**

O28-71

- **SPR BIO-2: Requires crew members and contractors to receive training regarding biological resources from a qualified RPF or biologist familiar with the life history of the species so crews are aware of potential special-status wildlife in the treatment area and measures to reduce adverse effects. Will there be a biology monitor onsite during the treatment? If not, why not? If so, what ability will the biology monitor have to stop the treatment to prevent adverse impacts from occurring? Since one of the standard complaints about treatment crews is that they treat the wrong property (my mom’s property has been accidentally cleared twice, even though she’s actually two properties away from an open space), what efforts will be made to keep treatments within the bounds established by the documentation that accompanies them? How will impacts be documented?**

O28-72

7.C. With regard to the mitigations, they are so vague that they do not support the assertion that they will mitigate the impacts so poorly documented above to a point of less than significance. How can they be improved to bring confidence to readers? Remember that a PEIR is supposed to be a comprehensive analysis that is tiered off of, not a “100,000 foot level view” with the details to be filled in. Vagueness propagates to all levels. So does specificity. How will mitigations be monitored? What will happen to those data afterward?

O28-73

- **Mitigation BIO-2a: Avoiding impacts to listed and fully-protected wildlife species is a good thing. The problem is that the Project Proponent is not instructed to consult**

O28-74

with CDFW and USFWS as part of determining how to avoid these impacts, but only to consult on the off-chance that someone guesses the habitat might be occupied seasonally. **Is this the case? If so, why not rewrite the mitigation to make consulting with CDFW and USFWS standard practice if sensitive wildlife is thought to be present in the project area, as in a normal CEQA practice? How will the success of these mitigation measures be determined? How will they be monitored? What will be done if the mitigation attempts fail and impacts or take occur? What about other protections, like the migratory bird treaty? How will their provisions be enforced?**

O28-74
cont.

Also (p. 3.6-144): "...tree or shrub canopy cover within existing suitable areas will be retained at the percentage preferred by the species..." Most animals probably translate this as "leave it alone, because if it was different, they wouldn't be there." **Is this correct? Why does it assume that animals can calculate vegetation percent cover, when botanists normally argue about these numbers? What other features (like snags, dens, water, or food) may be even more important than vegetation cover to the presence of particular species? How will these be identified and protected?**

O28-75

- Mitigation BIO-2b: Avoid mortality, injury, or disturbance and maintain habitat function for other special-status wildlife species. (All treatment activities) (page 3.6-144). **There is a contradiction here, in that it say under the subject of "Avoid Mortality, Injury, or Disturbance of Individuals".."For all treatment activities except prescribed burning." This does not match up with Table 3.6-33 (page 3.6-139 that lists All Treatment Activities. Which is correct, and if it is not for prescribed burns, why not?.**

O28-76

Under the same subject is a description of factors to be considered in determining buffer size. It states, "...the presence of natural buffers provided by vegetation or topography; nest height; locations of foraging territory; baseline levels of noise and human activity." **How are baseline levels of noise and human activity determined? If they are known, why is this information not included in the PEIR? If they are not known, how will they be determined operationally through the VTP?**

O28-77

On page 3.6-145, at the top of the page describes how no activity will occur within the buffer areas until the qualified biologist has determined that the young have fledged or dispersed. But then in the next sentence, the biologist may "... be required to monitor the nest, den, burrow, or other occurrence during treatment activity has the potential to result in mortality, injury, or disturbance." **Isn't this a contradiction? How will the qualified biologist actually protect the animals in this situation?**

O28-78

Under the subject "Maintain Habitat Function," it is stated that a qualified biologist will review the treatment design and applicable impact mitigation measure (potential including others not listed above) to determine if effects from treatment would be significant under CEQA. **Are the project planners aware that this is to be documented in this report and that deferred mitigation is not allowed under CEQA?** The purpose of the EIR is to analyze environmental impacts and determine impacts and mitigation prior to approval of any project.

O28-79

On the bottom of page 3.6-145 "the only exception to this mitigation approach is if special-status wildlife would benefit from treatment even though some non-listed

O28-80

special status wildlife may be killed or injured. If it is determined treatment activities would benefit special-status wildlife, no compensatory mitigation will be required.”

Why are project proponents allowed to pick and choose which sensitive species to benefit and which to impact? That is not their role, it is the role of CDFW or USFWS. In this pointlessly competitive situation, why are the wildlife agencies not intimately and immediately involved in the decision? Why does Cal Fire seek to usurp their legitimate authority? Why does the VTP seek to further deputize such decisions to entities that probably lack the knowledge, expertise, and authority to make such a call?

O28-80
cont.

- Mitigation BIO-2c: Compensate for mortality, injury, or disturbance and loss of habitat function for special-status wildlife if applicable (All treatment activities) (page 3.6-146).

Compensation may include preservation of existing habitat outside the treatment area in perpetuity. One of the definitions of perpetuity - the state or quality of lasting forever. **Is that what this project plan is proposing? In a changing climate? Will the habitat preserved be kept outside future VTP treatments? What legal mechanism will be used to set aside habitat? An HCCP? Who will purchase the land? Who will manage it? How will it fit into existing mitigation banks and development plans? What if (as in most of coastal San Diego County) there is no unpreserved habitat available to set aside as mitigation? What counts as comparable, especially with rarer vegetation types or sensitive species? How will this interact with local programs (such San Diego City and County’s mitigation ratios) that establish ratios of greater than 1:1 for mitigation of take of many vegetation types?**

O28-81

The second compensation is to enhance habitat by restoring or enhancing it by adding or removing perching structures, removing barriers or other features that are adversely affecting the species. **Are qualified biologists and wildlife agencies are involved in determining the correct procedure, why is this here? Furthermore, where is the mitigation that requires such damage to be documented and properly disseminated first, so that experts can get involved?**

- SPR BIO-10: Survey for special-status wildlife and nursery sites (page 3.6-124). Within these guidelines, states that a qualified biologist or RPF will determine if following an established protocol is required, and the project proponent may consult with CDFW and/or USFWS for technical information regarding appropriate survey protocols. **Don’t they have to be certified to perform protocol surveys? Why is this option (“may”) instead of mandatory (“shall”) for all surveys of special-status organisms where protocols already exist?**

O28-82

- **SPR BIO-11 requires the use of wildlife friendly fencing during prescribed herbivory treatments, but it has issues.** This SPR proposes conflicting information: that if feasible, fencing of electric netting shall be employed at all times or laid when not in use, but that continuous fence chargers are not permitted. **How then is the fence to be kept powered? Does feasible include fire danger, and if so, how is that assessed and mitigated for?**

O28-83

Another point states, “Minimize the chance of wildlife entanglement by avoiding barbed wire, loose or broken wires, or any material that could impale or snag a leaping animal.” **How will that be monitored and fixed, or better yet, avoided?**

O28-83
cont.

ISSUE 8. THERE ARE SERIOUS CLIMATE CHANGE ISSUES AS WELL.

CNPS advocates for California's native plants and of vegetation dominated by native plants. Because we increasingly have to deal with climate change issues to protect native plants, we now also advocate on climate change issues. In our opinion the treatment of plants and the analysis of climate change impacts in the DEIR have substantial issues. We have a number of issues with the climate change impacts discussion

O28-84

The biggest issue is that, Impact GHG-1 is significant (failure to comply with regulations) but is not mitigated, while Impact GHG-2 (activities will emit greenhouse gases) is mitigated inadequately with Mitigation GHG-2 (burn less). Therefore, it appears that the VTP has significant, unmitigated impacts to greenhouse gases. **Why did it not fully and honestly disclose these shortcomings?**

8.A. Problems with updated the CEQA checklist.

- First, just about every activity generates greenhouse gases, so there is no way that this cannot be a significant issue as defined. **Why was it thought that, as defined, it could be mitigated below the level of significance? Why not use the original question, which defines gas emissions to the point where they have a significant impact?**
- Second, it is more useful to specify “other impacts” than to leave it open ended, because many people filling out these checklists are not subject experts.

Table 5. Comparison of a standard CEQA checklist with the VTP DEIR draft checklist.

Standard CEQA Checklist (AEP)	VTP PEIR Draft Checklist
Greenhouse Gases	Greenhouse Gases
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Impact GHG-2: Generate Greenhouse Gas Emissions through Treatment Activities
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	Impact GHG-1: Conflict with applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHGs
	Other Impacts to related to Greenhouse Gases: Would the project result in other impacts related to greenhouse gases that are not evaluated in the CalVTP PEIR?

O28-85

8.B. Mitigation Measure GHG-2 is radically inadequate:

- **Where is the mitigation for creating the project? That takes travel.**
- **Where are the mitigations for mechanical treatment? Manual Treatment? Herbicide applications? Moving and monitoring herbivores? Thos all produce gas**

O28-86

as noted in Table 3.8-4. All those emissions have to be mitigated? Where are those mitigations?

- **As for the biggest emissions source, prescribed burning, which in Table 38-4 causes 99% of emissions, the mitigation (“burn less”) is obviously inadequate, since fully enforcing it to beneath the level of significance would require abandoning prescribed burns entirely! If the VTP is not willing to do that, why not disclose the significant and unavoidable impact?**
- **What amount of GHGs would be produced even if Mitigation Measure GHG-2 was fully implemented? This would include:**

Reducing “the total area burned by isolating and leaving large fuels (e.g., large logs, snags) unburned.” Left unclear is how leaving large logs and snags reduces “the area burned” in a burn that averages 260 acres. What amount of GHG is expected to be reduced with this? Why is this not a mitigation for wildlife habitat impacts?

Reducing “the total area burned through mosaic burning.” At least this compares acres to acres. Doesn’t it require a bigger crew? How many people will be employed on mosaic burns, and how much more will it cost to perform bigger, more diffuse, giant mosaic burns to get to 125,000 or 250,000 acres/year? Can Cal Fire handle these operations?

“Burn when fuels have a higher fuel moisture content” **Normally, fuels don’t ignite if they’re moist, so how is this defined? Burn during the rain and snow? What constitutes higher moisture level? What are the minimum fuel moisture levels below which prescribed fires should be avoided? Doesn’t burning damp vegetation produce more smoke, particulates, and other air quality impacts? How does this proposed mitigation conflict with mitigations designed to improve air quality?**

“Reduce fuel loading by removing fuels before ignition. Methods to remove fuels include mechanical treatments, manual treatments, prescribed herbivory, and biomass utilization.” **In other words, doesn’t this suggest that prescribed fires should be avoided, and that the other proposed methods should only be used? Why then was prescribed fire given such a prominent role?**

“Schedule burns before new fuels appear.” Normally, fuels appear in the spring after precipitation, which is why the third mitigation proposed to burn when there was higher moisture content. **Doesn’t this measure contradict this plan? Worse, the time when no new fuels appear is during heat waves, when all the vegetation is dry and dormant. Does this mitigation propose to burn primarily during the dormant season? Isn’t this the time when extreme, wind-driven fires are expected? Does this not increase the risk of prescribed fires going out of control?**

8.C. Impact GHG-1 has no mitigation? Why not? If it is not mitigated, it is a significant impact, correct? How does the VTP cause impacts to the following?

- reducing statewide GHG emissions to 1990 levels by 2020 (Assembly Bill [AB] 32, Statutes of 2006) and to 40 percent below 1990 levels by 2030 (Senate Bill [SB] 32, Statutes of 2016).
- Executive Order S-3-05, which calls for statewide GHG emissions to be reduced to 80 percent below 1990 levels by 2050.
- Executive Order B-55-18, which calls for California to achieve carbon neutrality by 2045 and achieve and maintain net negative GHG emissions thereafter.

O28-86 cont.

O28-87

O28-88

O28-89

O28-90

O28-91

O28-92

First, Cal Fire is **required**, as a state agency, to follow these orders, which means that the VTP 1) must *accurately* account for *all* the greenhouse gases its projects *actually* emit, and 2) that it *must* reduce its own greenhouse gas emissions commensurate with these orders. **Can it?**

O28-93

Where is the SPR that requires project proponents to monitor their greenhouse gas emissions on a per project basis? How long will projects be required to monitor after treatments, both to determine the slow release of carbon from decaying logs (a contradiction with Mitigation Measure GHG-2) and to monitor uptake over time on plots (which may require 10-20 or more years to store as much carbon as they had prior to treatment?)

O28-94

Does Executive Order B-55-18 not create a mandatory sunset for the VTP? How can the project keep emitting greenhouse gases after 2045? What about SB 32, with its reduction of emissions to 40 percent below 1990 levels. How does this limit the VTP by 2030 or even before?

O28-95

What about international agreements, like the Paris Treaty, which California still honors?

O28-96

What is required to be in Mitigation Measure GHG-1? What SPRs and long-term monitoring are required to support it?

O28-97

Depending on greenhouse gas emissions monitoring and models for how stands of vegetation both lose carbon from dead logs and gain carbon from regrowth, it may be that the VTP will have to stop well before 2045, simply so that emissions from projects that happened by, say, 2035 have a chance to regain the carbon they had sequestered prior to treatment, so they are at net zero. **How will the VTP do the multi-year carbon accounting to make sure it is contributing to negative carbon emission rates by 2045 or sooner?**

O28-98

8.D. What is the VTP’s long-term carbon sequestration model? As noted in the book *Hot Earth Dreams* (by Landis), the problem with climate change doesn’t magically end in 2100. Indeed, on the business as usual trajectory, things get worse over the next few hundred years thereafter. Therefore, it is *critical* that carbon that is sequestered now be kept out of the atmosphere for at least 100 years, even if we meet our goals of limiting emissions. Earth’s climate is an enormous system with huge inertia built into it, and storing carbon for only a few years is radically insufficient. **What are the most durable carbon sequestration types in California? How will the VTP manage these to maximize their long term carbon storage? How will it avoid impacting them? How will it monitor their condition?**

O28-99

ISSUE 9. Issues with Prescribed Burning

As noted at the beginning of this letter, there is a fundamental problem with the fire model the VTP presented to support its existence. Here, the discussion is about problems with prescribed burns . Not that section 8 discussed at some length the shortcomings of mitigating for the greenhouse gas impacts of prescribed burns, and those comments apply here as well.

O28-100

9.A. Problems with updating the CEQA checklist. As noted previously, the VTP wrote its own proprietary CEQA checklist, and this has issues.

- **Why is the fire risk to structures ignored in IMPACT WIL-1?** The standard CEQA quest asks about risks to people or structures, but WIL-1 only asks if a project will “expose people to uncontrolled spread of a wildfire?” **So Cal Fire is not in the business of protecting people or their property from significant risk of loss, injury or death? And the threat is “uncontrolled spread of wildfire,” not “significant risk of loss, injury, or death?”** We’re all axiomatically exposed to the spread of wildfires multiple times every year, thanks to the news media. **Why is this impact even proposed? Why are significant risks of loss, injury, or death totally ignored? Does this reflect Cal Fire and the Board of Forestry’s official policy now? Why is this rated as a less-than-significant problem?**
- **Why are impacts of prescribed fires to other things, such as carbon sequestration, watersheds for urban areas, sensitive species, or other normal impacts, not required or discussed?** Risk from post-fire landslides and flooding to people and structures are all very good, but this Project proposes to treat watersheds that keep millions in the urban areas from running out of water. **What about larger scale issues such as these? How are these impacts to be analyzed and avoided or mitigated?**
- **What other risks are contemplated in the “Other Impacts” question?** The standard CEQA checklist is useful for prompting people to think about specific impacts, because the “other” category requires imagination and foresight, qualities that vary widely among people filling out CEQA checklists. **What useful details can be added to this question?**

O28-101

O28-102

O28-103

O28-104

Table 6. Comparison of a standard CEQA checklist with the VTP DEIR draft checklist.

Standard CEQA Checklist (AEP)	VTP PEIR Draft Checklist
Wildfire	Wildfire
Would the project h) Expose 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?	Impact WIL-1: Substantially Exacerbate Fire Risk and Expose People to Uncontrolled Spread of a Wildfire
	Impact WIL-2: Expose People or Structures to Substantial Risks Related to Post-Fire Flooding or Landslides
	Other Impacts related to Wildfire: Would the project result in other impacts related to wildfire that are not evaluated in the CalVTP PEIR?

O28-105

9.B. There are numerous, well-known problems with fire science, as presented in letters submitted by Endangered Habitats League and Chaparral Institute and incorporated here by reference. They include:

O28-106

- the lack of documented effectiveness of prescribed burns in reducing risk of or damage from extreme, wind-driven wildfires, compared with the well-documented effectiveness of preparing defensible space near buildings, at least for non wind-driven wildfires.
- The fact that fire breaks are rare in the landscape and so are most fires, so the chance of a fire intercepting a fire break during the fire break’s operational lifespan is tiny.

O28-106
cont.

9.C. How will prescribed fires fit into the existing fire season? It is normal to hear that fire season is all year in parts of California, yet it does vary across the state. Still 480 fires/year, let alone 960 fires/year, demands that at least one prescribed fire burn somewhere in the state on average every day of the year, including during floods, snowstorms, and worst, red flag weather. **Is this the plan? If not, when will prescribed fires take place? Does Cal Fire and other agencies have enough people to staff all these prescribed burns in the windows when they can occur? What will be done about pressure to burn in more dangerous times of year, such as during the likely drought of 2020, that will dry out the biomass grown in 2019?**

O28-107

Will the acreage burned by wildfires be factored in to treated acreage, or not? If something like the Mendocino Complex II burns half a million acres, will the VTP still burn an addition 250,000 acres, or will it declare that there has been enough fire that year and declare a moratorium until the next season?

9.D. Lack of analysis of chance of fire escaping, which is probably higher than assumed. One of the problems with prescribed burns is that they can escape control. **What are the chances of this happening?**

In the absence of a better model from Cal Fire, we turned to simple statistics. The proposal on the table is to burn 125,000 acres/year, in fires averaging 260 acres. That means just over 480 fires per year. We also have the data from the last ten years of fires, which is summarized in the table below.

Below we present a basic statistics equation for calculating the chance that a fire will occur, assuming that the probability of each fire is random and fires are not connected. These are not entirely true, but this is a start. The equation is:

$$\text{Chance of fire happening} = 1 - (1 - \text{proportion of a type of fire})^{\text{number of fires}}$$

O28-108

Where the chance of a type of fire happening is the number of those fires (such as big fires greater than 1,000 acres or extreme fires that are bigger still) divided by the total number of fires in a year. In the calculations in table 7, the number of fires per year is set at 480.8, the mean number of 260-acre prescribed fires proposed in the VTP.

As can be seen in Table 7 on the next page, **the probabilities are stark: with 480 fires per year, each averaging 260 acres, if they act like fires do in California every year, there is an over 91% chance every year that a controlled burn will escape and burn over 1000 acres. Furthermore, there is a 25% chance that a VTP-ignited prescribed burn will become an extreme, wind-driven wildfire, an uncontrollable event that will burn cause a significant proportion of the total acreage burned that**

year. Furthermore, that risk climbs to almost certainty if the VTP allows large prescribed burns to meet its acreage totals²¹.

Table 7. Calculation of the probability of a VTP-prescribed fire growing big (>1000 acres) or an extreme, wind-driven wildfire each year.

Mean number of 260-acre VTP fires/year	480.8
Mean number of total fires/year (Table 1)	8009.2
Mean number of big fires (>1000 acres)/year (Table 1)	41.5
proportion of fires becoming big (>1000 acres)/year	0.52%
chance of a VTP fire becoming big/year	91.79%
Mean number of extreme fires/year	4.9
proportion of a fire becoming extreme (Table 1)	0.06%
chance of a VTP fire becoming extreme/year	25.53%
proportion of a big fires becoming extreme/year	11.82%
chance of a big VTP fire becoming extreme/year	100.00%

O28-108
cont.

The calculations for doubling the prescribed burn acreage/year is not shown, but the results are what one might imagine. The chance of a VTP fire becoming extreme grows to over 44% per year.

Is the risk worth it? Note that this risk is in addition to California’s normal fires, not in place of them. This take a situation that Cal Fire thinks is risky and appears to make it riskier still. **Is the risk worth it?**

What risk model does Cal Fire use to calculate the risk of its prescribed burns escaping control and growing to over 1000 acres or becoming wind-driven extreme monsters? What are the details and results from that model?

9.E. Long term readiness problems for Cal Fire. How will engaging in a long-term VTP impact Cal Fire’s ability to fight extreme, wind-driven fires? The magnitude of the problem was brought home to me in an article a friend sent me from The Modern War Institute at West Point²². The article was about the problems with a potential invasion of Iran, but the two paragraphs on the military’s state of readiness in 2018 stuck with me:

O28-109

“It is important to recognize that the United States has some of its own problems in regard to a potential successful invasion, let alone occupation, of Iran. First, for example, the US military does not have enough combat capability despite all of the money we spend each year. Second, as retired Air Force Lt. Gen. David Deptula has clearly described, the United States has an airpower problem. Specifically, the US Air Force and the aviation components of the Navy, Marines,

²¹ This is due to the fact that while the number of extreme fires is tiny compared to the number of total fires, so is the number of big fires. The proportion of extreme fires in big fires is quite high, and that one minus that proportion raised to 480 is infinitesimal.

²² <https://mwi.usma.edu/irans-human-geography-wicked-problem-people-places-things-complicates-us-strategy/>

and the Army have been at war for over twenty-five years without a break. As a result, while we have the most air combat experience of any air force or air component in history, the constant and continuous air operations since the early 1990s have eroded our ability to properly and effectively leverage this expertise. And third, the US Army notified Congress in March 2017 that it had a readiness problem. In 2018, we know what that problem looks like: being 12,000 recruits short for the first half of the year. The Army is also at least one conventional corps too light given that I Corps is allocated to the PACOM Area of Responsibility and III Corps and XVIII Airborne Corps have been rotating back and forth as the command element of Operation Inherent Resolve.

“The US Marine Corps is also facing resourcing issues as it has no Marine expeditionary units to spare—they are all currently committed for existing training or operations. And the US Navy is also stretched. The three-carrier group show of force off the coast of the DPRK between November and December 2017 burned through an entire year’s worth of maintenance, training, and operational resources in a three-week period. Finally, Gen. Tony Thomas, commander of US Special Operations Command, has made it clear to Congress that he has no more special operations forces to spare.”

This is the best-funded military the world has ever seen, but after 25 years of continuous action, it is falling apart and failing to meet existing needs and goals, let alone new challenges.

How long will it take Cal Fire and its firefighting allies to reach a condition where they are unable to recruit enough personnel and have chronic equipment shortages when they treat 250,000 acres per year, every year? What about if that treatment rate increases to 500,000 acres per year, every year? What kinds of shortcomings are expected, what can be done to deal with them, and what kinds of vulnerabilities should Californians expect when such shortfalls happen? And when should we expect to begin experiencing them?

An alternative to the current VTP and PEIR

When reading the DEIR, one comes away with the overwhelming impression that this is a document written by people who want stuff done without thinking about the consequences. While we understand that impulse, we do not sympathize with it.

The problem is that the VTP, if implemented as written, would be the single biggest igniter of wildland fires in California, igniting over 480 every year. While all of these are supposed to be controlled burns, the sheer number of ignitions means that some, eventually, will go out of control and cause damage through simple bad luck. Moreover, the VTP will be the single biggest vegetation-clearer in the state. Even if the biological mitigation measures are implemented as written, VTP employees and contractors will become the single biggest danger to sensitive plants and animals in California. If fire scientists turn out to be right about fire behavior, most VTP activities will have little or no effect on saving lives or property from wildfires, while spending hundreds of millions of dollars.

O28-109
cont.

O28-110

This is why we care about consequences. The proposed VTP is far too hulking a program to run it impulsively and not analyze its predictable consequences.

Then there is the time scale of preparation. The VTP in its current incarnation has been around since 2013, and its roots go back to the 1990s. That is a long time, and a lot of analysis and project design could have been accomplished in that interval.

Unfortunately, the DEIR is still focused on trying to avoid that analysis through a combination of pushing it forward to individual projects (contrary to CEQA), hiding motivations, writing that is padded, repetitive, vague, contradictory and obfuscatory, ignoring reality, and simple sloppiness. As a result, the process has wasted years. It is no closer than it was at the beginning to satisfying CEQA or satisfying people, like us, who will have to deal with the VTP's consequences.

I (Landis) would like to propose another alternative. This notion is not endorsed by CNPS or Audubon, merely the result of my reading too many versions of the PEIR: Keep the VTP and Get Rid of the EIR.

While this may sound counterintuitive, the problem isn't the need for prescribed fires in ponderosa pine forests or clearing fire breaks around homes, it's that the VTP PEIRs always attempt to use CEQA for a process it was never intended for, and try to use a document that's perhaps 1,000 pages long with appendices to do the work of a document that should be 50,000-100,000 pages long. To what end?

THE VTP without the PEIR would be a program dedicated to funding and expertise. While it would lose the power and control emanating from the certified PEIR, it would accomplish most of the other goals. My alternative is that VTP establishes itself as a funding and information program. It collects data and funds projects that meet its standards and goals. When it fund projects, it makes decisions based on CEQA documents produced by other lead agencies responsible for the implementation (including Cal Fire) and issues a CEQA finding as a responsible agency, rather than as a lead agency.

While VTP is definitely a project under CEQA section 21065, it only needs to be a PEIR if the goal is to tier other projects off the PEIR to make related CEQA documents simpler, so that they do not have to repeat the research analyzed in the PEIR. The VTP PEIR does almost none of this. Instead, it's more a handbook of what the Board would like to see done, along with some problematic language designed to make reviews become cursory in a process mislabeled as "streamlining."²³ If the VTP relinquishes the PEIR, doing an EIR around the establishment of the program might actually be feasible.

There may be another way to achieve most of these goals: Conceptualize the VTP primarily as a program that gives out grant and information based on the best science and practice. Have it perform adaptive management by requiring funded programs to report effects and monitoring findings. Serves as both a data center and analyst for fires.. Set the VTP's ultimate goal of making Californian safer from wildfires and bring pyrosilviculture back onto the state's landscape in a sane, controlled, and useful way, as well as financing some clearing near communities, on helipads and similar systems that will be used frequently enough to be worth the effort of keeping clear.

In this role, the VTP would be responsible, like the Coastal Commission or the Wildlife Conservation Board, for making decisions on whether or not to fund projects

²³ Anybody who thinks real streamlining is simpler than blocky design knows little about planes, boats, or rocket science.

O28-110
cont.

that meet its criteria. Those criteria would be the subject of an EIR (NOT a PEIR) that evaluated the impact of its proposed projects, the standard project requirements, data required both before and after projects, and so on. A VTP board could meet monthly to make decisions on projects submitted to it, and they would then issues notices of determination or other CEQA findings as appropriate.

There are some advantages to this alternative:

- 672 pages utterly inadequate for a PEIR. It is approaching the right length for a handbook of how to create a project that can be funded and assisted by a VTP.
- SPRs are utterly inadequate as mitigations, but they are useful starting-point for creating guidelines for what must be in a project that is funded by the VTP.
- The role of project proponents and responsible agencies as described in the PEIR appear problematic under CEQA. Without the PEIR in place, it would be okay for a project to go through the normal CEQA process under its local lead agency and then to get funded by the VTP, and it's okay for a CEQA-reviewed and certified VTP handbook to provide standardized language and mitigation guides to help local projects get through the review with fewer headaches.
- The VTP currently provides no help to increase staffing or programs at responsible agencies in any case, so why try to impose a new program on them? Why not use existing CEQA pipelines throughout the state to analyze projects that accomplish VTP goals, without insisting that they use a specialized new process and deal with a problematic, additional layer of bureaucracy? If local agencies cannot treat 250,000 acres using their own processes and VTP funding and resources, why would anyone think that they can treat 250,000 acres with the additional layer of bureaucracy that the VTP PEIR imposes?
- The VTP without the PEIR is more free to innovate, because when it revises its guidebook, if the changes are not radical, it can issue a supplemental EIR, instead of an entire EIR.
- Cal Fire could certainly apply for funds from a VTP without a PEIR, and the group doing the treatments would then have to do their own CEQA process. That's basically what has to happen now.
- California is becoming ever more complex, with lands in the state having to provide food and water, while also being treated for fire protection, invasive species, pests, pathogens, droughts and floods, a changing climate, and dealing with past land management decisions that have since proved to be mistakes. It seems foolhardy in the extreme to say that now is the time to pay less attention to the impacts of what we do, to pay no attention to the effects of what we do, and to start lighting huge numbers of fires, bulldozing and masticating wildly, spraying mass quantities of herbicides, and so forth. There's little upside and tremendous downsides to such a strategy.
- Going from the current PEIR to a handbook for grant submissions and treatments is far easier than going from the current PEIR to something that actually fulfills the function of a statewide PEIR. This way saves time and effort, although it requires substantial outreach to the legislator and the governor about why it is a better approach.

This is just a personal suggestion, trying to think outside the box, and not endorsed by any group.

O28-110
cont.

Unfortunately, none of these suggestions change our organizations' basic opinion, which is that this DEIR and VTP as written are unworkable. They do not appear to address extreme, wind-driven wildfires. As fire scientists have repeatedly noted, the vegetation treatments proposed here will not make property safer. The CEQA scheme is questionable, and it leads to a messy chain of command where Cal Fire may be responsible for a disaster that one of its project proponents caused, without having an adequate understanding of what the proponent proposed or possibly any way to not approve the project. There is also no long-term monitoring, no implementation of adaptive management, no thought of keeping peoples' property safe from prescribed fires, unmitigated greenhouse gas emissions, and a program that may so strain Cal Fire and its allies that they are ultimately unable to fight the extreme, wind-driven wildfires that cause a great majority of the damage from California's fires every year.

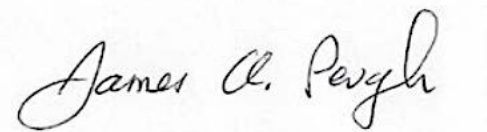
California needs to change the way it deals with fires, but it is a complex problem. To paraphrase HL Mencken, this is a clear, simple, and wrong solution that will cause harm if it is rammed through.

Please keep us informed of all future developments with this and related projects. Thank you for consideration of our comments and questions. Please keep CNPSSD informed of all developments at conservation@cnpsd.org and franklandis03@yahoo.com. Please also keep SDAS informed of the progress at meyer@sandiegoaudubon.org and peugh@cox.net. If there is another comment window opened to allow all responsible agencies to comment, please let us know, as there is quite a bit more we would like to say, but did not due to time constraints.

Sincerely,



Frank Landis, PhD
Conservation Chair
CNPS San Diego



James A. Peugh
Conservation Chair
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O28-110
cont.



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January 9, 2018

Board of Forestry and Fire Protection
ATTN: Edith Hannigan, Board Analyst
VTP Draft PEIR Comments
PO Box 944246
Sacramento, CA 94244-2460
VegetationTreatment@bof.ca.gov

Re: Draft Programmatic Environmental Impact Report For The Vegetation Treatment Program of the California State Board of Forestry and Fire Protection

Dear Ms Hannigan and Members of the Board:

We appreciate the opportunity to comment on the Draft Programmatic Environmental Impact Report for The Vegetation Treatment Program Of the California State Board of Forestry and Fire Protection ("DEIR," "VTP," "BoF").

The California Native Plant Society (CNPS) and its San Diego Chapter ("CNPSSD") promotes sound plant science as the backbone of effective natural areas protection. We work closely with decision-makers, scientists, and local planners to advocate for well informed and environmentally friendly policies, regulations, and land management practices. Our focus is on California's native plants, the vegetation they form, and climate change as it affects both. CNPS support appropriate land management practices to sustain California native plant species, both on properties dedicated to that purpose (e.g. State, Federal, County, or local and private conservation parks or preserves) and other properties, private and public, where native plants, especially where their continued survival helps provide ecological and genetic buffers for their survival, should catastrophic events destroy them in protected areas.

We strongly agree that fire and invasive species are critical issues that must be actively managed. However, **we strongly recommend that this DEIR NOT be certified, due to lack of substantial evidence to support contentions and conclusions made throughout the document, due to substantial procedural lapses and irregularities, as well as the other issues we list below. We further contend that the VTP cannot serve the purpose for which it was apparently designed, and propose more workable solutions for the Board's consideration.**



Dedicated to the preservation of California native flora

Based on the DEIR, we have many issues, including:

10. Whether an EIR is the appropriate document for this project
11. CEQA procedural lapses and irregularities
12. How the DEIR deals with native plants issues
13. How the DEIR deals with climate change
14. Why the DEIR contains so many misstatements based on scientific papers, reliance on anecdotal evidence, and avoidance of scientific advice
15. Why the DEIR contains so many internal contradictions.

The following groups of questions are based on the concerns summarized above. We formally request that the BoF fully consider and respond to our questions in an effort to improve the Draft DEIR by clarifying, among other things, its purpose, rationale, and management structure. Note that this letter contains similar material to CNPSSD comment letters on previous versions of the DEIR, sent February 15, 2013 and May 31, 2016. Those letters also included requests to the BoF to respond to the questions these letters raised. The BoF never responded to that requests, which is unfortunate, as many of those questions were specifically designed to help the BoF write a better DEIR. As a result, the current DEIR repeats its predecessors' mistakes, and the same criticisms still apply. To provide a complete record, all previous comment letters are attached to this letter.

Background

California is inarguably the most complicated state in the US, whether the complexity is biodiversity (California is a global biodiversity hotspot²⁴), socio-political, geographic, geologic, or in the massive infrastructure of aqueducts, power grids, farms, forests, and cities that allow over 38,000,000 people to live here. Worse, climate change is affecting everything, from water availability to fire behavior.

Writing a programmatic EIR ("PEIR") is about analyzing the predictable, cumulative impacts of a program. Writing a PEIR for a program that proposes a diverse set activities across 23% of California is a truly titanic undertaking that the writers of the DEIR did not engage in.

The main body of the DEIR is only 751 pages long (the total length including appendices is 1291 pages),. To show why this is a problem, compare it to the natural resources management plan and Mitigated Negative Declaration for 1,092 acres of urban park in San Diego, which was 159 pages long²⁵. The DEIR, supposedly an analysis of a long-term program that proposes to treat up to 23,000,000 acres over decades, is only 5.5 times longer than a routine local management document that deals with a few miles of trail. There is no way the DEIR can provide adequate analysis in so short a length, and it does not. The scale of the DEIR is orders of magnitude too small for the VTP. Unfortunately, the issues do with the DEIR do not stop at its short length.

²⁴ Myers, N., Mittermeier, R. A., Mittermeier, C. G., da Fonseca, G. A. B., and J. Kent. (2000). Biodiversity hotspots for conservation priorities. *Nature*, 403(6772), 853-858.

²⁵ City of San Diego (2015). Carmel Mountain/Del Mar Mesa Natural Resources Management Plan and Trail System.

1. Is an EIR the correct document for the VTP, and were all affected parties properly notified?

1.A. Is an EIR the correct document for the VTP? We are glad, in this fourth iteration of the project, that maps were finally included (Appendix A), as project maps are a fundamental CEQA requirement.²⁶ The issue here is that the maps appear to contradict the text over the boundaries of the VTP.

According to the text, the area covered by the VTP is the State Responsibility Area ("SRA"), the land where State is financially responsible for the prevention and suppression of wildfires. SRA does not include lands within city boundaries, zoned for agriculture, or in federal ownership.

Unfortunately, in looking at the maps that cover CNPSSD's territory—the South Coast Treatment Areas and the Colorado Desert Treatment Areas Maps for San Diego and Imperial Counties respectively—we found numerous jurisdictional issues. The maps showed many fuel breaks within the City of San Diego and other urban areas, and it also showed fuel breaks in areas zoned for agriculture, such as the San Pasqual Valley Agricultural Preserve. Most importantly, it showed fuel breaks on federal lands, including Marine Corps Air Station Miramar, Superstition Hills US Naval Reservation, Tijuana River National Estuarine Research Reserve, San Diego National Wildlife Refuge, Cabrillo National Monument/Point Loma Naval Reserve (the boundary is unclear), and the Cleveland National Forest. It also showed fuel breaks and other treatments on all or most of the Indian reservations in San Diego and Imperial County. Projects involving both federal lands require Environmental Impact Statements under NEPA, in this case a combined EIR/S.

Why do the maps disagree with the text, which says repeatedly that only state and private lands are affected by the VTP? If the DEIR text is correct, why do the maps show VTP treatments on federal lands? If the maps are incorrect, where are the correct maps? Does the correction affect statements that 23,000,000 acres are available for treatment? If the maps are correct and the VTP covers federal and tribal lands, where is the EIS? Where are the consultations with all the relevant entities?

1.B. Were all affected parties properly notified? We asked one of the local Indian tribes, and our query was the first time they had heard of the VTP DEIR. **Were all the federal and tribal entities included in the maps in Appendix A.2 properly notified, following CEQA §15087? Were affected Indian tribes consulted, pursuant to AB 52 (2014; Gatto, Native Americans: California Environmental Quality Act)? If not, why not? What can be done to remedy the situation?**

2. With respect to CEQA, we noticed numerous procedural lapses and irregularities:

2.A. What exactly is the Proposed VTP, and what are its boundaries in space and time?

This is a critical question, because CEQA requires that the DEIR properly describe the VTP and its limits in space and time.

²⁶ CEQA § 15124 (a): "The precise location and boundaries of the proposed project shall be shown on a detailed map, preferably topographic. The location of the project shall also appear on a regional map."

- We are told (p. 2-2) "[t]he VTP is a formal program that would comprehensively direct the management of the wildland landscape within BOF's State Responsibility Area, an area comprised of over 31 million acres of private land. The VTP is projected to treat approximately 60,000 acres of this landscape annually, or 600,000 acres over a 10-year time frame. " **Why is the relevant frame 31,000,000 acres and not 600,000 acres?** Everybody knows that fuel breaks have to be cleared frequently, ideally annually, to be effective. To pick but one data point, scientific research in southern California suggests that chaparral regrows to the point where it supports fires after 1-2 years.²⁷ **Why does the VTP not cover 120,000 acres (60,000 acres/year times 2 years?), instead of the 3,938,563 acres of "treatable acres within the fuel break treatment area" across the state (p. 2-24)?** The total acreage is unusably vast: assuming each acre of the 3,938,563 acres is cleared once, it would take over 65.6 years (3,938,563 acres/60,000 acres/year) to clear every proposed fuel break in the state once. Even if fuel break clearance is focused entirely on South Coast shrublands, it would take 4.2 years (252,806 acres/60,000 acres/year) to clear each fuel break once. **Since the clearance rate does not add up, why are these numbers used? What can be done insure that the VTP clears and maintains critical fuel breaks, rather than randomly scattering efforts and promoting weed invasions in areas that are cleared once and neglected thereafter?**
- **Why do the maps show fuel breaks on high value spaces?** As noted in 1. above, the project maps show treatments on federal and tribal lands. In San Diego and Imperial Counties, fuel breaks are also shown covering the *entire unincorporated towns*, including Julian, Jamul, and Borrego Springs, as well as Torrey Pines State Reserve (within the City of San Diego) and the San Diego Zoo Safari Park, just to name a few of the many, many obvious landmarks that have fuel breaks modeled on top of them. **What fire danger could be ameliorated by bulldozing 300'-wide fuel breaks through tourist towns? Or by wiping out the main exhibit areas of one of the world's foremost conservation organizations? What fire danger could be lessened by clearing Torrey pines (*Pinus torreyana*, CRPR list 1B.2), along with many other sensitive species, destroying the only vehicular entrance to a popular park visited by thousands of people every day, and devastating the poorly consolidated sandstone on which the park is based? How many other beloved public attractions across the state would the VTP pay to have cleared as strategic fuel breaks? How can damage within these significant assets be justified under the rubric of saving them from fire?**
- Similarly, there are fuel breaks modeled throughout the canyons of the City of San Diego and neighboring jurisdictions. **What good is a fuel break that is 300 feet wide but less than 300 feet long, where a road crosses a small urban canyon?** Organizations like Canyonlands and the Ocean Discovery Institute have spent years on volunteer ecological restorations in areas marked for total clearance, and one of their goals is making it possible for disadvantaged urban families to have a safe experience in neighborhood canyons. **Have they been contacted for their input on the VTP? How would the VTP's proposed work impact such groups?**
- **Why is there a fuel break at Algodones Dunes?** One answer is that the vegetation mapping system classifies all desert vegetation as "desert scrub" and assigns a medium fire risk to it, ignoring the tremendous diversity of actual desert vegetation. As a result, there are

²⁷ {Price, 2012 #18}

fuel breaks proposed for the Algodones Dunes, on the east side of the Salton Sea, throughout Anzo Borrego State Park and the town of Borrego Springs, and in many other non-flammable, high erosion, areas. The problem should have been obvious to anyone proof-reading the maps. **Were the maps checked prior to publication? What other egregious errors did the mapping protocol cause, in terms of proposing destructive treatments such as useless or unworkable fuel breaks? By how much do mapping errors inflate proposed 3,938,563 "treatable acres within the fuel break treatment area" beyond what is actually treatable?**

- **WUI mapping is inadequate.** A simple example is Black Mountain in San Diego, zip code 92129, within the boundary of the City of San Diego. The Mountain itself is a San Diego City park, home to a number of sensitive species, and covered with 30 separate fuel breaks (calling each branch of a complex, dendritic pattern a separate fuel break). I (Landis) live near it, well within a high fire zone, due to my relative proximity to the chaparral and coastal sage scrub on the mountain. By San Diego standards, I am in the WUI, but not by the standards of the VTP. **Why not? How many different definitions of the WUI are used in official documents, and why was this not standardized so that the VTP uses the same definitions as the people it proposes to service? Why clear 300' wide fuel breaks in vegetation that is not even considered to be in the WUI, but not perform WUI treatments within it? Why limit WUI clearance to areas putatively outside urban zones?**
- **Ecological restoration treatments are not always consistent with the working definition of ecological restoration provided in the glossary.** (p.2-29) "Ecological restoration would also improve range and forage on private property, increasing land management options for private landowners. This treatment type could be implemented through grazing, thinning, understory burning, and other methods." This appears to say that the State will pay ranchers to graze their own animals on their own land (under the theory of "improving forage" through "grazing"). **Is this correct? If not, does it mean that the VTP will pay to type convert vegetation dominated by woody plants to vegetation dominated by grasses? How is this not a permanent impact?** The VTP looks exactly like older programs designed to convert chaparral into grassland. To mitigate anthropogenic climate change (per state law), we desperately need more woody plants on the landscape sequestering carbon, not more annual grasses (which do not sequester carbon) and more cattle (which emit substantial greenhouse gases). Indeed, beef production is by far the biggest source of greenhouse gas emissions among agricultural sectors.²⁸ **What are the ecological and greenhouse gas impacts of type-converting shrublands to grasslands? If the VTP claims to have no impact on greenhouse gas emissions, why promote grasslands and grazing? If it cuts back on grazing, how will that affect the acreage it treats under ecological restoration? How mitigating greenhouse gas impacts affect the acreage targeted under "ecological restoration?"**
- The VTP seeks to treat 60,000 acres per year, with 231 projects per year averaging 260 acres each (p. 2-35). This is huge (60,000 acres is 93.75 square miles, roughly the size of Oakland and Berkeley combined), but it is not clear if it is appropriate. For example, if every one of the 23,000,000 acres "appropriate for a treatment" were to be treated just once, it would take over 383 years (23,000,000 acres/60,000 acres per year), which is clearly inadequate for any

²⁸ {Ranganathan, 2016 #26}

kind of sustained vegetation management, unless the desire is to promote old growth vegetation. Clearly the VTP actually intends to treat a small subset of land "appropriate for a treatment," but the actual parcels to be treated are not discussed, mapped, or analyzed, and may not be known yet. **If the actual parcels are not yet known, how can anyone write a PEIR that offers any useful analysis that is consistent with CEQA? How can land owners, their neighbors, and government programs that cover parcels be informed when a VTP project that tiers off this DEIR is proposed for a parcel?**

- The VTP breaks California down into ten ecoregions; it proposes three types of fuel management treatments, at the Wildand Urban Interface (WUI), on fire breaks, and as ecological restoration; it proposes a six treatment activities including two types of prescribed burns (purportedly half of the treatments), grazing with non-native herbivores, mechanical clearance, clearance by hand, and herbicide application. Just a simple combinatorial analysis, 10 ecoregions times 3 management treatments times 6 treatment activities, leads to 180 different scenarios, even without mixing treatment types. What is presented in chapter 4 is an anecdotal tour mentioning things that have happened under some treatments, often with contradicting factors. This does not provide an in-depth, programmatic analysis of the impacts of the VTP in any place or time. **Where is the quantitative analysis of the impacts of all 180 scenarios? What will happen when, where, why, how often, what factors will determine which treatment is used, what are the impacts of each scenario, what are the cumulative impacts, and what can be done on a programmatic level to avoid or mitigate those impacts?**

2.B. Why is the DEIR written with such lack of detail?

As we understand it, the courts have ruled that "[a]n accurate, stable and finite project description" in an EIR is necessary to analyze its impacts, and a "truncated project concept" violates CEQA.²⁹ While exhaustive detail is unnecessary, CEQA mandates that EIR project descriptions should be sufficiently detailed, and sufficiently accurate, to permit informed decision making.³⁰ **Given that the DEIR does exactly the opposite of what CEQA policy states and courts support, why was the DEIR written that way? Would it not have been better to follow CEQA and relevant case law?**

As shown above, the accuracy of the project description is in question. The stability of the description is also questionable, if most of the participants have yet to announce themselves. Similarly, the boundaries of the project, both spatially and temporally, are questionable, as the VTP has no sunset date. **What exactly is the VTP? Can it be described accurately? Will that description remain stable? What are its precise boundaries each year, and when will it end?**

The programmatic aspect of the DEIR is also given short shrift. PEIRs are supposed to analyze impacts "as specifically and comprehensively as possible."³¹ Indeed, the role of a PEIR is two-fold: it includes "more exhaustive consideration" of impacts, mitigation, and alternatives than an individual project EIR could include, and it considers cumulative impacts³². Projects are supposed to "tier" off the PEIR, depending on and supplementing its analysis only, not doing the work that it was supposed to contain. CEQA further notes that "[t]iering does not excuse the

²⁹ Sacramento Old City Association. v. City Council (1991), Rio Vista Farm Bureau v. County. of Solano (1992)

³⁰ CEQA Guidelines § 15124

³¹ CEQA Guidelines, 15168(a), (c)(5)

³² CEQA Guidelines, 15168(b)(1)-(2).

lead agency from adequately analyzing reasonably foreseeable significant environmental effects of the project and does not justify deferring such analysis to a later tier EIR or negative declaration."³³ Also, "[d]esignating an EIR as a program EIR also does not by itself decrease the level of analysis otherwise required in the EIR."³⁴ Programmatic EIRs must contain "extensive, detailed evaluations" of a plan's impacts on the existing environment.

The DEIR's avoidance of in-depth analysis of predictable project-level impacts, predictable cumulative impacts of projects within the same area, and predictable cumulative impacts as a result of repeated projects on the same parcel in the same area is contrary to CEQA's direction on the contents of EIRs and of programmatic EIRs in particular. CEQA does not allow agencies to defer analysis of a plan's impacts to some future EIR for specific projects contemplated by that plan. The courts have ruled that environmental review must take place before project approval, and specifically that, in a programmatic EIR, tiering "is not a device for deferring identification of significant environmental impacts that the adoption of a specific plan can be expected to cause."³⁵ **Given that the DEIR does exactly the opposite of what CEQA policy states and courts support, why was it written as it was? Would it not have been better to follow CEQA and case law? Is it possible to write a PEIR that accurately describes the VTP and analyzes all its predictable impacts in reasonable detail?**

2.C. Why are the thresholds presented presumed to be adequate? For example, the DEIR states that the VTP would have a significant impact if it contributes to the substantial, long-term decline in the viability of any native species (p. 4-182). Unfortunately, there is no threshold to determine what "substantial," "long-term," and "viability" mean in order to determine when a significant impact has occurred. Without thresholds, there is no mechanism for determining whether impacts have been mitigated to below the level of significance, and thus the analysis is incomplete.

The thresholds for "significant impact" (p.4-182) are, if anything, more problematic, and this can be shown by looking at them in order:

- "a) Threat to eliminate a plant community." **What is a plant community with respect to the WHR? All national programs deal in hierarchically defined vegetation types, not plant communities. Is a plant community a vegetation alliance, a unique stand, a vegetation series? Is elimination only significant when it is the last vegetation stand of its type in the world? In a VTP bioregion? In a County? In a municipality? What are the cumulative impacts of loss of plant communities? What about type conversion, such as done under the rubric of "ecological restoration" designed to promote grazing?**
- "b) Violation of any state or federal wildlife protection law." This seems unambiguous, but the purpose of a PEIR is to analyze predictable impacts. For instance, the Torrey Pines mentioned above are a CRPR List 1B.2 species, but they are not covered by the California or Federal Endangered Species Acts ("CESA" and "FESA" respectively). **Is it therefore okay to bulldoze Torrey Pines, so long as the only Torrey Pine "plant community" is not threatened with elimination?** CEQA requires analysis of all List 1B species as if they were covered by CESA, so the only protection these and all other non-listed CRPR list 1B and 2B species get is if impacts are analyzed in a CEQA document. Indeed, their presence normally

³³ CEQA Guidelines 15152(b)

³⁴ CEQA Guidelines 15160.

³⁵ Stanislaus Natural Heritage Project v. County of Stanislaus (1996)

triggers use of an EIR for a project on lands where they occur. **Therefore, where are all the impact analyses to sensitive plant species impacted by the VTP throughout the state?**

- "c) Contribution either directly (through immediate mortality) or indirectly (through reduced productivity, survivorship, genetic diversity, or environmental carrying capacity) to a substantial, long-term reduction in the viability of any native species or subspecies at the bioregion scale." **What monitoring measures will be undertaken to insure that ALL of California's 6,500-odd native plant taxa that are affected by the VTP will not show substantial, long-term reduction in viability?** According to Appendix I, monitoring and communication (p.I-1), "due to lack of resources the more rigorous "active" adaptive management program cannot be implemented at this time." This seems to suggest that this threshold of significance is unworkable. **How will the Project meet this threshold?**
- "d) Adverse effect, either directly or through habitat modification, on any species identified as a special status species in local or regional plans, policies, regulations, or by CDFW or USFWS." For CNPSSD's territory alone, there should be analyses for the dozens of species covered by the South County Multiple Species Conservation Plan, the proposed North County Multiple Species Conservation Plan, the City of San Diego Vernal Pool Habitat Conservation Plan, the Imperial County portion of the Desert Renewable Energy Conservation Plan, and the San Diego Gas and Electric Company Natural Communities Conservation Plan. **Where are these analyses? Each plan is going to be affected multiple times by multiple VTP projects. Where is the overarching, in depth analysis in the PEIR, off of which individual projects can tier?**
- "e) Net effect in a local subsequent activity area was a substantial increase in the population of invasive species AND this occurred on over 10 percent of a WHR lifeform in a bioregion." **Why is this relevant or even attainable?** The only time this would be relevant is when 10% of a "WHR lifeform" (e.g. oak woodland in the Central coast, or millions of acres) became affected by a new invasive species, and by the time an invasive species is that widespread, it is impossible to get rid of and possibly hideously costly. To give a comparison, two closely related invasive beetle species, the Polyphagous and Kuroshio Shot Hole Borers (*Euwallacea* spp.) will, if unchecked, kill 38% of the 71 million trees in 4,224 square mile Los Angeles County, and it will cost up to \$36,000,000,000 to remove all the dead trees.³⁶ Yet this does not cover even 10% of the South Coast bioregion, so this problem, which is larger than the probable entire VTP budget over its entire lifetime, is insufficient to be considered a significant effect under the VTP. **Is this correct? Why is this criterion consistent with CEQA? Who selected it? How can the VTP deal with outbreaks of highly damaging invasive species (an issue which BOF recognizes as a serious problem, if only because of the fire threat of millions more dead trees?) under this criterion?**
- "f) Creation of a public nuisance." Superficially, this seems unobjectionable. However, it interacts problematically with local ordinances. For example, the City of Escondido Weed and Rubbish Abatement Program defines weeds as:" (a) *Weeds* as referred to herein, including: (i) weeds which when mature bear seeds of a downy or wingy nature; (ii) sagebrush, chaparral and any other brush or weeds which attain such large growth as to become, when dry, a fire menace; (iii) poison oak and poison ivy when the conditions of growth are such as to constitute a menace to the public health, and weeds that are otherwise

³⁶ <http://www.latimes.com/local/california/la-me-trees-change-20170427-story.html>, accessed December 31, 2017.

noxious or dangerous; (iv) overgrown vegetation which is likely to harbor rats or vermin, or which constitutes a fire hazard; (v) dry grass, stubble, brush, or other flammable material which endangers the public safety by creating a fire hazard."³⁷ For projects in Escondido, wholesale clearance of chaparral would be elimination of a public nuisance, despite the significant impacts such removal would cause. **What are the cumulative impacts of the interactions between the VTP and anti-nuisance regulations such as the Escondido ordinance shown above? How are these impacts going to be avoided or mitigated?**

2.D. Why does the DEIR defer analysis of so many impacts and creation of mitigations until after it is approved? CEQA requires EIRs to be detailed, complete, and contain a sufficient degree of analysis to let the public and decision-makers understand the proposed project's adverse environmental impacts, so that corrections can be made and an informed decision can ultimately be undertaken.³⁸ As we understand it, the courts repeatedly have ruled against deferring analysis until after the EIR is approved.³⁹ Similarly, EIRs are generally not allowed to defer evaluation of mitigations.⁴⁰ **Why does the VTP DEIR resort to these tactics so often?**

2.E. Why does the DEIR inadequately analyze so many impacts from the VTP? Under CEQA, "[a]n EIR shall identify and focus on the significant effects of the proposed project."⁴¹ As we understand it, the courts have ruled against merely incorporating the conclusions of an analysis, and that an EIR must contain facts and analysis as well.⁴² We deal with one glaring botanical example of this problem below in 3.A., but it is ubiquitous throughout the DEIR. **Why does the DEIR resort to inadequate analysis so often?**

2. F. Why are the VTP Objectives so badly defined? (p.2-5)

- **Aren't Objectives 2, 3, and 4 subsets of Objective 1?** Objective 1, "Modify wildland fire behavior to help reduce losses to life, property, and natural resources,"(p. E-3) includes objectives 2 through 4 so one can argue that these objectives are redundant. These objectives perhaps refer instead to the three treatment activities respectively deal with fire in the wildland urban interface ("WUI"), fire breaks, and "ecological restoration," although they are they not named as such. In any case, they are, at best, sub-goals of Objective 1. **Why separate them out?**
- **Can the VTP accomplish Objectives 2 and 3?** Objective 2 states: "[i]ncrease the opportunities for altering or influencing the size, intensity, shape, and direction of wildfires within the wildland urban interface," and Objective 3 states: "[r]educe the potential size and total associated suppression costs of individual wildland fires by altering the continuity of wildland fuels." **If the average VTP project is 260 acres, less the half a square mile, and embers can travel up to 12 miles (see section 4 below), are VTP projects at the right scale to make any meaningful difference in fire behavior? What kinds of fires does the VTP envision projects protecting against? Is protecting against "VTP-scale" fires**

³⁷ http://www.qcode.us/codes/escondido/?view=desktop&topic=11-2-2-11_45, accessed December 31, 2017

³⁸ CEQA Guidelines § 15151.

³⁹ No Oil, Inc. v. City of Los Angeles (1974), Sundstrom v. County of Mendocino (1988), Gentry v. City of Murrieta (1995).

⁴⁰ CEQA Guidelines § 15126.4(a)(1)(B)

⁴¹ CEQA Guidelines § 15126.2(a)

⁴² Citizens of Goleta Valley v. Board of Supervisors (1990)

necessary and cost effective? These two objectives seem to be scaled too small to control the wind-driven fires that cause a vast majority of destruction in California.

- **What is meant by Objective 4?** Objective 4 is to "[r]educe the potential for high severity fires by restoring and maintaining a range of native, fire-adapted plant communities through periodic low intensity treatments within the appropriate vegetation types." This assumes:
 1. That plant communities and vegetation types are equivalent. This is problematic because the theory behind plant communities *explicitly assumes that the environment is a constant, plant communities are superorganisms, and they undergo succession until they come into equilibrium with the existing constant climate.* Vegetation, conversely, is merely plants occur in a particular time and place, and vegetation types are generally named by the most dominant species. They are only the same thing to people who have had no formal training in plant ecology.
 2. That all "fire-adapted plant communities" require low-intensity treatments. As shown above, fire-adapted plant community is a bit of an oxymoron. If the question is, how do plants respond to fires, then it is obvious that some do well with low-intensity fires, others absolutely require high-intensity fires to reproduce. Two examples are the many manzanita (*Arctostaphylos* spp.) and ceanothus species (*Ceanothus* spp.) that have no burls and require fire to stimulate germination of their seeds after the adults die. Many of these species are rare, and some dominate their local vegetation. On a larger scale, everything from chaparral to lodgepole pine forests have high-intensity, stand-replacing burns as a normal, if rare, disturbance. Eliminating high-intensity fire from the landscape eliminates all these species. **What are the impacts to species that depend on high-intensity fires of eliminating high-intensity fires from their habitats? How will the VTP mitigate for these impacts?**
 3. **This objective ignores climate change.** Restoring fire only makes sense in a world where the climate is constant. In 2017, when there are Santa Ana winds in December, it sheer romanticism. The VTP must address how climate change affects fire behavior. **What objective would be congruent with the need to fight fire in a hotter world with more extreme conditions of drought and flood, especially with rapid alternations between the two?**
 4. **What about invasive plants?** Another bit of unfounded romanticism embedded in this objective is the notion that we can restore California to the days when Indian Fire dominated the dynamics of ecosystems. If only. While California's native species have adapted to 10,000-20,000 years of Indian Fire, some of the weeds coming from Eurasia and Africa have adapted to 50,000-100,000+ years of human fire. Some invasive species are more fire-adapted than any local species, and that is one reason why weed-fields spring up after fires. **How will the VTP deal with invasive species that are favored by fires, especially low-intensity ones?**

As both the California Chaparral Institute and CNPSSD have argued repeatedly, there is too much fire in chaparral, especially in southern California. The simplest way to improve this fire return interval is to not burn in chaparral for the next century or so. Both Objective 4 and the VTP itself need to become consistent and transparent about what they intend to burn, where, and why. CNPSSD does not disagree that some vegetation, such as some ponderosa pine stands in the Sierra Nevada, could benefit from controlled burns. These need to be called out so that the impacts of treating them can be analyzed. **Why were they not identified in this DEIR?**

2.G. Why does the Alternatives analysis depend so much on acres treated? One major issue here is that treating 60,000 acres per year is not one of the official objectives of the VTP, so it should not be used to judge alternatives.

- **Why was the No Project Alternative derided?** Officially (p. 3-5), the reason is that "...many of the types of treatments described in Chapter 2 would require individual EIRs, which are time consuming, costly, and a significant workload increase on staff. Consequently, it may not be possible to complete CEQA requirements within time frames associated with certain grants and other funding opportunities or within the staff resource capabilities of non-government organizations in the SRA. The current program structure also often includes extensive considerations of effects and may include duplicative analysis of cumulative impacts." This is the wrong cost comparison. While it makes sense to look at the staff allocated to this task and the length of the CEQA process, here are some tradeoffs that also need to be considered. **Is doing a proper CEQA review too expensive to consider?** Perhaps not.

1. SDG&E was assigned responsibility for causing the 2007 Cedar fire in San Diego County. To date it and its insurers have paid out \$2.4 billion in claims from thousands of lawsuits. The VTP as described will result in dozens, if not hundreds, of prescribed fires per year, even though climate models suggest that extreme drought and lower fuel moisture levels will be the new normal. **Is avoiding an extensive review for a prescribed fire, or even 100 prescribed fires, cheaper than paying the costs of the conflagration that an escaped fire might cause in such conditions?** Under the VTP, BOF will make itself one of the biggest, single sources of fire ignition in the State. **How does the cost to the State of preventing a prescribed fire from escaping compare with the cost to the State of fighting the resulting blaze and paying for whatever it damages?**
2. Not that BOF has the option of ignoring the California Natural Communities Conservation Program administered by CDFW, but it should realize that tacitly ignoring it (as done in the DEIR) causes enormous costs for the state. The NCCP is designed to aid both development and conservation in California, by allowing counties and other entities to programmatically determine which lands are set aside for conservation, and which can be developed. The key point is that any NCCP program only works if the entity administering the program meets CDFW's goals in keeping the species protected by the NCCP from being extirpated within the NCCP's area. If the lead NCCP agency fails in this goal, it loses permission to administer the program, both the lead agency and CDFW are potential targets for lawsuits to force them to comply with California law, AND DEVELOPERS SUFFER TOO, because they lose the ability to streamline review of their projects. The VTP, by ignoring NCCPs within the State Responsibility Area, puts numerous NCCP projects at risk, with potentially huge legal and opportunity costs to the lead agency and the state. **How do the cost savings to the State for managing the VTP compare to the cost to the State of disrupting these programs?** The money comes out of one state budget, after all.
3. While the costs of losing listed and sensitive species are difficult to quantify monetarily, except when they are photogenic species like the Torrey Pines mentioned above, the costs of dealing with invasive species are estimated to be in the billions, as noted above for the Polyphagous shot hole borer. Slipshod review can move pathogens and cause huge

losses. **How do these costs to the State compare with the costs to the State of doing a proper CEQA review?**

- **Why is the VTP frame of reference the entire State Responsibility Area, and not the acres treated per year?** The problem here is that, on an annual basis the VTP is proposed to treat 60,000 acres/year, which is 0.6% of the proposed area for WUI treatments (10,064,865 acres, p. 3-16), 1.5% of the proposed area for fuel break treatments (3,938,563 acres, by calculation), or 0.65% of the proposed area for ecological restoration treatments (9,211,560 acres, by calculation). The point here is that there's little reason to assume that the VTP can implement treatments in its entire, modeled treatment area in a time span that is relevant to either modifying fire behavior (clearing once per century or less?) or fiddling with vegetation characteristics (one treatment per century?). **The key question is, what can the VTP do each year to meet its objectives in a useful way? Why was this not even evaluated, let alone used as the frame of reference for evaluating alternatives?**
- **Why were the Very High Fire Risk Severity Zones considered?** They appear to be areas where prescribed burns are most likely to escape control. **Why are these areas considered for prescribed fires? How does drought affect this designation? Why are 11,787,015 acres (51.2% of VTP, 38% of SRA) considered to be in these zones? If it is such a big area, isn't it worthless as a designation? If there are communities at high risk outside this designation, what is the value of this designation and this alternative?**
- **Why was Alternative D considered if, per p. 4-113 (air quality), "[t]hrough implementation of AIR-1 and AIR-2 no prescribed fire activities will allow be allowed to exceed overall daily air quality thresholds. As a result impact on air quality from prescribed fire emissions would be less than significant after mitigation." It is alleged that the VTP itself can be mitigated to less than significant effects. Isn't consideration of this alternative a contradiction? Which is correct, that air quality impacts from the VTP restrictfull implementation of the VTP, or that the VTP can mitigate air quality impacts below the level of significance?**

We strongly suggest that the BoF consider how much they truly need to work on, and make that the area of the VTP. **If the goal is to make a positive difference through useful objectives, how can this be achieved?**

2. H. The history of the DEIR is incomplete (p. 1-21). This is the fourth DEIR released, with previous releases in 2013, 2015, and 2016. **Where is this history? Where are the responses to all the letters sent in? Why have all previous comments on this, from the previous versions of the DEIR and the scientific review panel, been ignored? Why have previous versions of the DEIR not been sent to the lead agency for certification?** To support resolution of this issue, all previous comment letters made by CNPSSD are attached. Please respond to those comments.

3. With respect to native plant issues, we noticed many problems. The treatment of native plants issues is riddled with issues, starting with the trivial (CNPS is repeatedly referenced in the DEIR, but the acronym is not spelled out nor included in the front glossary). In addition, the plural of plant is not vegetation, and vegetation has different issues than plants, despite the attempt of the DEIR to bundle them together), and going rapidly to the seriously non-functional. We have the following questions about how native plant issues were treated in the DEIR:

3. A. Why was Mitigation Measure BIO-1, not carried out in preparation of the DEIR itself? The Torrey pines example above can be flogged to death, but it is worth noting that the fuel breaks modeled around the Torrey Pines area, if cleared per the VTP, would wipe out the world's population of *Dudleya brevifolia*, a state endangered species. **Why was no attempt made to avoid known populations of listed species? Why was little or no attempt made to avoid highly restricted state-owned lands, such as state reserves within state parks, or CDFW ecological reserves?** With GIS, this would have been a trivial analysis: overlay proposed VTP project areas with known CNDDDB occurrences and with reserve lands, then take the places where they match *out of the VTP*. After all, the lands proposed for the VTP are far more vast than the Project ever hopes to treat CEQA requires avoidance as well as mitigation. **Why was there no attempt to avoid predictable impacts?**

How does this meet CEQA Guideline 15125(c): "The EIR must demonstrate that the significant environmental impacts of the proposed project were adequately investigated and discussed and it must permit the significant effects of the project to be considered in the full environmental context[?]"

Note that CEQA requires this analysis in all EIRs. It is not option, nor, as noted above, is it allowable to forego this impacts analysis until after the VTP DEIR is approved.

- **Where is the detailed evidence that this analysis was ever done?**
- **What were the detailed results of this analysis?**
- **What can we check to determine that this analysis was done properly, so that we can help fix any deficiencies?**
- **What were the impacts to populations of sensitive species? How many will be lost? How many will need to be transplanted or replanted? How many new populations were discovered?**
- **How are the impacts to each species to be mitigated below significance?**
- **What are the cumulative impacts?**
- **How are they to be mitigated below the level of significance?**
- **Are there unavoidable impacts? Where is the declaration of over-riding consideration for them?**
- **How did impacts to sensitive plants and the mitigation thereof influence the design of the VTP?**

A fundamental point is that the Program does not affect all listed and sensitive species, it affects a subset of them. **Why was this subset not identified in the VTP, avoided to the extent feasible while still protecting life and property, while mitigations were proposed for the rest?**

3.B. Why is the biological description of the project area so incomplete? In section 4.5 Biological Resource (p. 4-142) " The bioregion was determined to be the appropriate scale to analyze the impacts of the proposed program." **Really? The entire South Coast from Ventura County to the Mexican border is homogeneous enough that analyzing as a single unit makes sense?** Indeed, it says in the description of the "South Coast Ecoregion (p.4-155) that "[m]ore than 150 species of vertebrate animals and 200 species of plants are either listed as protected or considered sensitive by wildlife agencies and conservation groups (Hunter, 1999 [Why not reference the CNDDDB for a listing less than a decade old?])...The South Coast's widely variable geography and diverse climate have given rise to remarkable biological

diversity." **Where is the analysis of the hundreds of sensitive species and "remarkable biological diversity" of this region? Why was only one page devoted to it?**

The description of the "ten ecoregions" used in the analysis (p.4-85-4-109) is not useful for environmental analysis. It does not describe what is important, it does not describe what is impacted, it does not use scientific names, but it does lump together plants with radically different fire ecologies and pretends they are equivalent. Indeed, it does not describe concerns or in any way highlight which bits of information are actually useful for CEQA analysis.

According to CEQA, "[a]n EIR must include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation is published."⁴³ This includes the plants and animals within the project's boundary. Section 4.5 fails to do this.

Worse, the description of impacts is useless. To be useful for tiering, the VTP needs to describe predictable impacts to all sensitive species. The VTP needs to avoid impacts that are predictable and avoidable, it needs to mitigate impacts that are mitigable, and it needs to disclose impacts that are significant and unavoidable, so that the decision makers of the lead agency can determine if the purported benefits of the VTP outweigh the damage it causes. The analysis does none of this. **Where is the impacts description and analysis? What impacts can be avoided at the programmatic level?**

3.C. Where is the template for individual projects? Section 4.5 (p.4-142) says that " A focused analysis at the scale of the individual project ("subsequent activity") is required by the Project Scale Analysis (see Appendix J) prior to implementing an individual treatment under the proposed Project." Appendix J is "Project Scale Analysis **Burn Planning**" [emphasis added]. It is not even a CEQA-compliant checklist. **How will individual projects be analyzed? Since no attempt was made to include the checklists of previous versions, presumably they will use a traditional CEQA analysis. Is this correct?**

3.D. Why are the biology mitigation measures vague, unenforceable, and inadequate? CEQA requires all EIRs to not only identify significant impacts but also to find ways to mitigate them below the level of significance as much as possible.⁴⁴ Furthermore, the mitigation measures must be enforceable.⁴⁵ As we understand it, the courts have ruled against mitigation measures that are vague and unenforceable.⁴⁶ **Why does the VTP DEIR resort to these tactics so often? Where is the detailed, complete, and sufficient analysis in the DEIR to allow anyone to conclude that the VTP will not have significant individual and cumulative impacts?**

3.E. Why is Mitigation Measure BIO-1 (p. 4-211) thought to be sufficient or workable? BIO-1 is unworkable, as it does not cover sensitive species on the CRPR list (note that the CNPS list has been the California Rare Plants Rank list for many years now), nor does it cover species protected by cities and counties. **Why is VegCAMP labeled as a "successor" to the CNDDDB?** The two are entirely separate programs, one for sensitive plants, one for vegetation. **As a basic test, what is the difference between plant species and vegetation?**

⁴³ CEQA guideline § 15125

⁴⁴ Public Resources Code, §§ 21002, 21061.1; CEQA Guidelines §§ 15021(b), 15364

⁴⁵ Public Resources Code, § 21002; CEQA Guidelines §§ 15002(a)(3), 15126.4(a)(2)

⁴⁶ Anderson First Coalition v. City of Anderson (2005)

Why does Mitigation Bio-1 designate the Project Coordinator to conduct a field review of any proposed project? What qualifications demonstrate that the Project Coordinator is competent to perform field identifications? Where is this competency requirement specified in the VTP? How will qualifications be assessed? The problem is that, unless the Project Coordinator is a qualified botanist, (s)he will lack the ability to determine how accurate the CNDDDB or any other database is, will not know when or how to survey (the excellent guidance from CDFW and CNPS is inadequate without real training), will not know how to collect specimens, nor where to send them in problematic cases, nor how to deal with any truly complex issues.

A second problem is that all databases are insufficient. The CNDDDB states, "[W]e cannot and do not portray the CNDDDB as an exhaustive and comprehensive inventory of all rare species and natural communities statewide. Field verification for the presence or absence of sensitive species will always be an important obligation of our customers."⁴⁷ Trained botanists know this. Untrained bureaucrats do not. **Why is a database check thought to be sufficient screening?** Even when records are accurate, most plants in a nine-quad search are not found in something as small as a 260-acre plot, unless they are already known from that precise area. **How can anyone use this data alone to protect native species?** Wildlife agencies insist on focused surveys in the proper season as a way to determine the presence or absence of species thought *possibly* to occur in a site, due to a CNDDDB search turning up the possibility of the plants occurring in the area in suitable habitat. Reputable botanists also check the Consortium of California Herbaria. Impacts and mitigation are then based upon whether the plants are found, how many plants are found, where they are relative to the project, and whether the project can avoid some or all of the plants. Only then are appropriate mitigations worked out.

It is routine to find new populations of sensitive species or even new species in areas (such as large, old ranches) that were never or rarely surveyed. The author of this letter (Dr. Landis) found what eventually turned out to be a new species of *Eriastrum* in 2007, on a wind farm project in the Tehachapis. He currently is helping with a study defining the current range of the List 1B Campbell's liverwort (*Geothallus tuberosus*), which occurs adjacent or on the proposed fuel break clearance on Del Mar Mesa, but which is not yet in the CNDDDB. The San Diego Plant Atlas, since 2003, has found over 300 new county records, 10 state records, and 2 new taxa.⁴⁸ Tejonflora.org documented floristic survey of the Tejon Ranch, and the new species that are being described from there. A new species of cholla was described in Riverside and Imperial County in 2014⁴⁹, and an undescribed new manzanita species were published in June 2016. *Carex cyrtostachya*, described in 2013, is found in Butte, Yuba, and El Dorado Counties,⁵⁰ and it is a CRPR List 1B species. The same is true for the Sierran *Carex xerophila*, published in 2014,⁵¹ and for *Calystegia vanzuukiae* from El Dorado County, published in 2013.⁵² According

⁴⁷ http://www.dfg.ca.gov/biogeodata/cnddb/cnddb_info.asp

⁴⁸ <http://sdnhm.org/science/botany/projects/plant-atlas/>, accessed 5/26/2016

⁴⁹ Baker, M. A., & Cloud-Hughes, M. A. (2014). *Cylindropuntia chuckwallensis* (Cactaceae), a New Species from Riverside and Imperial Counties, California. *Madroño*, 61(2), 231-243.

⁵⁰ Zika, P.F., L.P. Janeway, B. L. Wilson and L. Ahart (2013) *Carex cyrtostachya* (Cyperaceae), a new species of sedge endemic to the Sierra Nevada of California. *Journal of the Botanical Research Institute of Texas* 7:25–35.

⁵¹ , Zika, P.F., L. P. Janeway and B. L. Wilson (2014) *Carex xerophila* (Cyperaceae), a New Sedge from the Chaparral of Northern California. *Madroño* 61(3):299-307.

⁵² Brummitt, R. K. and Namoff, Sandra M. (2013) *Calystegia vanzuukiae* (Convolvulaceae), a Remarkable New Species From Central California. *Aliso* 31(1)

to an informal, one-week email and Facebook survey of CNPS botanists undertaken in the last week of May 2016, undescribed new species in process of identification were reported to exist in Marin, Tehama, Butte, Shasta, and Santa Barbara counties, and more will certainly be found as large, old ranches and remote areas are surveyed for development, wind, and solar projects, and probably for the VTP. Experienced botanists know how to deal with this issue. Untrained bureaucrats do not.

The VTP provides no guidance as to the qualifications of project coordinators, nor does it specify when or how long they should spend in the field in each project, going against the advice of both CDFW and CNPS cited in the DEIR. In any case, CNPS always strongly suggests that surveys be left to qualified botanists with experience in the local area of any proposed project, that surveys should take place when the plants are most likely to be alive and identifiable, and that qualified surveyors be allowed adequate time for their work, and not forced to do a cursory, 15 minute visit where they do not get out of the vehicle. **What is to stop Project Coordinators from doing cursory drive-by visits and not even setting foot on project sites? Why should project coordinator surveys be considered acceptable under CEQA? What documentation would the Project Coordinator produce to demonstrate that (s)he had done the task to an acceptable standard?**

3.E. How is Mitigation BIO-2 actually supposed to protect anything? (p.4-212) Critical terms like "type conversion" and "median fire return interval," are left undefined, their determination at the mercy of the Project Coordinator whose qualifications are also left undefined. Moreover, these areas are to be protected for "aesthetics, wildlife, and recreation," not for sensitive plants, lichens, or even the reproduction of species that take decades to reproduce. **Why should mountain bikers desiring new trails be privileged over the continued existence of last-of-their-kind stands?** Additionally, local experts like the California Chaparral Institute, numerous local land management groups, and scientists from both academia and other agencies are left out of the decision loop. **Why are they excluded?** Mitigation BIO-5 is unworkable as written. It should incorporate the analysis of impacts directly into the DEIR, rather than forcing it onto a single Project Coordinator who only needs to make a single site visit. **Why was this not done?**

3.F. Why use the outdated WHR, when so much more useful vegetation information is available? California's flora is immensely complex, but the VTP analysis oversimplifies it by shoehorning all species into trees, shrubs, and herbs. No knowledgeable fire fighter would assume that ponderosa pine (*Pinus ponderosa*) and white fir (*Abies concolor*) have the same fire ecology, but they are all lumped together as "tree-dominated" vegetation (e.g. Table 4.5-6) for the purposes of describing the vegetation in the South Coast.

Considering that CDFW, CNPS, and many other organizations, from cities to federal agencies, have for decades been cooperating to map the vegetation of California and have created two editions of *The Manual of California Vegetation* ("MCV"), it really is sad to see the 1980s Wildlife Habitat Relationships system used by any state agency. The MCV contains a wealth of information on fire ecology. While it is admittedly incomplete, even incomplete it is a far more complete and more useful as a mapping system than is the WHR. **Why not use the MCV as its primary vegetation mapping tool and incorporate the fire ecology information therein into the VTP?**

3.G. How does the VTP avoid becoming a major vector for pests and pathogens? CNPS has found that non-native, pathogenic water molds (genus *Phytophthora*) are spreading through the state and into wildlands through nursery-mediated infection of plants for restoration and landscaping. In 2015 we implemented a policy to try to stem the spread, at least through native plant nurseries.⁵³ The genus *Phytophthora* may be unfamiliar, but *Phytophthora ramorum* (the cause of Sudden Oak Death) is depressingly familiar, as is the Irish potato blight (*Phytophthora infestans*) that caused so many famines. There are dozens, if not hundreds, of non-native *Phytophthora* species spreading into the state, primarily through the horticultural trade, but increasingly through restoration work. Southern California is so far free of Sudden Oak Death, but it faces beetle invasions from gold-spotted oak borer (*Agrilus coxalis*) and the shot-hole borers mentioned previously. Native pine boring beetles have caused major tree die-offs elsewhere in the state. All of these pests and pathogens can be readily transported by carelessly handled wood, litter, untreated or insufficiently composted green waste, dirty equipment, carelessly grown nursery stock, and so on. Proper sanitation and quarantine are necessary to keep vegetation treatment activities from spreading pests and pathogens throughout the state.

California Department of Resources Recycling and Recovery (CalRecycle) has mandated (AB 1826 Chesbro 2014) that California businesses recycle organic materials, with the goal of diverting all green waste from landfills by 2021.⁵⁴ For the VTP, this means that cleared material cannot be landfilled, but must be disposed of elsewhere. If AB 1826 is implemented carelessly by the VTP, it will make the program an "invasives superhighway," as infested material cleared as part of a VTP project is dumped elsewhere, spreading pests, pathogens, and parasites throughout the state.

This is inadequately addressed in the DEIR. Yes, Mitigation BIO-6 is a step in the right direction, but the problem is the statement (p.4-240): "During the planning phase, if the program coordinator determines that there is a significant risk of introducing or spreading an invasive pest (plant or animal), the following standards will be implemented.." This is akin to a medical professional deciding to institute sanitation procedures only if things look gross. **Why is this optional and not mandatory? If the program coordinator is required to decide when sanitation is necessary, what data will be collected to determine the necessity? How will the decision be made?** This is a non-trivial question, as tests for pathogens are expensive and identification of diseased plants and plant pests requires extensive specialized knowledge. Mandatory sanitation is cheaper and easier to understand and practice.

If BIO-6 is implemented as written, the VTP can be expected to cause substantial individual and cumulative impacts as workers inadvertently spread pests and pathogens on uncleaned equipment and by removing dead, but still infected, plant material and piling it elsewhere. Even leaving some infected material might be problematic, as the pest or pathogen could simply reinfest the area from whatever is left behind.

What are the impacts of implementing BIO-6, or conversely, of not implementing it? How are these impacts to be mitigated, individually and cumulatively? The California Department of Agriculture is in charge of quarantines for agricultural pests and pathogens, while CalRecycle is in charge of greenwaste disposal. Have they been contacted about the VTP? How are their interests affected by the VTP?

⁵³ http://www.cnps.org/cnps/archive/phytophthora_policy_2015.pdf

⁵⁴ <http://www.calrecycle.ca.gov/recycle/commercial/organics/>

4. There are serious climate change issues as well. As mentioned in the previous section, CNPS is an advocate of California's native plants and of vegetation dominated by native plants. Because we increasingly have to deal with climate change issues to protect native plants, we now also advocate on climate change issues. In our opinion the treatment of plants and the analysis of climate change impacts in the DEIR have substantial issues. We have a number of issues with the climate change impacts discussion (section 4.6, pp.4-215 to 4-242).

4.A. Is the Regulatory Setting complete? It is not clear why AB 197 (Garcia, 2016) and SB 32 (Pavley, 2016) were excluded from the Regulatory setting. **Is this legislation relevant to the VTP? If it is, how does it change the analysis of section 4.6?**

4.B. How were SCAQMD greenhouse gas thresholds determined to be insignificant? (p. 4-228): "These thresholds were determined to be inappropriate for vegetation management projects in the WUI and wildlands that do not impact the underlying vegetative site productivity." It is unclear that the BoF has the authority to determine the threshold is inappropriate. **Who made the decision and on what grounds? What does "underlying vegetative site productivity" have to do with this decision? Why does it matter, when so many of the treatments involve vegetative type conversion in ways that affect site productivity? Shouldn't the VTP respect the very different air quality requirements for the different California Air Quality Management Districts? Who gave the BoF authority to establish its own greenhouse gas thresholds?**

4.C. Why was the analysis of climate change impacts performed as it was? As we understand it, the relevant details of the climate change impacts analysis are as follows:

- The time frame of analysis is one year. Page 4-230: "[b]ecause the generally accepted time frame for evaluating project emissions is the year of project implementation with emissions generally reported as MT/year, this is also the time frame chosen for this analysis. This will conservatively estimate the VTPs impacts because the benefits of future vegetative growth as the site recovers and the reduction of wildfire risk to the treatment area and surrounding landscape is not taken into account."
- The DEIR assumes that, of the 60,000 acres proposed to be treated every year, 30,000 acres will be burned, 20% mechanical treatments (p. 4-233), 10% manual treatments (p. 4-234), and grazing non-native herbivores and spraying herbicides are only accounted for as trip miles, with herbivore methane emissions based on a sheep herd of 450 animals as the only model (p. 4-234). Thus, only 50% of it burns.
- The conclusion is the VTP causes less than significant impacts to greenhouse gas emissions (p. 4-235): "The VTP would create approximately 298,745 MT/year of CO₂e, less than the 510,030 MT/year CO₂e emissions created by a similar size wildfire burning."

The conclusion does not follow from the analysis. It is only relevant if the 60,000 acres treated would have burned in the same year they were treated. This is intrinsically unlikely. 60,000 acres treated/22,000,000 acres in the VTP is 0.261%. According to Figure 1.1-1, ("annual area burned in California 1950-2010", p. 1-3), during the worst wildfire year, 2007, only 1,400,000 acres burned. This is approximately 6.4% of the 23,000,000 acre VTP area. Even during the worst year in recent history, over 93% of the state went unburned.

What are the chances that the area treated by the VTP will burn in the same year, even during a historically bad fire year? If the treatment and the fire are independent events, the chance is much less than one percent.

Still, one might argue that the BoF is very good at predicting where fires will occur and putting their treatments there, so the chance is much higher. This is doubtful, because BoF was unable to predict the Witch, Cedar, Tubbs, Thomas, or many, many other conflagrations, where it would have been immensely beneficial to stop them through prophylactic vegetation treatments. Moreover, the model used to predict fire hazards in the DEIR has been tested as a predictor for home loss during fires, and it contributed <5% to the model that predicted which homes would burn.⁵⁵ According to this test, the model used in the DEIR is very bad at predicting where fires will occur in a particular year, as are most models. Fire occurrence has a large random component. Other research in southern California showed that, over 28 years (not one year), 23% of fuel treatments intersected fires in the study area, which means that 77% of fuel treatments went unburned over 28 years in an area notorious for large wildfires.⁵⁶ Even in Southern California, a fire treatment area will most likely never be touched by a fire in a generation.

The upshot is that one cannot analyze the greenhouse gas impacts from a vegetation treatment as if the treatment displaces a similarly sized wildfire on the same spot in the same year. Absent truly improbable events, the 60,000 acres treated will not intersect any fire during the year of analysis. Therefore, greenhouse gas emissions from the treatment will not replace or reduce emissions from a fire that would have burned the same area. Instead, they will be emitted in addition to whatever wildfires occur that year.

Clearly, the analysis of climate change impacts is incorrect. **Won't the VTP will cause substantial, unmitigated greenhouse gas emissions? What are the individual and cumulative impact of greenhouse gas emissions from the VTP? How can these impacts be mitigated?**

Moreover, the argument used in this section looks similar to the argument that the California Supreme Court ruled was invalid in the Newhall Ranch ruling.⁵⁷ **How can this ruling be incorporated into designing a better analysis of greenhouse gas impacts and mitigations?**

4.D. Why is the basic fire science wrong? In section 4.6.1.2.3.1 "Wildfire versus Prescribed Fire Emissions," the EIR makes the incorrect assumption that carbon dioxide emissions from a wildfire are equivalent to emissions of pollutants caused by inefficient burning. This is incorrect. The basic combustion reaction is that hydrocarbons + O₂ → CO₂ + water. The more efficiently this reaction runs, the more carbon dioxide is produced. Inefficient combustion produces soot, particulates, and other air pollutants. Decreasing combustion efficiency increases particulate and other pollution but decreases CO₂. Increasing combustion efficiency increases CO₂ production and decreases the amount of particulate and other emissions.. There is no way to escape producing some pollutant by manipulating a fire.

⁵⁵ Syphard, A. D., Keeley, J. E., Massada, A. B., Brennan, T. J., and V. C. Radeloff, V. C. (2012). Housing arrangement and location determine the likelihood of housing loss due to wildfire. PLoS One, 7(3), e33954.

⁵⁶ Syphard, A. D., Keeley, J. E., and T. J. Brennan, (2011). Comparing the role of fuel breaks across southern California national forests. Forest Ecology and Management, 261(11), 2038-2048.

⁵⁷ *Center for Biological Diversity et al. vs. California Department of Fish and Wildlife and Newhall Land and Farming Company*

As presented in the analysis, highly efficient controlled burns should produce more CO₂ emissions, not less. CO₂ emissions thus cannot be controlled by the same processes that control air pollution from fires. They have to be managed separately, either through not burning or through carbon sequestration. **How can section 4.6.1.2.3.1 and mitigations AIR-1, AIR-2, and FBE-1 be revised to reflect this basic reality?**

4.E. Why are BIO-5 and BIO-6 mentioned in the climate change section (p.4-235)? These two mitigations have nothing to do with carbon sequestration. Indeed, the proposed mitigations are at best marginally relevant to any significant greenhouse gas reduction.

4.F. What is the relationship between the VTP and BOF's responsibility for sequestering carbon? Since BOF has responsibility both for administering the VTP, which appears to be only about removing plants, and for carbon sequestration through planting plants, there needs to be an analysis of the impacts of these two programs on each other. After all, they are in fundamental conflict: fire protection seeks to remove plant matter from the landscape, while sequestration seeks to add it to the landscape. One might expect close coordination between these two programs and how they impact each other, yet there is no mention of it in the DEIR. Specifically, the DEIR needs to analyze:

- **How will the VTP sequester the CO₂e it produces (see 4.C. above)?**
- **How will mistakes and accidents increase CO₂e emissions from the VTP?**
- **What is the rate or probability of BOF controlled burns escaping control and becoming wildfires?**
- **How are escaped fires controlled, and how much do they burn relative to the proposed size of controlled burns?**
- **How are impacts from escaped burns assessed individually and collectively across the VTP?**
- **What happens if an escaped wildfire impacts a carbon sequestration site?**
- **Can BOF's carbon sequestration programs be used as mitigation for the greenhouse gas impacts generated by the VTP?**

4.G. Why did the DEIR ignore the method suggested in the California Chaparral Institute's response to the Notice of Preparation from October 24, 2015, of accounting over a 100 year period? That method would have avoided at least some of the issues raised in 4.C. and 4.F.

5. Why is the DEIR contain so many misstatements based on scientific papers, reliance on anecdotal evidence, and avoidance of scientific advice? We fully support the California Chaparral Institute's comments in their January 2018 letter ("CCI letter"). Some points we find problematic:

- **Why does the DEIR misquote the science?** The CCI letter contains ample documentation of this, including one scientist denying that his paper said what was implied in the DEIR. We strongly agree with the assessment, and ask the same.
- **Why does the DEIR rely on anecdotal evidence?** This is particularly apparent in the definition of the wildland urban interface (WUI), which is defined in the DEIR solely in reference to how far embers can fly. As noted in the DEIR (p.4-33) and in Appendix A of

the CCI letter, there is no good science to support 1.5 miles as anything other than a polite political fiction. According to the CCI letter and the references therein, the 2009 Bunyip Ridge fire in Australia projected embers 20 km (about 12 miles), while the ongoing Ft. McMurray fire is reported to have projected embers 10 km (about 6 miles). While most fires do not throw embers 12 miles—yet (see climate change)—1.5 miles is too short a distance to guarantee that structures will be protected from flying embers.

Worse, 1.5 miles is a silly number, and this can be demonstrated two ways:

1. First, if VTP projects are supposed to clear 260 acres on average, that is 11,325,600 square feet, and a 1.5 mile wide WUI clearance would be 7,920 feet wide. If one does the math, a 260 acre VTP clearance would create a 1.5 mile wide fire break that is 1,430 feet long, and such a firebreak only works if it is pointed directly at the oncoming fire, and somehow the fire doesn't burn down the uncleared sides of the fire break.
2. Second, the VTP is supposed to clear 60,000 acres per year, and there are 4,523.9 acres in a 1.5 mile-radius circle, as proposed for the WUI. Dividing the two, it looks like the VTP could clear 13.26 WUI circles per year by treating 60,000 acres of VTP (and doing nothing else, no fuel breaks, no ecological restoration). Is protecting 13 structures per year by clearing 1.5 miles around them a useful exercise?

Conversely, there is increasing evidence for the utility of 100 feet of fire clearance around structures, and a 260 acre VTP project could be used to create 21.45 linear miles of fire break 100 feet wide. Choosing 1.5 miles at worst leads to silly projects. **Why use it at all? Why not try approaches that appear more useful based on repeatable tests of evidence?**

***6. Why are there so many contradictions within the DEIR?** It is riddled with them, and they are non-trivial.

- One example, from page E-3: "California's tremendous diversity in vegetation translates into a similar diversity in fuel types, with a resultant variation in fire behavior throughout the state. Considering statewide variations in fire behavior and the need to characterize it at a workable scale for a statewide environmental analysis, the vegetation of California is condensed into three main groups based on the distinct fire behavior each group exhibits. These groups can be classified as tree dominated, grass dominated, and shrub dominated vegetation formations." **Really? Would any firefighter consider white fir and ponderosa pine to have the same fire ecology? How about other pairs of trees and shrubs that have highly divergent fire ecology: sequoia and redwood, lodgepole pine and whitebark pine, chamise and scrub oak?** Clearly, the DEIR failed to usefully simplify the complexity, so we are left concluding that the original statement about diversity in fuel types was correct, and that the analysis failed to account for it at all.
- **The contradictions become more problematic when dealing with biological cumulative impacts.** The DEIR states (p 5-30) that "[o]verall, it is impossible to precisely specify at the scale of the state or region both the biophysical and economic ramifications of interaction between disturbance and biological resources."

Later it says (p-5-30) that "[c]umulative effects, either negative or positive, can potentially impact individual species of concern, the distribution and sustainability of special habitat elements, wildlife, vegetation structures, and other biological resources. Cumulative

effects attributable to these kinds of impact mechanisms are generally most reliably assessed at the scale of the individual project and lands immediately adjacent."

At this point, the DEIR is going against CEQA's intent with PEIRs, as noted in section 2 above. Unfortunately, it goes on to say that (p. 5-31) "[t]he VTP Program EIR cumulative impact analysis, conducted at the scale of the watershed or bioregion, identifies and assesses impact mechanisms that may influence landscape scale biological resource issues such as wildlife movement or habitat capability across broad regions, likelihood of genetic interchange, change in plant community composition as a result of non-native species establishment, or change in species distribution." **Really? Where is this analysis? What were its conclusions?** This part of the DEIR should be thousands of pages long.

Finally (p. 5-33) the DEIR states, "[b]ecause of the amount of acreage eligible but not receiving treatment under the VTP, *the proposed Program would likely result in a less than significant cumulative effect on biological resources at the bioregional scale* [emphasis added]. Wildfires would continue to occur in California, having both negative and positive effects on biological resources and wildlife habitat condition; the magnitude of effect being dependent on a wide suite of physical, biological, and climatic variables."

This is an absurd conclusion. **Does it really say that, because only 60,000 acres is treated each year out of 23,000,000, there is no cumulative impact at all? How many California native species, sensitive or not, have global ranges of less than 60,000 acres? An area half the size of Oakland is deliberately burned every year, but that is not significant, because it doesn't burn one-tenth of the state? An equivalent area is herbicided, grazed, and masticated, but that's not significant, because the project doesn't herbicide, graze, and masticate one tenth of the state? Why does the BoF think this makes any sense at all?**

As noted above, it is easy for a single, 260-acre vegetation treatment to wipe out the last stand of old growth chaparral, or to exterminate an endangered plant species, or to remove critical habitat that causes a sensitive species to spiral towards extinction, or to poison a watershed by accidental release of herbicides into a stream, or to transport a pest or pathogen where it never before existed, or to spark a wildfire that burns thousands of acres, because the crew was impatient and started the fire under inappropriate conditions (as in the 2013 San Felipe Fire). All of these are predictable and analyzable. **If such predictable consequences are so hard for the BoF to analyze, why attempt the VTP at all?**

If the DEIR is supposed to be a trustworthy document, to meet its Objective 5, to "[p]rovide a consistent, accountable, and transparent process for vegetation treatment monitoring that is responsive to the objectives, priorities, and concerns of landowners, local, state, federal governments and other stakeholders," then **all internal and external contradictions need to be resolved and removed. How can the VTP be trusted otherwise? What steps will be undertaken to identify and fix the VTP's internal contradictions?**

Alternatives to the current VTP and DEIR

When reading the DEIR, one comes away with the overwhelming impression that this is a document written by people who want stuff done without thinking about the consequences. While we understand that impulse, we do not sympathize with it.

The problem is that the VTP, if implemented as written, would be the single biggest igniter of wildland fires in California, igniting over 100 every year. While all of these are supposed to be controlled burns, the sheer number of ignitions means that some, eventually, will go out of control and cause damage through simple bad luck. Moreover, the VTP will be the single biggest vegetation-clearer in the state. If the biological mitigation measures are implemented as written, VTP employees and contractors will become the single biggest danger to sensitive plants in California. If fire scientists turn out to be right about fire behavior, most VTP activities will have little or no effect on saving lives or property from wildfires, while spending hundreds of millions of dollars.

This is why we care about consequences. The proposed VTP is far too hulking a program to run it impulsively and not analyze its predictable consequences.

We also care because the VTP simply doesn't add up as written. If 23,000,000 acres are "appropriate for treatment" and 60,000 acres are treated every year, it would take almost 383 years for each appropriate acre to get treated once. That's simply pointless. Old growth chaparral can re-establish itself in well under 383 years. The State of California is less than half that age. If the VTP's goal is truly treat WUI areas, that takes repeated visits every few years. In any case, the VTP can only include a small fraction of those 23,000,000 acres. There's no utility in making the program area unworkably large, and there's especially no point in using the scale of acres appropriate for treatment as a way to evaluate alternatives. Most of the land is untreatable anyway.

Then there is the time scale of preparation. The VTP in its current incarnation has been around since 2013, and its roots go back to the 1990s. That is a long time, and a lot of analysis and project design could have been accomplished in that interval. Unfortunately, the DEIR is still focused on trying to avoid that analysis through a combination of pushing it forward to individual projects (contrary to CEQA), hiding motivations, writing that is padded, repetitive, vague, contradictory and obfuscatory, ignoring reality, and simple sloppiness. As a result, the process has wasted years. It is no closer than it was at the beginning to satisfying CEQA or satisfying people, like us, who will have to deal with the VTP's consequences.

Fortunately, there are workable alternatives:

- **Base the VTP's objectives and strategies on science.** We understand that many firefighters distrust science, so we propose that the term "science" be accepted by the VTP preparers as the stuff that turns out to be true whether anyone believes in it or not. The science that underlies the VTP has to be the things that keep firefighters and others from being burned, properties as safe as possible, and keeps the VTP from being an engine for extinction, type conversion of native lands to weed-fields, and a major vector for pests and pathogens. This is the type of science CNPS tries hard to promote, and we hope BOF will promote it too.
- **Create a program that implements those objectives and strategies, again using science.** This is common sense, although some may not see it that way. For example, the DEIR notes that "cost and time to meet environmental review requirements, surveying for and mitigating treatment effects to threatened and endangered species" are major impediments to treating 120,000 acres per year under the existing Vegetation Management Program ("VMP", p. 1-15). Oddly enough, agencies like the National Park Service somehow manage to get programs done within the constraint of environmental review requirements. **Is the problem in the requirements, or within BoF's system for meeting them?** This is an awkward, but critical question. If the problem isn't with the environmental review requirements, then the

VTP is based on a fundamentally wrong assumption, and BoF needs to look at other options for accomplishing its objectives.

- **Front-load the analysis into the PEIR, rather than pushing it down to projects.** This is what CEQA requires. CNPS agrees with the BoF that we need to treat at least some vegetation within 300 feet of homes. We also agree that, in some parts of the state (like some pine forests in the Sierra Nevada), we need more controlled burns. Were the VTP limited to projects that have broad-based support, it would be in place right now. Unfortunately, none of this analysis or consensus seeking went into the VTP or its DEIR. If it had, many of the problems we identify would not exist.
- **Set hard boundaries early.** The math for the VTP simply does not work, and to be blunt, we suspect that a PEIR that realistically tried to analyze the impacts to 23,000,000 acres of any project would be unworkably huge. We are also quite sure that any real VTP will be a small fraction of the size it proposes. We are also quite sure that there are projects that everyone wants done. It should not be as hard as the project proponents think to figure out where projects need to be done and are likely to be done, and to focus the VTP down so that it only works on those areas. Indeed, once the VTP has done that, it might be easier to expand it from a small area using supplemental EIRs, rather than trying to deal with an unworkably huge initial PEIR.
- **Follow CEQA exactly, and get the environmental analysts involved at the design stage, not at the end.** The point is to identify critical problems and avoid them through design changes, rather than solidifying the design and being left with a mess to mitigate. Environmental analysts earn their pay because they are, on an per-hour basis, substantially cheaper than lawyers, and often even cheaper than firefighters. Their best role is helping people spot and avoid predictable problems, rather than in covering up issues. Many southern California developers have learned this advice, and their projects get built without drama. We suggest that state agencies might find it useful as well.
- **Use a multi-year, overlapping planning process for each proposed project.** Since we can expect the climate to get more extreme in coming years (bigger storms, bigger droughts, more rapid switches between the two, longer heatwaves, higher temperatures, and so forth), planning for things like burn days for controlled burns is going to be an exercise in patience. Rather than trying to go from plan to treatment in a single year, we suggest using a multi-year process, like the existing VMP, so that areas can be surveyed by professional biologists, local information and buy-in can be sought, and plans can be made ready for the increasingly rare times when the weather cooperates. Moreover, overlap projects, so that some are being researched while some are being implemented and others are being evaluated afterwards. Rushing will not just make waste, it may ignite conflagrations, injure firefighters, kill people, and send species into extinction. **Is convenience really worth this price?**
- **Consider taking five years to create the next iteration of the VTP.** This is not for our convenience, but because so many things are changing right now:
 1. Fire behavior may be changing with climate change, and new types of wildfires may be emerging.
 2. California is still developing its climate change response by both limiting emissions and increasing sequestration, and it is clear to us that not enough people in California government understand its ramifications yet.
 3. Pests and pathogens are spreading rapidly, and new ones continually enter the state.

- **Rework the VTP so that BoF is a responsible agency, providing resources to projects where other jurisdictions' take the lead for CEQA analysis, rather be the lead agency for treatments. This may sound like a dereliction of duty, but if BOF does not have the resources to perform the VMP adequately, why would it want to be responsible for a poorly-vetted program that will be the single biggest ignition source for fires in California?**

The lesson of SDG&E is relevant here. After the 2007 Cedar Fire, which SDG&E accidentally started, it settled 2,500 suits for a total of \$2,400,000,000.⁵⁸ BOF will be held similarly responsible if a VTP prescribed burn goes out of control and causes another Cedar, Witch, Tubbs, or Thomas fire. If BOF does not have adequate resources to pursue the VMP now, it is difficult to imagine how much its resources and prestige will be damaged by a VTP-prescribed fire gone catastrophically wrong.

There are other factors at stake. Moody's Analytics, which rates municipal bonds, is starting to assess the credit risks to cities and state that are affected by climate change, and among those risks in the Southwest are wildfires.⁵⁹ California cities, counties, and the state itself could all see their bond ratings slashed after inept handling of wildfire risks, especially when the damage is self-inflicted by VTP-authorized projects, and responsibility is laid at the feet of BOF.

How much damage can the BoF do by rushing to implement a vague, sloppy program at this time? Our strong sense in reading multiple versions of the DEIR is that the people who wrote it really did not understand most of the issues they wrote about, nor did they get help from some really good in-house researchers, such as the fire researchers in BOF. We believe that the BoF needs to take several years at least to understand and embrace what the 21st Century has in store for it, rather than rushing to implement a bigger version of the 1980s-era VMP. We only wish that this process had started a decade ago, rather than now.

Unfortunately, none of these suggestions change our basic opinion, which is that this DEIR needs to be thoroughly rewritten and recirculated, and that the VTP as written is unworkable. Please take the time to do it right.

Please keep us informed of all future developments with this and related projects. Thank you for consideration of our comments and questions. Please keep us informed of all developments at conservation@cnpsd.org and franklandis03@yahoo.com.

Sincerely,



Frank Landis, PhD
Conservation Chair
CNPS San Diego

⁵⁸ <http://www.kpbs.org/news/2017/nov/30/regulators-vote-sdge-not-ratepayers-pay-2007-san-d/>, accessed 1/1/2017.

⁵⁹ <https://www.npr.org/2017/12/01/567843604/credit-rating-agency-issues-warning-on-climate-change-to-cities>, accessed 1/1/2017.



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May 31, 2016

Edith Hannigan, Board Analyst
Board of Forestry and Fire Protection
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Sacramento, CA 94244-2460
VegetationTreatment@bof.ca.gov

Re: Draft Programmatic Environmental Impact Report For The Vegetation Treatment Program of the California State Board of Forestry and Fire Protection

Dear Ms Hannigan and Members of the Board:

We appreciate the opportunity to comment on the Draft Programmatic Environmental Impact Report for The Vegetation Treatment Program Of the California State Board of Forestry and Fire Protection ("DEIR," "VTP," "BoF").

The California Native Plant Society (CNPS) works to protect California's native plant heritage and preserve it for future generations. CNPS promotes sound plant science and action against climate change as the backbone of effective natural areas protection. We work closely with decision-makers, scientists, and planners to advocate for well informed and environmentally friendly policies, regulations, and land management practices. CNPS support appropriate land management practices to sustain California native plant species, both on properties dedicated to that purpose (e.g. State, Federal, County, or local and private conservation parks or preserves) and other properties, private and public, where these species occur, especially where their continued survival helps provide a genetic buffer for their survival, should catastrophic events destroy them in protected areas.

We strongly agree that fire and invasive species are critical issues that must be actively managed. However, **we strongly recommends that this DEIR NOT be certified, due to lack of substantial evidence to support contentions and conclusions made throughout the document, due to substantial procedural lapses and irregularities, as well as the other issues we list below. We further contend that it cannot serve the purpose it was apparently designed for, and propose possibly more workable solutions for the Board's consideration.** Based on the DEIR, we have many questions, including:



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16. How the DEIR deals with its procedural lapses and irregularities
17. How the DEIR deals with native plants issues
18. How the DEIR deals with climate change
19. Why the DEIR contains so many misstatements based on scientific papers, reliance on anecdotal evidence, and avoidance of scientific advice?
20. Why the DEIR contains so many internal contradictions.

The following groups of questions are based on the concerns summarized above. We formally request that the BoF fully consider and respond to our questions in an effort to improve the Draft DEIR by clarifying, among other things, its purpose, rationale, and management structure.

We note that this letter contains similar material to the San Diego CNPS (CNPSSD) comment letter on a previous version of the DEIR, sent February 15, 2013. That letter also included a formal request to the Board of Forestry to respond to the questions that letter raised. The BoF never responded to that request, which is unfortunate, as many of those questions were specifically designed to help the BoF write a better DEIR. As a result, the current Report repeats many of its predecessors' mistakes, and the same criticisms still apply.

Background

California is inarguably the most complicated state in the US, whether the complexity is biodiversity (California is a global biodiversity hotspot⁶⁰), socio-political, geographic, geologic, or in the massive infrastructure of aqueducts, power grids, farms, forests, and cities that allow over 38,000,000 people to live here. Worse, climate change is affecting everything, from water availability to fire behavior. Writing a programmatic EIR (PEIR) is about analyzing the predictable, cumulative impacts of a program. Writing a PEIR for a program that proposes a diverse set activities across almost one-fifth of California is a truly titanic undertaking that the writers of the DEIR did not really engage in.

The main body of the DEIR is only 759 pages long, and it contains multiple repetitions. To show why this is a problem, compare it to the natural resources management plan and Mitigated Negative Declaration for 1,092 acres of urban park in San Diego, which was 159 pages long⁶¹. The DEIR, supposedly an analysis of a long-term program that proposes to treat up to 22,000,000 acres over decades, is barely five times longer than a routine local management document that deals with a few miles of trail. There is no way the DEIR can provide adequate analysis in so short a length, and it does not. The scale of the DEIR far too small for the VTP. Unfortunately, the issues do with the DEIR do not stop at its short length.

1. With respect to CEQA, we noticed numerous procedural lapses and irregularities:

1.A. Why is the DEIR written with such lack of detail? It certainly is not because it is a PEIR. According to CEQA, all EIRs, whether programmatic or not, need to contain a detailed analysis, and PEIRs are supposed to analyze impacts "as specifically and comprehensively as possible."⁶² Indeed, the role of a PEIR is two-fold: it includes "more exhaustive consideration" of impacts, mitigation, and alternatives than an individual project EIR could include, and it

⁶⁰ Myers, N., Mittermeier, R. A., Mittermeier, C. G., da Fonseca, G. A. B., and J. Kent. (2000). Biodiversity hotspots for conservation priorities. *Nature*, 403(6772), 853-858.

⁶¹ City of San Diego (2015). Carmel Mountain/Del Mar Mesa Natural Resources Management Plan and Trail System..

⁶² CEQA Guidelines, 15168(a), (c)(5)

considers cumulative impacts⁶³. Projects are supposed to "tier" off the PEIR, depending on and supplementing its analysis only, not doing the work that it was supposed to contain. CEQA further notes that "[t]iering does not excuse the lead agency from adequately analyzing reasonably foreseeable significant environmental effects of the project and does not justify deferring such analysis to a later tier EIR or negative declaration."⁶⁴ Also, "[d]esignating an EIR as a program EIR also does not by itself decrease the level of analysis otherwise required in the EIR."⁶⁵ Programmatic EIRs must contain "extensive, detailed evaluations" of a plan's impacts on the existing environment. The DEIR's reliance on future, project-level environmental review is contrary to CEQA's policy of favoring early identification of environmental impacts. CEQA does not allow agencies to defer analysis of a plan's impacts to some future EIR for specific projects contemplated by that plan. Finally, as we understand it (we are not lawyers) the courts have ruled that environmental review must take place before project approval, and specifically that, in an programmatic EIR, tiering" is not a device for deferring identification of significant environmental impacts that the adoption of a specific plan can be expected to cause."⁶⁶ Given that the DEIR does exactly the opposite of what CEQA policy states and courts support, why was it written that way? Would it not have been better to follow CEQA and relevant case law?

1.B. What exactly is the Proposed VTP, and what are its boundaries in space and time?

Here is what we do know about the VTP, from the DEIR:

- (p. E-6) "The total land area where the vegetation formation assemblages are appropriate for a ...treatment is approximately 22 million acres, or 71 percent of the SRA [State Responsibility Area]."
- Maps in Figure ES-1 (pE-7) make it clear that many treatment acres are outside the SRA. Other maps (e.g. Figure A1-1, p. A-2) show that some of the "treatable acres in the VTP" are either in Local Responsibility Areas or Federal Responsibility Areas, although all maps in the DEIR are at too small a scale to see boundaries, a fact emphasized by the "blowup" sections on some to show the presence of undescribed and unanalyzed details (e.g. 2.2-9, p. 2-20).
- The VTP seeks to treat 60,000 acres per year, with 231 projects per year averaging 260 acres each (p. 2-35). This is huge (60,000 acres is 93.75 square miles, roughly the size of Oakland and Berkeley combined), but it is not clear if it is appropriate. For example, if every one of the 22,000,000 acres " appropriate for a treatment" were to be treated just once, it would take almost 367 years (22,000,000 acres/60,000 acres per year), which is clearly inadequate for any kind of sustained vegetation management. Clearly the VTP actually intends to treat a small subset of land " appropriate for a treatment, "but the actual parcels to be treated are not discussed, mapped, or analyzed, and may not be determined yet.
- The VTP breaks California down into nine ecoregions; it proposes three types of fuel management treatments, at the Wildand Urban Interface (WUI), on fire breaks, and as ecological restoration; it proposes a menu of treatment activities including controlled burns (supposedly half of the treatments), grazing with non-native herbivores, mechanical clearance, clearance by hand, and herbicide application. Just a simple combinatorial analysis, 9 ecoregions times 3 management treatments times 5 treatment activities, leads to

⁶³ CEQA Guidelines, 15168(b)(1)-(2).

⁶⁴ CEQA Guidelines 15152(b)

⁶⁵ CEQA Guidelines 15160.

⁶⁶ Stanislaus Natural Heritage Project v. County of Stanislaus (1996)

135 different scenarios, even without adding further very necessary complexities. Analyzing the impacts of over one hundred scenarios is an enormous task, one that is impossible in a document that is only 759 pages long. Indeed, the DEIR does not grapple with this full complexity at all, so we have no idea exactly what will happen when, where, why, or how often.

There is a problem with this approach: as we understand it, the courts have ruled that "[a]n accurate, stable and finite project description" in an EIR is necessary to analyze its impacts, and a "truncated project concept" violates CEQA.⁶⁷ While exhaustive detail is unnecessary, CEQA mandates that EIR project descriptions should be sufficiently detailed, and sufficiently accurate, to permit informed decision making.⁶⁸

Given that the DEIR does exactly the opposite of what CEQA policy states and courts support, why was the DEIR written that way? Would it not have been better to follow CEQA and relevant case law? What exactly is the VTP?

1.C. Where is the program map, and what parcels are subject to the VTP? According to CEQA⁶⁹: "The precise location and boundaries of the proposed project shall be shown on a detailed map, preferably topographic. The location of the project shall also appear on a regional map." While numerous maps are supplied, they are labeled as responsibility areas or as modeled areas that might be treated. We could find no hard-line map.

- How can local impacts be analyzed if the time and place affected by any program is not specified? How can cumulative impacts be analyzed if there is insufficient local data on where and when the program occurs, and what is affected?
- How can landowners determine whether they or neighboring properties are susceptible to the VTP, in case they want to take action?
- Why does the DEIR show maps that are insufficiently detailed for any landowner to determine whether they are subject to the proposed program or not?

Environmental impacts must, by definition, have an environment in which to occur. Phrasing the acreage as "appropriate for treatment" is insufficient. If a parcel is considered eligible for the Program, then the Program has a boundary, and all parcels within that boundary must shown on maps, to circumscribe the environment impacted by the Program.

There is a second map issue, which can be seen clearly in Figure ES-1, but which is repeated throughout the DEIR: **Why do the maps of the State Responsibility Area, Treatable Vegetation Formations, and Treatable Acres in the VTP not agree? It appears that there are quite a few acres (fire breaks?) that occur in the deserts and other areas outside the State Responsibility Area. Is CALFIRE responsible for these?**

- **Why is vegetation that is outside the State Responsibility Area discussed but not mapped?**
- **Why are there fuel breaks that appear to be in the Federal Responsibility Area (compare Figure A-1.1, page A-2, and A-1.3, page A-5)? If these areas are under Federal Responsibility should the DEIR not also be an environmental impact statement, and EIR/S?**

⁶⁷ Sacramento Old City Association. v. City Council (1991), Rio Vista Farm Bureau v. County. of Solano (1992)

⁶⁸ CEQA Guidelines § 15124

⁶⁹ *ibid.*

1.D How does the DEIR deal with thresholds of significance? CEQA presumes that agencies will use thresholds of significance as a tool for determining the significance of a project's possible impacts.⁷⁰ What are the thresholds of significance for biological impacts in the DEIR? We could not find them, and this causes problems throughout the document. For example, the DEIR states that the VTP would have a significant impact if it contributes to the substantial, long-term decline in the viability of any native species (p. 4-115). Unfortunately, there is no threshold to determine what substantial, long-term, and viability mean in order to determine when a significant impact has occurred. Without thresholds, there is no mechanism for determining whether impacts have been mitigated to below the level of significance, and thus the analysis is incomplete.

1.E. Why does the DEIR defer analysis of so many impacts and creation of mitigations until after it is approved? CEQA requires EIRs to be detailed, complete, and contain a sufficient degree of analysis to let the public and decision-makers understand the proposed project's adverse environmental impacts, so that corrections can be made and an informed decision can ultimately be undertaken.⁷¹ As we understand it, the courts repeatedly have ruled against deferring analysis until after the EIR is approved.⁷² Similarly, EIRs are generally not allowed to defer evaluation of mitigations.⁷³ Why does the VTP DEIR resort to these tactics so often?

1.F. Why does the DEIR inadequately analyze so many impacts from the VTP? Under CEQA, "[a]n EIR shall identify and focus on the significant effects of the proposed project."⁷⁴ As we understand it, the courts have ruled against merely incorporating the conclusions of an analysis, and that an EIR must contain facts and analysis as well.⁷⁵ We deal with one glaring botanical example of this problem below in 2.A., but it is ubiquitous throughout the DEIR. Why does the DEIR resort to inadequate analysis so often?

1.G. Why does the DEIR contain so many mitigation measures that are vague, unenforceable, and inadequate? CEQA requires all EIRs to not only identify significant impacts but also to find ways to mitigate them below the level of significance as much as possible.⁷⁶ Furthermore, the mitigation measures must be enforceable.⁷⁷ As we understand it, the courts have ruled against mitigation measures that are vague and unenforceable.⁷⁸ Why does the VTP DEIR resort to these tactics so often? Where is the detailed, complete, and sufficient analysis in the DEIR to allow anyone to conclude that the VTP will not have significant individual and cumulative impacts?

1. H. Why are the Objectives so badly defined?

⁷⁰ CEQA Guidelines § 15064(a), 15064.7

⁷¹ CEQA Guidelines § 15151.

⁷² No Oil, Inc. v. City of Los Angeles (1974), Sundstrom v. County of Mendocino (1988), Gentry v. City of Murrieta (1995).

⁷³ CEQA Guidelines § 15126.4(a)(1)(B)

⁷⁴ CEQA Guidelines § 15126.2(a)

⁷⁵ Citizens of Goleta Valley v. Board of Supervisors (1990)

⁷⁶ Public Resources Code, §§ 21002, 21061.1; CEQA Guidelines §§ 15021(b), 15364

⁷⁷ Public Resources Code, § 21002; CEQA Guidelines §§ 15002(a)(3), 15126.4(a)(2)

⁷⁸ Anderson First Coalition v. City of Anderson (2005)

- **Aren't Objectives 2, 3, and 4 subsets of Objective 1?** Objective 1, "Modify wildland fire behavior to help reduce losses to life, property, and natural resources,"(p. E-3) includes objectives 2-4 so one can argue that 2-4 are redundant. These objectives perhaps refer instead to the three treatment activities respectively deal with fire in the wildland urban interface ("WUI"), fire breaks, and "ecological restoration," although not only are they not named as such. In any case, they are, at best, sub-goals of #1. Why separate them out?
- **Can the VTP accomplish Objectives 2 and 3?** Objective 2 (p. E-2) states: "[i]ncrease the opportunities for altering or influencing the size, intensity, shape, and direction of wildfires within the wildland urban interface," and Objective 3 (p. E-3) states: "Reduce the potential size and total associated suppression costs of individual wildland fires by altering the continuity of wildland fuels." If the average VTP project is 260 acres, less the half a square mile, and embers can travel up to 12 miles (see section 4 below), then are VTP projects at the right scale to make any meaningful difference? The VTP needs to make clear what kinds of fires it envisions protecting against, because these two objectives seem to be scaled too small to control the wind-driven fires that cause a vast majority of destruction in California.
- **What is meant by Objective 4?** Objective 4 (p. E-3) is to "[r]educe the potential for high severity fires by restoring and maintaining a range of native, fire-adapted plant communities through periodic low intensity treatments within the appropriate vegetation types." While this might make sense in, for instance, ponderosa pine forests that have become overgrown with saplings due to fire suppression, it appears that the majority of controlled burns are aimed at shrub-dominated vegetation, e.g. chaparral (p. 4-427). As both the California Chaparral Institute and CNPSSD have argued repeatedly, there is too much fire in chaparral, especially in southern California. The simplest way to improve this fire return interval is to not burn in chaparral for the next century or so. Both Objective 4 and the VTP itself need to become consistent and transparent about what they intend to burn, where, and why. CNPSSD does not disagree that some plant communities, such as some ponderosa pine stands in the Sierra Nevada, could benefit from controlled burns. These need to be called out so that the impacts of treating them can be analyzed. Why were they not identified in this DEIR?

1.I. Why does the Alternatives Analysis depend so much on acres treated? One major issue here is that treating 60,000 acres per year is not one of the official objectives of the VTP, so it should not be used to judge alternatives. Clearly, however, it is the main *unofficial* objective. Nonetheless, the goal of 60,000 acres per year with unlimited potential for expansion to 22,000,000 acres is problematic, because it means that areas get treated once per century or once per 366 years, as noted above. Things like fire breaks only work if they are cleared regularly, ideally every year. However, limiting the VTP to acres that could be cleared every year would limit the program to something as small as 60,000 high-value acres (so that each acre could be cleared once every year). Any realistic VTP should be something in between 300,000 and 22,000,000 acres (probably less than a few million acres, as even projects in a 1,200,000 acre program would only be visited once every 20 years). That requires a much reduced project, so that some sites are visited frequently, some once. Regardless, any argument that downgrades alternatives because they limit the acreage treated is doomed by logistics and math. It is a criterion based on greed rather than analysis or logistics. Why use it? We strongly suggest that the BoF consider how much they truly need to work on, and make that the area of the VTP. We also strongly suggest that, if acreage treated is so important, that the

VTP make that the first official objective, and stop trying to hide this fundamental motivation for the VTP.

2. With respect to native plant issues, we noticed many problems. The treatment of native plants issues is riddled with issues, starting with the trivial (CNPS is repeatedly referenced in the DEIR, but the acronym is not spelled out nor included in the front glossary). In addition, the plural of plant is not vegetation, and vegetation has different issues than plants, despite the attempt of the DEIR to bundle them together), and going rapidly to the seriously non-functional.

We have the following questions about how native plant issues were treated in the DEIR:

2. A. Why were Standard Project Requirements (SPRs) BIO-1, BIO-2, and BIO-3 not carried out in preparation of the DEIR itself, rather than as a task to be carried out in subsequent analyses? *The entire botanical analysis* is the following statement: "[i]mpacts to botanical resources were analyzed by examining special status plants and communities listed in the California Natural Diversity Database (CNDDDB) for each bioregion."**How does this meet CEQA Guideline 15125(c): "The EIR must demonstrate that the significant environmental impacts of the proposed project were adequately investigated and discussed and it must permit the significant effects of the project to be considered in the full environmental context[?]"**

Note that CEQA requires this analysis in all EIRs. It is not option, nor, as noted above, is it allowable to forego this impacts analysis until after the VTP DEIR is approved.

- Where is the detailed evidence that this analysis was ever done?
- What were the detailed results of this analysis?
- What can we check to determine that this analysis was done properly, so that we can help fix any deficiencies?
- What were the impacts to populations of sensitive species? How many will be lost? How many will need to be transplanted or replanted? How many new populations were discovered?
- How are the impacts to each species to be mitigated below significance?
- What are the cumulative impacts?
- How are they to be mitigated below the level of significance?
- Are there unavoidable impacts? Where is the declaration of over-riding consideration for them?
- How did impacts to sensitive plants and the mitigation thereof influence the design of the VTP?

The current version of the DEIR has the dubious distinction of containing even less information about California's native plants than did its predecessors. Note that not all of California's plant species are affected by the VTP. Insular species like the extremely rare *Cercocarpus traskiae* will never be subject to vegetation treatment. Nor will a wide selection of beach dune plants (e.g. *Acmispon prostratus*, *Phacelia stellaris*, and *Nemacaulis denudata* var. *denudata*) that mostly occur on urban dunes. The fundamental point is that the Program does not affect all listed plants, it affects a subset of them. Why was this subset not identified?

2.B. Why is the biological description of the project area so incomplete? 4.2.1.2, the Biological Setting and Concerns, is a description of the "nine ecoregions" used in the analysis

(p.4-85-4-109) is not useful for environmental analysis. It does not describe what is important, it does not describe what is impacted, it does not use scientific names, but it does lump together plants with radically different fire ecologies and pretends they are equivalent. Indeed, it does not describe concerns or in any way highlight which bits of information are actually important. (For example, the Sierra Nevada is described as having "bold topography," rather than by the elevation range of any vegetation type or species mentioned).

According to CEQA, "[a]n EIR must include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation is published."⁷⁹ This includes the plants and animals within the project's boundary. Section 4.2.1.2. fails to do this. To pick one concern that is left undescribed, we learn on page 4-427, in the climate change section, that the majority of the 30,000 acres subject to controlled burns will occur in "shrub dominated vegetation." Despite the presence of BIO-5, it appears that the VTP specifically targets chaparral, but this is not mentioned in the Biological Setting and Concerns. Why is it not mentioned?

Worse, the DEIR contradicts itself on the utility of ecoregions. For example, it notes (p. 4-79) that "evaluating impacts at the bio-regional scale allows for a reasonable analysis of the foreseeable impacts without being neither so large an area as to dilute the impacts or too small an area to magnify the impacts," but later (p. 4-121) states that "[i]n order for an effect to be considered significant at the bioregional level, the species in question would have to be impacted enough to meet one of the Significance Criteria stated above. The amount of habitat that would have to be adversely modified to cause a substantial adverse effect has not been scientifically determined for most species and is likely unknowable until the threshold has been crossed and the species is in jeopardy." In other words, despite the importance of threshold analysis in CEQA as noted above, this document appears to regard threshold impacts as unknowable, at least at the bio-regional scale. Why was this scale used? It is also very unclear what the "Significance Criteria stated above" are, since this is the first use of the term "Significance Criteria" and other uses refer to over issues. What are they?

2.C. Why is SPR BIO-1 thought to be sufficient or workable? To us, SPR BIO-1 is unworkable, as it does not cover sensitive species on the CRPR list (note that the CNPS list has been the California Rare Plants Rank list for many years now), nor does it cover species protected by cities and counties. As written, this SPR fails to cover hundreds of sensitive plants. Moreover, the DEIR misses the fact that List 2 was split to List 2A and List 2B, to parallel Lists 1A and 1B. This SPR must be rewritten to conform to current practice and terminology, as it is obsolete as written. At the very least, the definition should follow CDFW current practice. We also note that counties like San Diego and Ventura have their own lists, which largely, but not entirely, match with those maintained by the state. The VTP should honor local lists and local practice that reflect local expertise and local needs.

2.D. Why does SPR BIO-2 designate the Project Coordinator to conduct a field review of any proposed project? What qualifications demonstrate that the Project Coordinator is competent to perform field identifications? Where is this competency requirement specified in the VTP? How will qualifications be assessed? The problem is that, unless the Project Coordinator is a qualified botanist, (s)he will lack the ability to determine how accurate the CNDDDB or any other database is, will not know when or how to survey (the excellent

⁷⁹ CEQA guideline § 15125

guidance from CDFW and CNPS is inadequate without real training), will not know how to collect specimens, nor where to send them in problematic cases, nor how to deal with any truly complex issues.

Another problem here is that all databases are insufficient. For example, the CNDDDB states, "[W]e cannot and do not portray the CNDDDB as an exhaustive and comprehensive inventory of all rare species and natural communities statewide. Field verification for the presence or absence of sensitive species will always be an important obligation of our customers."⁸⁰ Trained botanists know this. Untrained bureaucrats do not.

It is routine to find new populations of sensitive species or even new species in areas (such as large, old ranches) that were never or rarely surveyed. The author of this letter (Dr. Landis) found what eventually turned out to be a new species of *Eriastrum* in 2007, on a wind farm project in the Tehachapis. The San Diego Plant Atlas, since 2003, has found over 300 new county records, 10 state records, and 2 new taxa.⁸¹ Tejonflora.org documents the ongoing floristic survey of the Tejon Ranch, and the new species that are being described from there. A new species of cholla was described in Riverside and Imperial County in 2014⁸², and an undescribed new manzanita species will be published in June. *Carex cyrtostachya*, described in 2013, is found in Butte, Yuba, and El Dorado Counties,⁸³ and it is a CRPR List 1B species that may not yet be in CNDDDB. The same is true for the Sierran *Carex xerophila*, published in 2014,⁸⁴ and for *Calystegia vanzuukiae* from El Dorado County, published in 2013.⁸⁵ According to an informal, one-week email and Facebook survey of CNPS botanists undertaken in the last week of May 2016, undescribed new species in process of identification were reported to exist in Marin, Tehama, Butte, Shasta, and Santa Barbara counties, and more will certainly be found as large, old ranches and remote areas are surveyed for development, wind, and solar projects, and probably for the VTP. Experienced botanists know how to deal with this issue. Untrained bureaucrats do not.

The VTP provides no guidance as to the qualifications of Project Coordinators, nor does it specify when or how long they should spend in the field in each project, going against the advice of both CDFW and CNPS cited in the DEIR. In any case, CNPS always strongly suggests that surveys be left to qualified botanists with experience in the local area of any proposed project, that surveys should take place when the plants are most likely to be alive and identifiable, and that qualified surveyors be allowed adequate time for their work, and not forced to do a cursory, 15 minute visit where they do not get out of the vehicle. What is to stop Project Coordinators from doing cursory drive-by visits and not even setting foot on project sites? Why should drive-by surveys be considered acceptable under CEQA?

⁸⁰ http://www.dfg.ca.gov/biogeodata/cnddb/cnddb_info.asp

⁸¹ <http://sdnhm.org/science/botany/projects/plant-atlas/>, accessed 5/26/2016

⁸² Baker, M. A., & Cloud-Hughes, M. A. (2014). *Cylindropuntia chuckwallensis* (Cactaceae), a New Species from Riverside and Imperial Counties, California. *Madroño*, 61(2), 231-243.

⁸³ Zika, P.F., L.P. Janeway, B. L. Wilson and L. Ahart (2013) *Carex cyrtostachya* (Cyperaceae), a new species of sedge endemic to the Sierra Nevada of California. *Journal of the Botanical Research Institute of Texas* 7:25–35.

⁸⁴ , Zika, P.F., L. P. Janeway and B. L. Wilson (2014) *Carex xerophila* (Cyperaceae), a New Sedge from the Chaparral of Northern California. *Madroño* 61(3):299-307.

⁸⁵ Brummitt, R. K. and Namoff, Sandra M. (2013) *Calystegia vanzuukiae* (Convolvulaceae), a Remarkable New Species From Central California. *Aliso* 31(1)

2.E. How is SPR BIO-5 actually supposed to protect anything? Critical terms like "type conversion," "median fire return interval," and "old growth" are left undefined, their determination at the mercy of the Project Coordinator whose qualifications are also left undefined. Moreover, these areas are to be protected for "aesthetics, wildlife, and recreation," not for sensitive plants, lichens, or even the reproduction of species that take decades to reproduce. Why should mountain bikers desiring new trails be privileged over the continued existence of last-of-their-kind stands? Additionally, local experts like the California Chaparral Institute, numerous local land management groups, and scientists from both academia and other agencies are left out of the decision loop. Why are they excluded? Finally, this SPR needs to be extended to all old growth vegetation throughout the state, because there is very little left of any of it. As the author (Dr. Landis) is finding, working in an urban stand of old growth chaparral, old growth is often home to other poorly known or even undescribed species. SPR BIO-5 is unworkable as written. It should incorporate the analysis of impacts to old growth stands directly into the DEIR, rather than forcing it onto a single Project Coordinator who only needs to make a single site visit. Why was this not done?

2.F. Why use the outdated WHR, when so much more useful vegetation information is available? California's flora is immensely complex, but the VTP analysis oversimplifies it by shoehorning all species into trees, shrubs, and herbs. No knowledgeable fire fighter would assume that ponderosa pine (*Pinus ponderosa*) and white fir (*Abies concolor*) have the same fire ecology, but they are all lumped together as "tree-dominated" vegetation (e.g. Table 4.2-14) for the purposes of describing the vegetation in the Sierra Nevada.

Considering that CDFW and CNPS have for decades been cooperating to map the vegetation of California and have created two editions of *The Manual of California Vegetation* ("MCV"), it really is sad to see the 1980s Wildlife Habitat Relationships system used by any state agency. The MCV contains a wealth of information on fire ecology. While it is admittedly incomplete, even incomplete it is a far more complete and more useful as a mapping system than is the WHR. We strongly recommend that the BoF use the MCV as its primary vegetation mapping tool and incorporate the fire ecology information therein into the analysis of programs like the VTP.

2.G. How does the VTP avoid becoming a major vector for pests and pathogens? CNPS has found that non-native, pathogenic water molds (genus *Phytophthora*) are spreading through the state and into wildlands through nursery-mediated infection of plants for restoration and landscaping. In 2015 we implemented a policy to try to stem the spread, at least through native plant nurseries.⁸⁶ The genus *Phytophthora* may be unfamiliar, but *Phytophthora ramorum* (the cause of Sudden Oak Death) is depressingly familiar, as is the Irish potato blight (*Phytophthora infestans*) that caused so many famines. Southern California is so far free of Sudden Oak Death, but it faces beetle invasions, from gold-spotted oak borer and polyphagous shot-hole borers. Native pine boring beetles have caused major tree die-offs elsewhere in the state. All of these pests and pathogens can be readily transported by carelessly handled wood, litter, untreated or insufficiently composted green waste, uncleaned equipment, carelessly grown nursery stock, and so on. Proper sanitation and quarantine are necessary to keep vegetation treatment activities from spreading pests and pathogens throughout the state.

⁸⁶ http://www.cnps.org/cnps/archive/phytophthora_policy_2015.pdf

Unfortunately, this was not addressed in the DEIR. As a result, the VTP can be expected to cause substantial individual and cumulative impacts as workers inadvertently spread pests and pathogens on uncleaned equipment and by removing dead, but still infected, plant material. Even leaving some infected material might be problematic, as the pest or pathogen could simply reinfest the area from whatever is left behind.

What is the VTP going to do about proper sanitation and quarantine? What are the impacts of doing these, or conversely, of not doing them? How are these impacts to be mitigated, individually and cumulatively?

3. There are serious climate change issues as well. As mentioned in the previous section, CNPS is a champion of California's native plants and of vegetation dominated by native plants. Because we were successful co-plaintiffs in the recent case *Center for Biological Diversity et al. vs. California Department of Fish and Wildlife and Newhall Land and Farming Company* ("Newhall Ranch ruling"), and because we are increasingly having to deal with climate change issues to protect native plants, we now also advocate on climate change issues. In our opinion the treatment of plants and the analysis of climate change impacts in the DEIR have substantial issues. We have a number of issues with the climate change impacts discussion (section 4.14, pp.4-408 to 4-434).

3.A. Why was the analysis of climate change impacts performed as it was? As we understand it, the relevant details of the climate change impacts analysis are as follows:

- The time frame of analysis is one year. Page 4-424: "Because the generally accepted time frame for evaluating project emissions is the year of project implementation with emissions generally reported as MT/year, this is also the time frame chosen for this analysis. This will conservatively estimate the VTPs impacts because the benefits of future vegetative growth as the site recovers and the reduction of wildfire risk to the treatment area and surrounding landscape is not taken into account."
- The DEIR assumes that, of the 60,000 acres proposed to be treated every year, 30,000 acres will be burned, 20% mechanical treatments (p.4-427), 10% manual treatments (p.4-428), and grazing non-native herbivores and spraying herbicides are only accounted for as trip miles, with herbivore methane emissions based on a sheep herd of 450 animals as the only model (p.4-428). Thus, only 50% of it burns.
- Conclusion: there are less than significant impacts to greenhouse gas emissions (p. 4-429): "The VTP would create approximately 298,745 MT/year of CO₂e, less than the 510,030 MT/year CO₂e emissions created by a similar size wildfire burning."

The conclusion does not follow from the analysis. It is only relevant if the 60,000 acres treated would have burned in the same year it was treated. This is intrinsically unlikely. 60,000 acres treated/22,000,000 acres in the VTP is 0.272%. According to Figure 1.1-1, ("annual area burned in California 1950-2010", p. 1-3), during the worst wildfire year, 2007, only 1,400,000 acres burned. This is approximately 6.3% of the 22,000,000 acre VTP area. Even during the worst year in recent history, over 93% of the state went unburned.

What are the chances that the area treated by the VTP will burn in the same year, even during a historically bad fire year? If the treatment and the fire are independent events, the chance is much less than one percent. Still, one might argue that the BoF is very good at predicting where fires will occur and putting their treatments there, so the chance is much higher. Unfortunately

for this argument, the model used to predict fire hazards in the DEIR has been tested as a predictor for home loss during fires, and it contributed <5% to the model that predicted which homes would burn.⁸⁷ According to this test the model used in the DEIR is very bad at predicting where fires will occur in a particular year, as are most models. Fire occurrence has a large random component. Other research in southern California showed that, over 28 years (not one year), 23% of fuel treatments intersected fires in the study area, which means that 77% of fuel treatments went unburned over 28 years, in an area notorious for large wildfires.⁸⁸ Even in Southern California, a fire treatment area will most likely never be touched by a fire in a generation.

The upshot is that one cannot analyze the greenhouse gas impacts from a vegetation treatment as if the treatment displaces a similarly sized wildfire on the same spot in the same year. Absent truly improbable events, the treatment will not intersect any fire during the year of analysis. Therefore, greenhouse gas emissions from the treatment will not replace or reduce emissions from a fire that would have burned the same area. Instead, they will be emitted in addition to whatever wildfires occur that year.

Clearly, the analysis of climate change impacts is incorrect, and the VTP will cause substantial, unmitigated greenhouse gas emissions. This section needs to be redone, the individual and cumulative impact of greenhouse gas emissions from the VTP need to be analyzed, and real mitigation measures need to be proposed.

Moreover, the argument used in this section looks similar to the argument that the California Supreme Court ruled was invalid in the Newhall Ranch ruling. We therefore strongly suggest that BoF read that ruling, and incorporate it into designing a better analysis of greenhouse gas impacts and mitigations.

3.B. Why is the basic fire science wrong? In section 4.14.1.2.3.1 "Wildfire versus Prescribed Fire Emissions," the EIR makes the incorrect assumption that carbon dioxide emissions from a wildfire are equivalent to emissions of pollutants caused by inefficient burning. This is incorrect. The basic combustion reaction is that hydrocarbons + oxygen → carbon dioxide + water. The more efficiently this reaction runs, the more carbon dioxide is produced. Inefficient combustion produces soot, particulates, and other air pollutants. Decreasing combustion efficiency increases particulate and other pollution. Increasing combustion efficiency increases carbon dioxide production. There is no way to escape producing some pollutant by manipulating an fire. As presented in the analysis, highly efficient controlled burns should produce more carbon dioxide emissions, not less. Carbon dioxide emissions thus cannot be controlled by the same processes that control air pollution from fires. They have to be managed separately, either through not burning or through carbon sequestration. Section 4.14 of the EIR needs to be rewritten to reflect this basic reality, as does SPR CC-1, CC-3, and CC-4.

3.C. Why are BIO-5 and BIO-6 mentioned in SPR CC-2 (p.4-434)? These two SPRs have nothing to do with carbon sequestration. The DEIR does need SPRs to deal with carbon sequestration, but it is not CC-2. This SPR needs to be totally rewritten to be useful.

⁸⁷ Syphard, A. D., Keeley, J. E., Massada, A. B., Brennan, T. J., and V. C. Radeloff, V. C. (2012). Housing arrangement and location determine the likelihood of housing loss due to wildfire. PLoS One, 7(3), e33954.

⁸⁸ Syphard, A. D., Keeley, J. E., and T. J. Brennan, (2011). Comparing the role of fuel breaks across southern California national forests. Forest Ecology and Management, 261(11), 2038-2048.

3.D. What is the relationship between the VTP and CALFIRE's responsibility for sequestering carbon? Since CALFIRE has responsibility both for administering the VTP, which appears to be only about removing plants, and for carbon sequestration through planting plants, there needs to be an analysis of the impacts of these two programs on each other. After all, they are in fundamental conflict: fire protection seeks to remove plant matter from the landscape, while sequestration seeks to add it to the landscape. One might expect close coordination between these two programs and how they impact each other, yet there is no mention of it in the DEIR. Specifically, the DEIR needs to analyze:

- How will the VTP sequester the CO₂e it produces (see 3.C. above)?
- How will mistakes and accidents increase CO₂e emissions from the VTP?
- What is the rate or probability of CALFIRE controlled burns escaping control and becoming wildfires?
- How are escaped fires controlled, and how much do they burn relative to the proposed size of controlled burns?
- How are impacts from escaped burns assessed individually and collectively across the VTP?
- What happens if an escaped wildfire impacts a carbon sequestration site?
- Can CALFIRE's carbon sequestration programs be used as mitigation for the greenhouse gas impacts generated by the VTP?

3.E. Why did the DEIR ignore the method suggested in the California Chaparral Institute's response to the Notice of Preparation from October 24, 2015? That method would have avoided at least some of the issues raised in 3.A. and 3.D.

4. Why is the DEIR contain so many misstatements based on scientific papers, reliance on anecdotal evidence, and avoidance of scientific advice? We fully support the California Chaparral Institute's comments in their letter of May 24, 2016 ("CCI letter"). Some points we find problematic:

- **Why does the DEIR misquote the science?** The CCI letter contains ample documentation of this, including one scientist denying that his paper said what was implied in the DEIR. We strongly agree with the assessment, and ask the same.
- **Why does the DEIR rely on anecdotal evidence?** This is particularly apparent in the definition of the WUI, which is defined in the DEIR solely in reference to how far embers can fly. As noted in Appendix A of the CCI letter, there is no good science to support 1.5 miles as anything other than a polite political fiction, chosen from overheard conversations at a conference, based on what others might find acceptable. There is no reality behind this anecdote. According to the CCI letter and the references therein, the 2009 Bunyip Ridge fire in Australia projected embers 20 km (about 12 miles), while the ongoing Ft. McMurray fire is reported to have projected embers 10 km (about 6 miles). 1.5 miles is insufficient to stop all embers during catastrophic wildfires.

Worse, 1.5 miles is a silly number. If VTP projects are supposed to clear 260 acres on average, that is 11,325,600 square feet, and a 1.5 mile wide WUI clearance would be 7,920 feet wide. If one does the math, a 260 acre VTP clearance would create a 1.5 mile wide fire break that is 1,430 feet long, and such a firebreak only works if it is pointed directly at the oncoming fire, and somehow the fire doesn't burn down the uncleared sides of the fire break. Conversely, there is

increasing evidence for the utility of 300 feet of fire clearance around structures, and a 260 acre VTP project could be used to create 7.15 linear miles of fire break 300 feet wide. Choosing 1.5 miles at worst leads to silly projects. Why use it at all? Why not try approaches that appear more useful based on repeatable tests of evidence?

5. Why are there so many contradictions within the DEIR? It is riddled with them, and they are non-trivial.

- One example, from page E-3: "California's tremendous diversity in vegetation translates into a similar diversity in fuel types, with a resultant variation in fire behavior throughout the state. Considering statewide variations in fire behavior and the need to characterize it at a workable scale for a statewide environmental analysis, the vegetation of California is condensed into three main groups based on the distinct fire behavior each group exhibits. These groups can be classified as tree dominated, grass dominated, and shrub dominated vegetation formations." Really? Would any firefighter consider white fir and ponderosa pine to have the same fire ecology? How about other pairs of trees and shrubs that have highly divergent fire ecology: sequoia and redwood, lodgepole pine and whitebark pine, chamise and scrub oak? Clearly, the DEIR failed to usefully simplify the complexity, so we are left concluding that the original statement about diversity in fuel types was correct, and that the analysis failed to account for it at all.
- **The contradictions become more problematic when dealing with biological cumulative impacts.** The DEIR states (p 5-24) that "[o]verall, it is impossible to precisely specify at the scale of the state or region both the biophysical and economic ramifications of interaction between disturbance and biological resources."

Later it says (p-5-24) that "[c]umulative effects occurring at the scale of the state or the region may not inform project level cumulative effects analysis...Cumulative effects, either negative or positive, can potentially impact individual species of concern, the distribution and sustainability of special habitat elements, wildlife, vegetation structures, and other biological resources. Cumulative effects attributable to these kinds of impact mechanisms are generally most reliably assessed at the scale of the individual project and lands immediately adjacent."

At this point, the DEIR is going against CEQA's intent with PEIRs, as noted in section 1 above. Unfortunately, it goes on to say that (p. 5-25) "[t]he VTP Program EIR cumulative impact analysis, conducted at the scale of the watershed or bioregion, identifies and assesses impact mechanisms that may influence landscape scale biological resource issues such as wildlife movement or habitat capability across broad regions, likelihood of genetic interchange, change in plant community composition as a result of non-native species establishment, or change in species distribution." Really? Where is this analysis? What were its conclusions? This part of the DEIR should be thousands of pages long.

Finally (p. 5-27) the DEIR states, "[b]ecause of the amount of acreage eligible but not receiving treatment under the VTP, **the proposed Program would likely result in a less than significant cumulative effect on biological resources at the bioregional scale** [emphasis added].

Wildfires would continue to occur in California, having both negative and positive effects on biological resources and wildlife habitat condition; the magnitude of effect being dependent on a wide suite of physical, biological, and climatic variables."

This is an absurd, contradictory conclusion. It appears to say that, because only 60,000 acres is treated each year out of 22,000,000, there is no cumulative impact at all. Really? An area half

the size of Oakland is deliberately burned every year, but that is not significant, because it doesn't burn one-tenth of the state? And an equivalent area is herbicided, grazed, and masticated, but that's not significant, because the project doesn't herbicide, graze, and masticate one tenth of the state? Why does the BoF think this makes any sense at all?

As noted above, it is easy for a single, 260-acre vegetation treatment to wipe out the last stand of old growth chaparral, or to remove critical habitat that causes a sensitive species to spiral towards extinction, or to poison a watershed by accidental release of herbicides into a stream, or to transport a pest or pathogen where it never before existed, or to spark a wildfire that burns thousands of acres, because the crew was impatient and started the fire under inappropriate conditions (as in the 2013 San Felipe Fire). All of these are predictable and analyzable. If such predictable consequences are so hard for the BoF to analyze, why attempt the VTP at all?

If the DEIR is supposed to be a trustworthy document, to meet its Objective 5, to "[p]rovide a consistent, accountable, and transparent process for vegetation treatment monitoring that is responsive to the objectives, priorities, and concerns of landowners, local, state, federal governments and other stakeholders," then **all internal and external contradictions need to be resolved and removed.** How can the VTP be trusted otherwise?

Alternatives to the current VTP and DEIR

When reading the DEIR, one comes away with the overwhelming impression that this is a document written by people who want stuff done without thinking about the consequences. While we understand that impulse, we do not sympathize with it. The problem is that the VTP, if implemented as written, would be the single biggest igniter of wildland fires in California, igniting over 100 every year. While all of these are supposed to be controlled burns, the sheer number of ignitions means that some, eventually, will go out of control and cause damage through simple bad luck. Moreover, the VTP will be the single biggest vegetation-clearer. If the biological SPRs are implemented as written, VTP employees and contractors will become the single biggest danger to sensitive plants in the state. If scientists turn out to be right about fire behavior, most VTP activities will have little or no effect on saving lives or property from wildfires, while spending hundreds of millions of dollars.

This is why we care about consequences. The proposed VTP is far too hulking a program to run it impulsively and not analyze its predictable consequences.

We also care because the VTP simply doesn't add up as written. If 22,000,000 acres are "appropriate for treatment" and 60,000 acres are treated every year, it would take almost 367 years for each appropriate acre to get treated once. That's simply pointless. Old growth chaparral can re-establish itself in well under 367 years. The State of California is less than half that age. If the VTP's goal is truly treat WUI areas, that takes repeated visits every few years. In any case, the VTP can only include a small fraction of those 22,000,000 acres. There's no utility in making the program area unworkably large, and there's especially no point in using the scale of acres appropriate for treatment as a way to evaluate alternatives. Most of the land is untreatable anyway.

Then there is the time scale of preparation. The VTP in its current incarnation has been around since 2013, and its roots go back to the 1990s. That's a long time, and a lot of analysis and project design could have been accomplished in that interval. Unfortunately, the DEIR is still focused on trying to avoid that analysis through a combination of pushing it forward (contrary to

CEQA) to individual projects, hiding motivations, padded, repetitive, vague, contradictory and obfuscatory writing, ignoring reality, and simple sloppiness. As a result, the process has wasted years, and is no closer to satisfying CEQA or satisfying people, like us, who will have to deal with the VTP's consequences.

Fortunately, there are workable alternatives:

- **Base the VTP's objectives and strategies on science.** We understand that many firefighters distrust science, so we propose that the term "science" be accepted by the VTP preparers as the stuff that turns out to be true whether anyone believes in it or not. The science that underlies the VTP has to be the things that keep firefighters and others from being burned, properties as safe as possible, and keeps the VTP from being an engine for extinction, type conversion of native lands to weed-fields, and a major vector for pests and pathogens. This is the type of science CNPS tries hard to promote.
- **Create a program that implements those objectives and strategies, again using science.** This is common sense, although some may not see it that way. For example, the DEIR notes that "cost and time to meet environmental review requirements, surveying for and mitigating treatment effects to threatened and endangered species" are major impediments to treating 120,000 acres per year under the existing Vegetation Management Program ("VMP", p. 1-15). Oddly enough, agencies like the National Park Service somehow manage to get programs done within the constraint of environmental review requirements. Is the problem in the requirements, or within BoF's system for meeting them? This is an awkward, but critical question. If the problem isn't with the environmental review requirements, then the VTP is based on a fundamentally wrong assumption, and BoF needs to look at other options for accomplishing its objectives.
- **Front-load the analysis into the PEIR, rather than pushing it down to projects.** This is what CEQA requires. CNPS agrees with the BoF that we need to treat at least some vegetation within 300 feet of homes. We also agree that, in some parts of the state (like some pine forests in the Sierra Nevada), we need more controlled burns. Were the VTP limited to projects that have broad-based support, it would be in place right now. Unfortunately, none of this analysis or consensus seeking went into the VTP or its DEIR. If it had, many of the problems we identify would not exist.
- **Set hard boundaries early.** The math for the VTP simply does not work, and to be blunt, we suspect that a PEIR that realistically tried to analyze the impacts to 22,000,000 acres of any project would be unworkably huge. We are also quite sure that any real VTP will be a small fraction of that size. We are also quite sure that there are projects that everyone wants done. It should not be as hard as the project proponents think to figure out where projects need to be done and are likely to be done, and to focus the VTP down so that it only works on those areas. Indeed, once the VTP has done that, it might be easier to expand it from a small area using supplemental EIRs, rather than trying to deal with an unworkably huge initial project.
- **Follow CEQA exactly, and get the environmental analysts involved at the design stage, not at the end.** The point is to identify critical problems and avoid them through design changes, rather than solidifying the design and being left with a mess to mitigate. Environmental analysts earn their pay because they are, on an per-hour basis, substantially cheaper than lawyers, and sometimes even cheaper than firefighters. Their best role is helping people spot and avoid predictable problems, rather than in covering up issues. Many

southern California developers have learned this advice, and their projects get built without drama. We suggest that state agencies might find it useful as well.

- **Use a multi-year, overlapping planning process for each proposed project.** Since we can expect the climate to get more extreme in coming years (bigger storms, bigger droughts, and so forth), planning for things like burn days for controlled burns is going to be an exercise in patience. Rather than trying to go from plan to treatment in a single year, we suggest using a multi-year process, like the existing VMP, so that areas can be surveyed by professional biologists, local information and buy-in can be sought, and plans can be made ready for when the weather cooperates. Moreover, overlap projects, so that some are being researched while some are being implemented and others are being evaluated afterwards. Rushing will not just make waste, it may make wildfires, injure firefighters, and send species into extinction. Is convenience really worth this price?
- **Consider taking five years to create the next iteration of the VTP.** This is not for our convenience, but because so many things are changing right now:
 - Fire behavior may be changing with climate change, and new types of wildfires may be emerging.
 - California is still developing its climate change response by both limiting emissions and increasing sequestration, and it is fairly clear to us that few people in California government understand its ramifications yet.
 - Pests and pathogens are spreading rapidly, and new ones are showing up.

How much damage can the BoF do by rushing to implement a vague, opaque program at this time? Our strong sense in reading multiple versions of the DEIR is that the people who wrote it really did not understand most of the issues they wrote about, nor did they get help from some really good in-house researchers, such as the fire researchers in CALFIRE. We believe that the BoF needs to take a couple of years to understand and embrace what the 21st Century has in store for it, rather than rushing to implement a bigger version of the 1980s-era VMP. We only wish that this process had started a decade ago, rather than now.

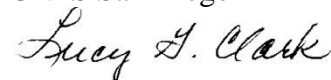
Unfortunately, none of these suggestions change our basic opinion, which is that this DEIR needs to be thoroughly rewritten and recirculated, and that the VTP as written is unworkable. Please take the time to do it right.

Please keep us informed of all future developments with this and related projects. Thank you for consideration of our comments and questions.

Sincerely,



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February 15, 2013

Re: Draft Programmatic Environmental Impact Report For The Vegetation Treatment Program of the California State Board of Forestry and Fire Protection (SCH #2005082054)

Dear Mr. Gentry:

We appreciate the opportunity to comment on the Draft Programmatic Environmental Impact Report for The Vegetation Treatment Program Of the California State Board of Forestry and Fire Protection ("Report," "Program," "VTPEIR").

The San Diego Chapter of the California Native Plant Society (CNPSSD) works to protect California's native plant heritage and preserve it for future generations. CNPSSD promotes sound plant science as the backbone of effective natural areas protection. We work closely with decision-makers, scientists, and local planners to advocate for well informed and environmentally friendly policies, regulations, and land management practices.

CNPSSD is a supporter of appropriate land management practices which result in sustaining special status California native plant species, both on properties dedicated to that purpose (e.g. State, Federal, County, or local and private conservation parks or preserves) and other properties (private and public) where these species occur, and where their continued survival helps provide a genetic buffer for their survival, should catastrophic events destroy them in protected areas. We strongly agree that fire and invasive species are critical issues that must be actively managed. However:

CNPSSD strongly recommends that this VTPEIR NOT be certified, due to lack of substantial evidence to support contentions and conclusions made throughout the document, due to substantial procedural lapses and irregularities, as well as the other issues we list below.



Dedicated to the preservation of California native flora

Based on the Report, we have many questions, including:

21. How the Report deals with its procedural lapses and irregularities
22. Whether all the impacts have been properly considered
23. Why does the Program description lacks substantial evidence to justify fundamental premises? Why is it inaccurate and overly simple?
24. How will the Program achieve its goals?

The following groups of questions are based on the concerns summarized above. We formally request that the Board of Forestry fully consider and respond to our questions in an effort to improve the Draft VTPEIR by clarifying, among other things, its purpose, rationale, and management structure.

1. Procedural Lapses and Irregularities

1.A. Why did the Report writers choose to create an EIR, not an EIR/S? In Chapter 2: Proposed Program, on Page 2-1: "The 38,000,000 acres that might be treated under the Proposed Program are comprised of about 34,958,000 acres, which are either privately owned or State owned lands (e.g. Department of Parks and Recreation (DPR) lands) that are designated as SRA or LRA, and about 3,000,000 acres of federal DPA lands (see glossary for description of DPA)." According to the CEQA Guidelines, the Program should have a combined EIR/S, not an EIR, since the Program proposes to cover federal lands as well as State lands.

1.B. Where is the Program Map, and what parcels are subject to the Program? According to CEQA Guideline 15124(a): "The precise location and boundaries of the proposed project shall be shown on a detailed map, preferably topographic. The location of the project shall also appear on a regional map." Neither of these maps is supplied. While maps of California and "bio-regions" are presented, approximately 1/3 of the state is actually affected by the Program, so these maps are insufficient for land owners to determine whether they are affected by the Program or not. How can the Report represent that the impact analysis is sufficient, if neither the place nor the timing of the Program are given? Environmental impacts must, by definition, have an environment in which to occur. Phrasing the acreage as "might be treated" is insufficient. If a parcel is considered eligible for the Program, then the Program has a boundary, and all parcels within that boundary must shown on maps, to circumscribe the environment impacted by the Program.

1.C. What are the objectives of the Proposed Program? Do the Goals of the Program adequately cover the Program's Objectives under CEQA? According to CEQA Guideline 15124(b), an EIR must contain "a statement of objectives sought by the proposed project. A clearly written statement of objectives will help the lead agency develop a reasonable range of alternatives to evaluate in the EIR and will aid the decision makers in preparing findings or a statement of overriding considerations, if necessary. The statement of objectives should include the underlying purpose of the project." We failed to find clearly labeled objectives, and assume in this analysis that the Goals (Report Page ES-iii) are the objectives. However, the alternatives are evaluated entirely

on how much acreage will be treated, which subset of laws will be followed, how expensive it is to follow all Federal and State regulations, and so forth, and the goals were never mentioned in consideration of alternatives. Furthermore, the goals are vague and never quantified, they are never referred to in the environmental checklist that is apparently the heart of the Proposed Program, there is no system proposed for monitoring Projects to determine whether they further Program goals, and there is no system to mitigate cumulative impacts from potential Projects below the level of significance, nor to monitor or report on mitigation efforts. Were we reading this document cynically, we would assume the objective of the program is to clear as much land as possible every year. Due to this lack of clarity, we want to know what the true Objectives of the Program are, and whether they are properly represented by the Goals.

1.D. How was the Notice of Availability publicized? According to CEQA Guideline 15087: "Notice ... shall also be given by at least one of the following procedures: (1) Publication at least one time by the public agency in a newspaper of general circulation in the area affected by the proposed project. If more than one area is affected, the notice shall be published in the newspaper of largest circulation from among the newspapers of general circulation in those areas. (2) Posting of notice by the public agency on and off the site in the area where the project is to be located. (3) Direct mailing to the owners and occupants of property contiguous to the parcel or parcels on which the project is located. Owners of such property shall be identified as shown on the latest equalized assessment roll."

Normally, EIRs include an appendix documenting their public notices. The Report failed to provide this information, so we investigated. We failed to find a Notice of Availability using online searches of the *Los Angeles Times* (http://classifieds.latimes.com/classifieds?category=public_notice) (which, according to Wikipedia, has the largest distribution of California newspapers), the *Sacramento Bee* (<http://www.sacbee.com/adperfect/>), the *San Francisco Chronicle* (<http://www.sfgate.com/chronicle/>), the *San Jose Mercury News* (<http://www.mypublicnotices.com/BayAreaNewsGroup/PublicNotice.asp>), or the *UT San Diego* (<http://www.legalnotice.org/pl/sandiego/landing1.aspx>). The website www.legalnotice.org covers legal notices in newspapers throughout the US, and we were unable to find it in there. As for posting the notice on and off-site, the site is not defined, so this is not practicable. As for direct mailing, a close relative owns a house immediately adjacent to state parks land. This land contains chaparral and coastal sage scrub, and has been the periodic target of vegetation management. Nonetheless, this relative never received any written or emailed notice about this program. While our investigation was not exhaustive, we found no evidence of public notice beyond the Project website itself. How was the Notice of Availability publicized?

1.D Why does the Report state that floristic surveys "may be necessary" rather than being mandatory? In the "Minimum Management Standards" section (page 2-6), Item 5 states: " A database search will be conducted for each project by a query of the most reasonably available sources and databases for biological information, including but not limited to, the CNDDDB and BIOS. The search shall include a minimum search area of

nine (9) USGS Quadrangles surrounding the project area. In cases where the project area extends into multiple quadrangles all adjacent quadrangles shall be included. Surveys may be necessary to determine presence/absence of special status plants or animals and to determine and evaluate site-specific impacts. The applicant will evaluate the potential direct and indirect impacts caused by the Project."

According to CEQA guideline 15125: " An EIR must include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation is published." This includes the plants and animals within the project's boundary.

Floristic surveys are never optional. They are a fundamental part of describing the environmental setting for the project. All a 9-quadrangle or CNDDDB search does is that it helps to determine what sensitive species may be present on the project site. All databases are known to be incomplete, sometimes radically so. They cannot be relied upon to determine either the presence or the absence of any sensitive species, and current surveys of project sites are absolutely necessary to determine what occurs on all project sites. Why does the Report state that these are optional? How does this comply with the California and national Endangered Species Acts and agency regulations for implementing these acts?

1.E. Why does the Report not state which plants are impacted by the Program?

Appendix B appears to be a list of all List 1A-4 plants in California. This makes no sense, for a number of reasons:

1. Why consider List 1A species? They are thought to be extinct, and therefore not affected by the Program.
2. Why consider all species? Yes, the report says " Addressing potential impacts of the VTP to every taxon at the programmatic level would be impractical," (Page 5.5-12), but the list presented in Appendix B is silly. It includes plants such as the extremely rare *Cercocarpus traskiae* which will never be subject to vegetation treatment. Nor will a wide selection of beach dune plants (e.g. *Acmispon nuttallianus* (*Lotus nuttallianus*), *Phacelia stellaris*, and *Nemacaulis denudata* var. *denudata*) that mostly occur on urban dunes, in small areas that are highly unlikely to ever come under any vegetation treatment. This list of non-impacted could be extended almost indefinitely, and should have been, because the Report notes which vegetation types are excluded from its purview. The fundamental point is that the Program does not affect all listed plants, it affects a subset of them. Why was this subset not identified? Certainly, a CNDDDB search of the parcels affected by the Program would produce a suitable list. Why was this search not performed?

1.F. Why did the Report reject the Environmentally Superior Alternative? While the Report states that the Program is the Environmentally Superior Alternative, the document does not make the case. Alternative 3 and Alternative 4 make the case for following water quality or air quality regulations, but the document states on page 3-15

that treatment acreage goals have priority over complying with both air quality and water quality regulations, and therefore the proposed Program does not comply with either.

We were not aware that failure to comply with state and federal regulations was an option for state agencies. Ever.

Nowhere in the Program goals does it say that acres treated is a goal. Therefore, acres treated is an invalid criterion, and using it goes against the Program's stated Goals. Given that acres treated is an invalid criterion by which to assess the alternatives, why did the Report reject the Environmentally Superior Alternative of complying with the laws, regulations, and guidelines of the United States and the State of California?

1.G. How can a Program that fails to comply with all state and federal regulations be certified? As noted in 1.F. above, complying with both air and water quality regulations (which are both state and federal) was rejected. If the Program as proposed cannot comply with all relevant state and federal regulations, how can it be certified as compliant with CEQA and NEPA?

1H. Why were the alternatives (both accepted and rejected) not evaluated in terms of how they would meet the Program's stated goals ? CEQA guidelines state that alternatives "shall include those that could feasibly accomplish most of the basic objectives of the project." (CEQA Guidelines 15126.6. Consideration and Discussion of Alternatives to the Proposed Project"). Since the Report fails to list the Program's objectives, we assume that the Program's goals are the "basic objectives of the project." None of the alternatives listed are characterized by how they would meet the Program's goals. None of the alternatives were rejected by how they would fail to meet the Program's stated goals. On pages 3-15 and 3-16, the Report rejects both an alternative that complies with air and water quality regulations, and a proposal that concentrates efforts where fire risk is greatest. In both cases, the proposals are rejected on the grounds that too few acres would be treated, or they would be treated in the wrong place. How do the rejected alternatives fare when evaluated in how they will meet the Program's stated goals?

1I. Where is the Environmental Checklist? How will the Checklist protocol described preclude EIRs for all projects under the Program? The Program appears predicated on the creation of an environmental checklist to streamline environmental review of Projects instituted under the Program. However, there is no Environmental Checklist in the Report. Chapter 8 "Environmental Checklist" contains a set of criteria for generating an initial study. Such lists are already freely available on the internet through the Association of Environmental Professionals, so the idea of generating a special checklist is unnecessary. Worse, since the Program admittedly fails to comply with both air quality and water quality regulations, and because we have many other questions about whether it properly complies with CEQA and NEPA, a checklist generated per the vague specifications in Chapter 8 will not, in fact, comply with CEQA, nor will replace a CEQA initial study. Given the lack of specificity, outdated, incomplete, and questionable science, lack of consultation with agencies, failure to

generate fauna and flora lists, and reliance on obsolete vegetation maps, among other problems, any project proposed under this Program might do better to ignore the Program and generate its own EIR independently, using existing the existing CEQA checklist.

2. Were all impacts considered?

2.A. What consultations were performed with the California Water Resources Board, Regional Water Control Boards, California Air Resources Board, California Department of Fish and Wildlife, U.S. Fish and Wildlife Service the Army Corps of Engineers, The Environmental Protection Agency, the US Forest Service, and the National Park Service? What other agencies should have been consulted that were not? What other agencies were consulted, and what was the result of the consultation? Normally, all consultations are included in the EIR as appendices, but these do not appear in the Report. Providing the text of consultations will help determine how the impacts were determined, and whether all impacts were determined to the satisfaction of the responsible agencies.

2. B. How does the Program comply with the CARB Smoke Management Program of 2000? The report appears to assume that the California Air Resources Board (CARB) has yet to develop a Smoke Management Plan (Page 4.6-2). According to the CARB website (<http://www.arb.ca.gov/smp/smp.htm>), the CARB adopted a Smoke Management Plan in 2000, and guidelines are available online. It appears that the proposed Program will render the state out of compliance with EPA guidelines, and it is unclear whether the Board of Forestry consulted with the Air Resources Board both on these impacts and on mitigating them.

2.C. Why did the Report Writers and Program choose to use the WHR? The Wildlife Habitat Relationships (WHR) system is obsolete and does not comply with national vegetation mapping standards (http://www.fgdc.gov/standards/projects/FGDC-standards-projects/vegetation/NVCS_V2_FINAL_2008-02.pdf), It was superseded most recently by the *Second Edition of the Manual of California Vegetation* (Sawyer, Keeler-Wolf and Evens, 2009), which does comply with national standards.

- A. Why was the WHR chosen?
- B. Why did the writers choose to ignore the wealth of fire characteristics given in the *Second Manual* for every flammable vegetation type in California?
- C. How will the Program fit current, compliant maps of California vegetation into the inadequate, outdated framework of the WHR? Wouldn't the current system provide more information for less effort? Won't such problematic mapping generate significant ecological impacts due to errors and data loss? How will the Program mitigate for such impacts?

2. D. How will the Program affect carbon sequestration efforts? On page 4.4-18, "The Role of the VTP in Carbon Sequestration and in Reducing California's Greenhouse Gas Emissions" fails to explicate the role of the Program in carbon sequestration. So far as we can determine, the only role the Program plays in carbon sequestration is by providing fuel to biomass-burning power plants. This has the effect of taking sequestered

carbon out of vegetation and blowing it back into the air. In fact, most of the activities under the Program will decrease sequestration by removing biomass and causing it to degrade, releasing carbon back into the air. Worse, the Program may scuttle market-based carbon sequestration efforts in California. After all, why should anyone invest in forest lands to sequester carbon in biomass, if the Program will allow someone to arbitrarily come along and reduce the biomass on that land within the next decade or two? Such a risk is totally unacceptable to most businesses, and insuring carbon sequestration against inadvertent or deliberate loss to Program treatments would impose a ruinous tax on carbon sequestration efforts.

2.E. Why does the Program exacerbate the type conversion of woody vegetation into herbaceous vegetation? How will it ameliorate the increased threats imposed by too-frequent vegetation treatments? On page 2-23, the Program states that "maintenance is assumed to occur at the following time intervals: Grasslands – 2-5 years after previous treatment, • Shrublands – 5-10 years after previous treatment, • Forestland – 10-15 years after previous treatment." According to well-established science, chaparral will type-convert to weedlands if the fire return interval is less than 30 years, and it is no stretch whatsoever to assume that any shrub-based vegetation will be replaced by herbs if it is treated more than once a decade. This is the basis for the centuries'-old practice by ranchers of converting brush to pasture by burning. Since herbaceous vegetation is more ignitable, and demonstrably more dangerous to houses (e.g. Syphard, et al. Housing arrangement and location determine the likelihood of housing loss due to wildfire. PLoS ONE 7(3): e33954), we strongly question these treatment intervals. They seem to run contrary to the stated goals of the Program, to "reduce catastrophic losses to life and property consistent with public expectation for fire protection" (Goal 2).

2.F. How does the program justify destroying more acres of vegetation than recently documented wildfires consume? According to the Program, 216,910 acres are considered for annual treatment (p. 2-25), while 198,769 acres of CAL FIRE lands were burned each year, according to CAL FIRE's own data (five year running average). (http://cdfdata.fire.ca.gov/incidents/incidents_stats?year=2012, accessed 1/29/2013), If the Program achieves anything like its proposed scope, it will be more destructive than the fires it purports to ameliorate, because it guarantees type conversion, exotic plant invasion, soil damage, and other impacts that are noted in the Report. Even if we count the 53% of lands subject to prescribed burns (114,962 acres/year), this is 57.8% of the total lands burned every year. Indeed, 114,962 acres burned/year would match the nineteenth largest California fire in recent history (http://www.fire.ca.gov/communications/downloads/fact_sheets/20LACRES.pdf), and would happen every single year. It appears that the Program wants to destroy California's vegetation in order to save it, in a grotesque echo of the worst parts of the Vietnam War. How does the Program justify such sustained, epic-scale destruction? How will it monitor and demonstrate that such destruction will meet any of the Program's goals? What will it do if this level of destruction fails to make Californians safer from fire?

3. Why does the Program description lack substantial evidence to justify

fundamental premises? Why is it inaccurate and overly simple? The various sections of the document, generally organized following the format of an EIR, appear at first glance to offer a broad historic, statistical, regulatory, land use, and geographic context to the topics. But upon closer inspection, one finds the proposed program is based on a number of unjustified assumptions, that it ignores best available science, and that in very many instances the report cites inappropriate, irrelevant, or debunked references. Moreover, although the PEIR is over 1300 pages long, why does it contain no meaningful information about the program's proposed project level planning? The closest the Report gets to a project level environmental analysis is a carefully documented process of combining a lot of coarse data that CAL FIRE states to be unreliable into variously unreliable, extremely coarse, over-generalized, and not very informative indices plotted statewide on a series of tiny maps at an effective scale of 1:25 million. For all these reasons and more, the document is legally inadequate for its intended purpose as an Environmental Impact Report.

3.A. How can CEQA be appropriately applied to the VTPEIR in a Program sense when groups or series of projects addressed within the Program are NOT similar in impacts, and when potential impacts can NOT be avoided or mitigated in a similar manner? What standards does the Program propose to determine similarity of impact and similarity of mitigation? How will these similarities be assessed at the Programmatic level? What will the Program do if Project implementation uses it incorrectly, to justify impacts that would not have otherwise occurred? In Chapter 1.6 of the VTPEIR, the Report states, "An agency is generally not permitted to treat each separate permit or approval under a program, such as the VTP, as a separate project segment if the effect is to avoid full disclosure of environmental impacts. However, CEQA does encourage the application of a programmatic approach **where a group or series of projects are similar in activities and impacts and where potential impacts can be avoided or mitigated in a similar manner.**" [bold added for emphasis]

One of the over-riding problems in the Report is the simplistic approach that attempts to make fire issues out as broadly similar across the region, when in fact they are very different. For example, the PEIR does not distinguish between surface fires in ponderosa pine and crown fires in chaparral, nor does it explain how these different fire regimes have been affected very differently by past fire management activities and as a consequence require very different approaches to future management. Nevertheless, the VTPEIR treats both fire regimes similarly by employing a simple one-size-fits-all premise upon which to base the rationale for treatments and impact analyses, in short; the Report claims that "increased treatments will result in less frequent and less severe uncontrolled burns, and increased treatments pose no significant impacts to the environments treated."

Much of the literature supporting treatments comes from surface fire regimes in coniferous forests and therefore is not appropriately applied to shrubland ecosystems. One important example of where these two ecosystems differ markedly is in the impact of fire severity. High severity fires have some negative impacts on certain forest types, however, shrubland ecosystems are highly resilient to high severity fires and in fact one

of the major threats, alien plant invasion, is promoted by low severity fires. Does CAL FIRE recognize the fact that, in southern California, wildfire frequency intervals have become so short as to threaten the continued existence of natural habitats such as chaparral, inland sage scrub, pinyon-juniper, and coastal sage scrub? These habitats are the ones stabilizing and protecting our watersheds in highly erodible mountain and hill topography.

Similar groups or series of projects, and similar impact avoidance / mitigation measures could be identified only through categories ecosystem within finer geographic regions, and only among finer vegetation classifications than are presented in the VTPEIR. The similar treatment of vastly different vegetation types operating under different fire regimes, the broad characterization of program area (California) and landcover types (CWHR classifications) as presented in the draft VTPEIR grossly oversimplify the "similarities" intended to justify a program approach to the CEQA, making it impossible to assess "full disclosure of environmental impacts" of treatments, and thereby voiding the BoF/CAL FIRE's ability to legally certify this draft PEIR under CEQA.

3.B. Where is the substantial evidence to support the PEIR's plan to increase burning across the Program area's bioregions by 36%? In Table 2-4 - Proposed Program Treatment Acreage by Bioregion, the PEIR indicates the Approximate Annual Acreage Treated during the ten-year program period is 216, 910 acres. The PEIR states that 53% of vegetation treatments will be prescribed burns. That means that each year 115,000 acres will be burned under this program. At page 4.2-3 of the PEIR historical wildfire trends are estimated (since late 1800s) to average 320,000 acres burned per year in California. CAL FIRE intends to increase the number of acres burned (generally in wildland habitats) by 115,000 acres per year. How does the PEIR justify increasing the acreage burned by 36%?

3.C Why doesn't the PEIR concentrate on the first three "major policy components" of the California Fire Plan? In Chapter 1.3 - Regulatory Authority: The California Fire Plan (BOF, 2010) has the following "major policy components":

- "• Land use planning that ensures increased fire safety for new development
- "• Creation of defensible space for survivability of established homes and neighborhoods
- "• Improving fire resistance and structural survivability of homes and other constructed assets
- "• Fuel hazard reduction that creates resilient landscapes and protects the wildland and natural resource values
- "• Adequate and appropriate levels of wildland fire suppression and related services
- "• Commitment by individuals and communities to wildfire prevention and protection through local fire planning."

1. Land use planning that ensures increased fire safety for new development inside or adjacent to wildlands requires planning agencies to understand what measures the developer and the residents must take to ensure fire safety while preserving soil stability, groundwater retention and natural resources. This requires not just a website, but demonstration structures and seminars for planners showing topographic layouts of developments that have survived wildfires. Board of

Forestry and CAL FIRE structures should all meet this requirement so they can be shown as examples to visitors or on special days like “open houses” at fire stations.

2. Creation of defensible space for survivability of established homes and neighborhoods is a crucial policy that CAL FIRE must implement. This Report recognizes the increasing population in California and the increasing encroachment into wildlands or into wildfire-prone topography. CAL FIRE emphasizes the importance of the “first thirty feet from a house or other structure” as the most importance area of defensible space”. Where is that discussed in this PEIR? Where is the program element that requires all Department of Forestry and Fire Protection structures to have the first thirty feet landscaped (with locally appropriate native plants) as a defensible space for demonstration and for defense? Where is the program element that requires pressure on all county fire stations located in or adjacent to wildfire prone lands to landscape the first thirty feet from all their structures as defensible space as demonstrations of what defensible space looks like for local residents, using locally appropriate native plants and working with local garden clubs and California Native Plant Society Chapters?
3. Improving fire resistance and structural survivability of homes and other constructed assets requires instructing local and regional planning agencies on what requirements they, their fire departments and their building and safety departments need to add to building or remodeling permits to improve or to ensure survivability of new or remodeled structures in areas prone to wildfire impacts.
4. These first three policy components are the most important in today’s world. People are not going to the CAL FIRE website, they are not reading their brush notices, they do not know what “defensible space” means and brush inspectors do not look at the first thirty feet from the structure when they inspect homes for compliance with local fuel modification regulations. Why aren’t CAL FIRE and the Forestry Board setting up demonstration gardens and teaching these residents of fire areas how to defend their structures and their resource values? Why aren’t brush inspectors inspecting the first thirty feet from structures and out to one hundred feet from the structure?
5. The last three major policy components are what CAL FIRE and Forestry do already. The Fire Safe Councils are an excellent idea but where is CAL FIRE and County Fire Departments buy-in on their own properties?
6. Vegetation treatments start at the structure. Why isn’t this PEIR strongly advocating for vegetation treatment and management in the first thirty feet from all structures, in all jurisdictions?

3.D. Where is the substantial evidence to support the increase in chaparral treatment planned in the PEIR? Where is the justification for burning, masticating/mechanically clearing, and eventually degrading and destroying shrublands such as southern California chaparral and other types of shrub communities around the state, as well as sage scrub in areas where these plant habitats are forming deep, complex root systems, sequestering vast amounts of carbon, stabilizing slopes, preventing soils

from becoming hydrophobic, acting as guardians of broad steeply-sloping watersheds and providing nesting, resting and food sources for a highly biodiverse wildlife, both resident and migratory? These habitats need 40 to 100 years to recover from fires, replenish their seedbanks, restore their canopies and replenish their root systems. Where in the Report is the scientific literature that would demonstrate these facts to be true?

3.E. Where is the substantial evidence to justify increasing the area to be treated, generally by burning or mechanical removal, from 34,824,500 acres to 37,958,400 acres? Where in the PEIR is there provided evidence to substantiate the purported need to increase treated acres in order to achieve Program goals?

3.F. Where is the substantial evidence that supports the evaluation of effects from non-native invasive species?

Assessments quantification in the DEIR apparently created from thin air. Having stated that areal quantification of cumulative impacts cannot be known (see italics section under cumulative impacts) the DEIR boldly states what effects will be. A great example is Table 5.5.2 *“Table 5.5.2 Summary of Effects from Non-Native Invasive Species from Implementing the Proposed Program.”* This takes each Bioregion and assesses the effect on weeds from the programs use of Prescribed Fire, Mechanical, Hand, and Herbivory treatments. For every region the chart states “NA/NB - negligible adverse or beneficial effects - those effects that are imperceptible or undetectable.” The document presents no quantitative evidence in support of this evaluation, but the narrative does describe many examples where each of the fuel treatments can make the invasive species situation worse. This has been made very evident from regular wildland fire fighting, where the equipment used to fight the fire is frequently “dirty” regarding alien seeds.

3.G. Why was the Program based on questionable science?

The document is characterized by cursory descriptions of mostly out-dated science with little or no summary of points of disagreement. For example, within the summary of Known Areas of Controversy listed in Chapter 2.7, “wildlife, conservation, or biological diversity issues” is not mentioned. We note the more complete descriptions of the PEIR's scientific failings as detailed in comments submitted by both the California Chaparral Institute and Endangered Habitats League.

3.H. Why does the Program assert that biomass burning will ameliorate climate change? The Report repeatedly considers biomass burning as a renewable resource that will help ameliorate climate change (e.g. 4.4-18, 4.11-6). This seems mistaken on three levels. First, biomass takes carbon out of the air, while burning it returns the carbon to the air. This short-circuits biological processes that take carbon out of the air and sequester it back in the ground or in biomass. If we practiced nothing but biomass burning, we would retain our high levels of atmospheric CO₂ indefinitely, so this solution prolongs the problem. Second, plants do not contain just carbon and energy. Burning biomass will release large quantities of nitrogen, and nitrogen deposition has already been shown to favor non-native invasive species (e.g. Allen et. al. 2009. [http://www.plantbiology.ucr.edu/faculty/ Allen et al. 2009.pdf](http://www.plantbiology.ucr.edu/faculty/Allen%20et%20al.%202009.pdf)). This will exacerbate

both air pollution and invasive species problems. Undisturbed native vegetation can effectively exclude most exotics, sequesters carbon, and sequesters nitrogen. Therefore, leaving the vegetation intact helps to solve three problems, while burning it exacerbates all three.

3.I. Why does the report assume that anthropogenic fire, anthropogenic disturbance, and browsing by goats and sheep or other Eurasian herbivores will favor native plants? One central problem is that California's plants have experienced 10,000-20,000 years of anthropogenic fire and disturbance, a few centuries of grazing by domestic livestock, and a few centuries of anthropogenic soil disturbance. In contrast, Eurasian weeds have adapted to 40,000-100,000 years of anthropogenic fire, 8,000-10,000 years of grazing by domestic livestock, and 8,000-10,000 years anthropogenic soil disturbance. Given this history, it seems obvious that Eurasian weeds are better adapted to anthropogenic fire, livestock grazing, and anthropogenic soil disturbance. We are at a loss to understand why the Program assumes any of these methods (fire, grazing, and clearing) can be used on a broad scale to restore native vegetation. As targeted treatments in small areas, they are fine. Antibiotics similarly work when targeted against susceptible bacteria, but wreak havoc when used indiscriminately. Widespread use of the Program's proposed methods will simply favor those species that are better adapted to such disturbances, and elementary evolutionary theory (as well as common sense) strongly suggests those species are non-native invasive weeds, rather than native species.

3.J. Why does the Program not focus on the wildland urban interface? According to recent publications (e.g. Syphard, et al . Housing arrangement and location determine the likelihood of housing loss due to wildfire. PLoS ONE 7(3): e33954; http://www.cnps.org/cnps/publications/fremontia/Fremontia_Vol38-No2-3.pdf and references therein), land use planning appears to be more important than fuel modification for reducing fire hazards. Additionally, replacing woody fuels with herbaceous fuels appears to increase fire risks to homes, and treating the wildland-urban interface is critical for making homes safe. None of this appears to be considered in the report. How does the Program plan to incorporate this information in creating an effective strategy, and how will the Program be amended to take this information into account?

3.K. Why did the Report cite the San Diego County Wildland Task Force August 2003 "Mitigation Strategies for Reducing Wildland Fire Risks"? In 4.2-8, the Report states that "In its August 2003 report, the San Diego Wildland Task Force agreed that fuel or vegetation management is the single most effective tool available to mitigate fires." **This report was withdrawn by its authors**, after protest by seven of the scientists whose work contradicts the Program's premise that mosaics of age classes reduce shrubland wildfires (detailed in http://www.californiachaparral.com/images/Letters_to_SD_County___Oberbauer.pdf). Why was a retracted and discredited report used to support the Program?

4. How will the Program achieve its goals? In general, the Report does a very poor job of relating the treatments proposed in the Program to its stated Goals. Therefore, we

want to understand how the Program will achieve its goals. This is critical in understanding the impacts of the Proposed Program and its alternatives, and in assessing the cumulative impacts of Projects proposed under the Program.

4.A. How will the Program "Maintain and enhance forest and range land resources including forest health to benefit present and future generations?" (Page ES-iii).

1. What forest and rangeland resources are under consideration? What science supports this determination?
2. How will resource enhancement be quantitatively determined? What science supports this determination?
3. How will forest and rangeland resources be monitored? What science supports this determination?
4. What is the definition of forest health? What science supports this definition?
5. What metrics will be used to assess forest health? What science supports this determination?
6. How will monitoring efforts feed back to determine success for the overall program?
7. What is the proposed budget for this part of the Program?

4. B. How will the Program "modify wildland fire behavior to help reduce catastrophic losses to life and property consistent with public expectation for fire protection?" (Page ES-iii).

1. How does the large body of fire science not considered in the Report address this goal? What substantial evidence supports its validity?
2. How will the Program monitor wildland fire behavior, and losses to life and property? What substantial evidence supports use of these monitoring techniques?
3. What will the Program do if it fails to attain this goal?

4.C. How will the Program "reduce the severity and associated suppression costs of wildland fires by altering the volume and continuity of wildland fuels?" (Page ES-iii)

1. Given that the Program proposes to clear more land every year than fires do on average, how much does the Program budget for its activities, and how will it compare these with suppression costs? How will it make these figures available to the public and to the Lead Agency?
2. How does current science address the notion that altering the volume and continuity of wildland fuels reduces the severity of fires? Is this the consensus view of experts in the field?
3. What will the Program do if it fails to attain this goal?

4.D. How will the Program "reduce the risk of large, high intensity fires by restoring a natural range of fire-adapted plant communities through periodic low intensity vegetation treatments?" (Page ES-iii)

1. What does the Program consider to be the natural range of fire-adapted plant communities? What quantitative measurements do they use to justify this? Is this the consensus opinion of scientific experts in the field?
2. How will the Program incorporate the extensive body of fire relationships in the *Second Manual of California Vegetation* into the Program?
3. Given that most California plant communities burn once or twice per century, how does the program justifying burning more than once every 20 years? This appears to be an increase in fire frequency?
4. How does the Program deal with plant communities such as chaparral, where large, infrequent, high intensity fires are the norm, and frequent low-intensity fires cause type conversion to more highly ignitable (and more dangerous) herbaceous plant communities?
5. What will the Program do if it fails to attain this goal?

4.E. How will the Program "maintain or improve long term air quality through vegetation treatments that reduce the severity of large, uncontrolled fires that release air pollutants and greenhouse gases?" (Page ES-iii)

1. How will the Program measure long-term air quality? Has it consulted with the California Air Resources Board on these measurements? With the EPA?
2. How will the Program measure greenhouse gases released by large, uncontrolled fires? How will the Program measure greenhouse gases released by its proposed operations? What science supports these measures?
3. What will the Program do if it fails to attain this goal? What will the Program do if its normal operations release more air pollution and greenhouse gases than large, uncontrolled fires do?

4.F. How will the Program "vary the spatial and temporal distribution of vegetation treatments within and across watersheds to reduce the detrimental effects of wildland fire on watershed health?" (Page ES-iii)

1. How does the Program define watershed health? What quantitative metrics does it use to measure watershed health? What science supports the use of these metrics?
2. How are these watershed health metrics affected by fire? How will the Program monitor these metrics? What will it cost, and who pays?
3. What science supports the goal? What science is against the goal? What is the current scientific consensus on this topic?
4. What will the Program do if it fails to attain this goal?

4.G. How will the Program "reduce noxious weeds and non-native invasive plants to increase desirable plant species and improve browse for wildlife and domestic stock?" (Page ES-iii)

1. What science supports the notion that the Programs methods will help it attain this goal?
2. How will the Program monitor noxious weed and non-native invasive plant populations? What science supports this?

3. What criteria will determine whether these populations are reduced or not? What science supports these criteria?
4. How will monitoring of noxious weeds and non-native invasive plants be funded?
5. What criteria will the Program use to determine desirable plant species? What science supports these criteria?
6. Will desirable plant species be increased at the expense of sensitive species? If so, why? If not, how will the Program determine that this hasn't happened?
7. How will the Program monitor populations of desirable plants? What science supports these methods?
8. What methods will the Program use to determine whether browse has been improved? What science supports these methods?
9. How will information gathered on the populations of weeds, desirable species, and browse feed back to inform the Program?
10. What will the Program do if it fails to attain this goal?

4.H. How will the Program "Improve wildlife habitat by spatially and temporally altering vegetation structure and composition, creating a mosaic of successional stages within various vegetation types?" (Page ES-iii)

1. Given that in most of California's vegetation, succession takes over a century, how can treatments occurring every 20 years at most establish a mosaic of successional stages? Most shrublands will be converted to weedfields by such frequent impacts.
2. Why does the Program assume that all wildlife benefits from edges and mosaics? Many of the rarest species in California require late successional stages and lack of disturbance. How will the Program mitigate impacts to these rare species?
3. Given that mosaics increase the distance propagules have to cover from parent to suitable niche, won't this goal impair species spread, thereby endangering them through habitat fragmentation? How will the Program mitigate for creating such habitat barriers? What science justifies this approach?
4. How will the Program keep invasives out of the mosaic, given that most invasives are favored by disturbance? How will the Program mitigate for treating these invasives? What science justifies this approach?
5. How will the Program monitor mosaics? What science justifies this approach?
6. What quantitative criteria will be used to determine whether habitat is improved for wildlife? What science justifies this approach?
7. What will the Program do if it fails to attain this goal?

4.I. How will the Program "provide a CEQA-compliant programmatic review document process/mechanism for other state or local agencies, which have a vegetation management program/project consistent with the VTP, to utilize this guiding document to implement their vegetation treatment programs/project?" (Page ES-iii)

1. Given the substantial procedural irregularities, how can any document prepared under this PEIR be considered compliant with CEQA, NEPA, and other pertinent state and federal laws, regulations, and guidelines?
2. What can be done to make the process comply with CEQA and NEPA?

3. How will projects be assessed to determine that they comply with relevant laws through complying with the Program?
4. How will projects be monitored by Program managers to determine that they are complying with all relevant laws under the Program?
5. What will the Program do if it fails to attain this goal?

Thank you for consideration of our comments and questions.

Sincerely,

A handwritten signature in cursive script, reading "Frank Landis", is displayed within a light gray rectangular box.

Frank Landis, PhD
Conservation Chair, CNPSSD



August 9, 2019

Board of Forestry and Fire Protection
PO Box 944246
Sacramento, CA 94244-2460

Submitted electronically via
CalVTP@bof.ca.gov

Re: California Vegetation Treatment Program (CalVTP) Draft Programmatic Environmental Impact Report (PEIR)

On behalf of over 2.5 million members and activists, many of whom are deeply impacted by wildfires and forest management in California, the Environmental Defense Fund (EDF) submits these comments in response to the Board of Forestry and Fire Protection’s California Vegetation Treatment Program (CalVTP) Draft PEIR. EDF is an international non-partisan, non-profit organization dedicated to protecting human health and the environment by effectively applying science, economics, and the law.

Introduction

California is experiencing a wildfire crisis. Decades of fire suppression, climate change impacts including drought, high temperatures, low snowpack, and expansive housing and commercial development in the high hazard wildland-urban interface have created a new normal of catastrophic wildfires. In 2018, California experienced the most destructive, largest, and deadliest, wildfires in the State’s history.

According to the Fourth National Climate Assessment, wildfire frequency is likely to increase by 25% over the next century with the frequency of megafires (fires exceeding 5,000 hectares)

O29-1

increasing trifold.¹ As of 2017, 3 million housing units were in Fire Hazard Severity Zones.² As wildfires will continue to increase in scale, severity, and frequency, so too will fire suppression costs and emergency response challenges.

But the way we talk about and approach solutions to the wildfire crisis needs to change. Decades of fire suppression and headlines in recent years about our new normal fire season have fostered the notion that all fire is to be avoided. Many forested lands are not only ecologically adapted to survive period burns, but also depend on fire for healthy regeneration. General public fear and historical norms of fire suppression must be overcome to successfully address the problem, and ultimately, protect our state's people, property, and natural resources. It is important for our state leaders and agencies to convey the message that vegetation management efforts are intended to ultimately allow the state to create a fire regime that is safer for communities and beneficial for each of our diverse ecosystems.

This PEIR, and the associated CalVTP, represent a positive step towards addressing risks associated with catastrophic wildfires in a comprehensive manner. Strategic management of fuels and vegetation helps protect surrounding communities, creates opportunities for a more natural fire regime, and will contribute to healthier forests and an overall net reduction of greenhouse gas emissions.³ This state-wide plan should facilitate the efficient allocation of limited public resources, allow local and regional fire-mitigation efforts to anticipate and build upon state strategies, and make possible regional and ecosystem-wide forest treatments.

Likewise, the comprehensive nature of a programmatic CEQA analysis is well-suited to analyze a project on the scale of CalVTP. The basic purpose of an EIR is to “provide public agencies and the public in general with detailed information about the effect [that] a proposed project is likely to have on the environment; to list ways in which the significant effects of such a project might be minimized; and to indicate alternatives to such a project.”⁴ The VTP PEIR does that; it covers a wide range of individual projects contemplated for implementation over a long timeframe, across a large geographic area. The level of detail in this analysis will assist the agency and public in making informed choices among fire-mitigation plan alternatives and California's annual fire regime. We discuss our support for this approach to CEQA compliance in greater detail below.

While comments on every analysis presented in the PEIR is beyond the scope of EDF's comments, we take particular note of CAL FIRE's treatment of Air Quality (3.4), and Biological Resources

O29-1
cont.

¹ Gonzalez, P., G.M. Garfin, D.D. Breshears, K.M. Brooks, H.E. Brown, E.H. Elias, A. Gunasekara, N. Huntly, J.K. Maldonado, N.J. Mantua, H.G. Margolis, S. McAfee, B.R. Middleton and B.H. Udall. 2018. Fourth National Climate Assessment: Chapter 25 Southwest. *U.S. Global Change Research Program*. <https://nca2018.globalchange.gov/chapter/25/>

² California Governor's Office of Emergency Services. 2018. California State Hazard Mitigation Plan: Chapter 8 – Fire Hazards: Risks and Mitigation. https://www.caloes.ca.gov/HazardMitigationSite/Documents/011-2018%20SHMP_FINAL_Ch%208.pdf

³ PEIR 3.4-31.

⁴ *Sierra Club v. City of Fresno*, (Cal. 2019), at 8; citing § 21061; Guidelines, § 15003, subds. (b)-(e).

(3.6). Our specific comments on those topics are below. In addition to our comments, we acknowledge the thoughtful comments submitted by Pacific Forest Trust and their co-signers.

O29-1
cont.

EDF Comments

Programmatic EIR

A programmatic EIR is an appropriate vehicle for CEQA compliance for the CalVTP because it analyzes a wide range of similar impacts from future projects, streamlining future permitting by conducting the bulk of CEQA evaluation work upfront. It also facilitates clear and efficient decision making by highlighting tradeoffs associated with state-wide policy decisions.

The CalVTP will implement vegetation treatment activities to reduce the risk of lives and property, reduce fire suppression costs, and protect natural resources from wildfire. Given the similarity of later site-specific vegetation treatment projects in treatment activities, a programmatic EIR can cover the range of environmental impacts associated with these future projects. For example, a series of prescribed burns will likely have similar air quality environmental impacts, including release of toxic air contaminants and objectionable odors, even as each individual burn may contribute to attainment of CAAQS and NAAQS differently, depending on the area.

If later site-specific projects are found to be within the scope of this PEIR, streamlining the CEQA process can increase the pace of project approval - while still ensuring environmental impacts and mitigation measures have been evaluated. This faster CEQA compliance pace is essential to achieve CAL FIRE's vegetation treatment goal of 250,000 acres per year.⁵ Individual CEQA analysis for each of the state's treatment projects would significantly delay achieving this goal, while the current CEQA exemption under emergency authority⁶ may risk environmental protection. If a future project is not within the scope of this PEIR, then the PEIR's findings can still help support the project's impact analysis as it moves through additional CEQA and permitting processes. Without the programmatic nature of this EIR, project approval and implementation may be significantly delayed, along with subsequent protection of lives, property, and natural resources.

O29-2

Programmatic reviews help facilitate clear and more transparent decision making.⁷ Governor Brown's Executive Order (EO) B-52-18⁸ (May 2018) calls for annual treatment of 500,000 acres on non-federal lands. The programmatic EIR scopes environmental impacts commensurate with this ambitious treatment goal and avoids piecemeal analysis of projects, which may lead to

⁵ PEIR (2-1).

⁶⁶ Executive Department, State of California, Proclamation of a State of Emergency (March 22, 2019). <https://www.gov.ca.gov/wp-content/uploads/2019/03/03.22.19-State-of-Emergency-Attested.pdf>

⁷ Boots, Michael (Council on Environmental Quality). 2014. Memorandum for Heads of Federal Departments and Agencies: Effective Use of Programmatic NEPA Reviews. https://obamawhitehouse.archives.gov/sites/default/files/docs/effective_use_of_programmatic_nepa_reviews_18dec2014.pdf

⁸ Executive Department, State of California (Governor Jerry Brown). 2018. Executive Order B-52-18. <https://fntf.fire.ca.gov/media/1859/51018-forest-eo.pdf>

underestimates of cumulative impacts. The Programmatic review is also facilitates an accurate comparison to the No Action Alternative. As California experiences state-wide impacts from wildfires, it is logical to evaluate state-wide impacts of wildfire control programs.

O29-2
cont.

Cumulative Impacts

The CalVTP addresses CAL FIRE’s vegetation treatment activities to reach a total treatment acreage target of approximately 250,000 acres per year.⁹ This will contribute to the 500,000 annual acres of treatment on non-federal land called for in Executive Order B-52-18.¹⁰ As the agency acknowledges, the CalVTP is one component of a larger set of actions employed by the state to respond to the wildfire crisis. Other efforts to address catastrophic wildfire, including building codes, local land use decisions, timber harvesting, and other fuels reduction efforts not otherwise addressed by the PEIR, will work together with the CalVTP. These efforts might include fuels reduction through vegetation removal, using methods as described by the CalVTP PEIR such as prescribed burning.

Because the CalVTP will be accompanied by a larger set of fuel reduction efforts, the state’s response to the wildfire crisis will likely result in environmental impacts beyond those expressed in this PEIR. Chapter 4, Cumulative Effects Analysis, considers the CalVTP together with other past, present, and probable future projects producing related impacts. The PEIR’s analysis of cumulative impacts associated with these projects could be strengthened by including a consideration of air quality impacts outside of the treatable landscape.

O29-3

Air quality impacts

PEIR Sections 3.4 and 4.43 address air quality impacts associated with implementation of the CalVTP and other projects. The cumulative effects analysis for air quality impacts (4.4.3) sets the geographic scope for air quality as air basins *within* the treatable landscape.¹¹ The PEIR finds that the CalVTP’s contribution to (1) nonattainment status of criteria air pollutants, (2) toxic air contaminants (TACs) contained in smoke generated by prescribed burns, and (3) odors contained in smoke generated by prescribed burning would be cumulatively considerable.

Given the nature of air pollution, and potentially significant air quality impacts associated with CalVTP efforts that would be cumulatively considerable, CAL FIRE should also consider impacts on air quality in air basins outside of the treatable landscape. Different characteristics, including weather (i.e. direction and speed of wind, amount of sunlight, precipitation) and geography, can

⁹ PEIR (2-1).

¹⁰ Executive Department, State of California (Governor Jerry Brown). 2018. Executive Order B-52-18. <https://fmtf.fire.ca.gov/media/1859/51018-forest-EO.pdf>

¹¹ PEIR (4-13)(“ The geographic scope for air quality is air basins within the treatable landscape.”)

affect the transport, dispersion, and deposition of air pollution.¹²¹³¹⁴ As California residents already know, smoke from wildfires and associated air pollutants may travel long distances, impacting areas far from the emission sources.¹⁵

An analysis of the air quality impacts to air basins outside the treatable landscape is unlikely to necessitate changes to the CalVTP. Instead, evaluating air quality impacts to basins likely to be affected by CalVTP activities, even if those basins are not within the treatable landscape, will facilitate a more transparent and comprehensive comparison of the effects of the plan and to the status quo. CAL FIRE should use the PEIR to demonstrate the long-term reduction of air pollution by reducing the intensity of wildfires to air basins in and out of the treatable landscape.

O29-3
cont.

Monarch Butterfly

CAL FIRE appropriately includes an analysis of impacts to insects and other terrestrial invertebrates in the PEIR. However, the PEIR could be strengthened with additional evaluation of effects to monarch butterflies, and the application of appropriate standard practice requirements (SPRs) for any impacts.

CAL FIRE should add monarch butterflies to its Special Status Species Tables.¹⁶ The California Department of Fish and Wildlife includes monarch on its 2018 Special Animals List, conferring official recognition that monarch butterflies require special and targeted conservation efforts.¹⁷ Likewise, the California legislature has established monarch and pollinator conservation as a state priority.¹⁸ To ensure that monarch receive special and targeted conservation efforts, and are not inadvertently impacted by CalVTP treatment activities, CAL FIRE should conduct a deeper analysis of how treatments will impact both overwintering and migratory monarch habitat, and consider whether existing SPRs are sufficient.

O29-4

Evidence demonstrates declines in western monarch populations so dramatic that additional stressors may be catastrophic. As of November 2018, the western monarch population had declined

¹² Samson, P.J. 1988. Atmospheric Transport and Dispersion of Air Pollutants Associated with Vehicular Emissions in "Air Pollution, the Automobile, and Public Health." *National Academy Press*: Washington, D.C.

<https://www.ncbi.nlm.nih.gov/books/NBK218142/>

¹³ Zhou, Y. and J.I. Levy. 2007. Factors Influencing the Spatial Extent of Mobile Source Air Pollution Impacts: A Meta-Analysis. *BMC Public Health*,7(89). <https://bmcpublihealth.biomedcentral.com/articles/10.1186/1471-2458-7-89>

¹⁴ Zhou, S., S. Peng, M. Wang, A. Shen and Z. Liu. 2018. The Characteristics and Contributing Factors of Air Pollution in Nanjing: A Case Study Based on an Unmanned Aerial Vehicle Experiment and Multiple Datasets. *Atmosphere*, 9(343). <https://www.mdpi.com/2073-4433/9/9/343/pdf-vor>

¹⁵ World Health Organization. Ambient air pollution: Pollutants. Accessed August 1, 2019. <https://www.who.int/airpollution/ambient/pollutants/en/>

¹⁶ PEIR Appx Bio-3, Special Status Species Tables (no reference to monarch butterfly (*danaus plexippus*)).

¹⁷ California Department of Fish and Wildlife and California Natural Diversity Database. 2018. Special Animals List. <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109406&inline>

¹⁸ State of California. 2018. AB 2421 Wildlife Conservation Board: Monarch Butterfly and Pollinator Rescue Program. https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201720180AB2421

by 86% in just one year- a 99.4% decline from 1980 population estimates.¹⁹ Current threats contributing to the decline of monarch populations in the western U.S. include habitat loss, parasites, disease, predators and climate change.

Western monarch populations overwinter in forested groves along the California coast from Mendocino County to Baja, California.²⁰ Overwintering sites are primarily composed of eucalyptus, but monarch will also select Monterey pine, Monterey cypress, western sycamore, and other native tree species when they are available. Loss and degradation of California’s overwintering habitat is “an important driver of western monarch decline,” and overwintering may be “the most vulnerable element of the monarch’s annual cycle.”²¹ According to the Western Association of Wildlife Agencies, changes to overwintering sites can make the few remaining locations incompatible for monarch.

Habitat alterations, whether by human activity (tree trimming, cluster tree removal) or as the result of some natural factor (fire, severe storms, drought, disease or senescence of trees) can alter the structure and microclimate of an overwintering site leading to less suitable habitat conditions (Sakai and Calvert 1991; Pelton et al. 2016).²²

In the PEIR, CAL FIRE correctly identifies “eucalyptus trees supporting overwintering monarch butterflies” as an example of an Environmentally Sensitive Area (ESHA).²³ SPR BIO-8 requires that the agency identify and minimize impacts in coastal zone ESHAs.²⁴ Certain treatment and ecological restoration activities would be allowed under the PEIR – without further analysis – if a suite of conditions are met.

However, some conditions are internally inconsistent, as applied to monarch overwintering sites. While vegetation treatments that “improve the habitat function of the affected ESHA, improve habitat values, and prevent loss or type conversion of habitat and vegetation types that define the ESHA, or loss of special-status species that inhabit the ESHA”²⁵ are commendable and will confer protection to precarious monarch populations, other conditions may undermine efforts to conserve remaining overwintering sites. For example, treatments that “control invasive plants” may include eucalyptus removal. Treatments that trim or limb woody species “as necessary to reduce ladder

¹⁹ Xerces Society. 2018. Record Low Number of Overwintering Monarch Butterflies in California—They Need Your Help! <https://xerces.org/2019/01/17/record-low-overwintering-monarchs-in-california/>

²⁰ Schultz, C.B., L.M. Brown, E. Pelton and E.E. Crone. 2017. Citizen Science Monitoring Demonstrates Dramatic Declines of Monarch Butterflies in Western North America. *Biological Conservation*, 214. <https://www.sciencedirect.com/science/article/pii/S0006320717304809>

²¹ Pyle and Monroe 2004, Pelton et al. 2016.

²² WAFWA, Western Monarch Butterfly Conservation Plan 2019-2069 (January 2019) <https://www.wafwa.org/Documents%20and%20Settings/37/Site%20Documents/Committees/Monarch/Western%20Monarch%20Butterfly%20Conservation%20Plan%202019-2069.pdf>

²³ PEIR (3.6-12).

²⁴ PEIR (3.6-123).

²⁵ PEIR (3.6-40).

fuels” or “restore densities” characteristic of healthy stands may alter the microclimate of an overwintering grove such that it is of no use to monarch.

O29-5
cont.

Additionally, we note that these conditions can be modified. Modifications that deviate significantly from those conditions contemplated in the PEIR should trigger additional analysis under CEQA.

After monarch leave overwintering sites, the butterflies and other pollinators require high quality breeding, feeding and sheltering habitat that includes native milkweeds and other native forbs, shrubs, and trees that provide nectar.²⁶ This [map](#)²⁷ shows the migratory patterns of the monarch butterfly as they pass through the Central Valley both on their way from and back to the coast. The Central Valley hosts such a notable concentration of potential habitat resources that WAFWA considers losses to Central Valley monarch habitat to be critically dangerous.

Given the juxtaposition of the Central Valley between coastal overwintering sites and western breeding habitats, further loss of milkweed and nectar resources in [the Central Valley] may be especially detrimental to first spring generation of monarchs.²⁸

O29-6

Additionally, 369,858 acres (nearly 28%) of the treatable landscape is comprised on annual/perennial grassland.²⁹ Grasslands include native wildflowers and yellow star-thistle, which are valuable nectar resources for monarch butterflies and other pollinators.

Although the treatable landscape includes 605,440 acres in the Great Valley Section (Central Valley),³⁰ and many acres of annual and perennial grasslands, impacts to monarch and other pollinator habitat are not evaluated in the PEIR. Due to the especially dramatic decline of Western monarch populations, we encourage CAL FIRE to take a hard look at the potential impacts of vegetation treatment on monarch and other pollinators, as well as opportunities to mitigate those impacts, through, for example, application of the SPR BIO series mitigation measures.

Conclusion

We commend CAL FIRE for undertaking this comprehensive approach to address California’s wildfire crisis. With the minor adjustments we suggest in this comment, we believe that the PEIR can provide a meaningful way for the agency and public to make transparent, well-informed

O29-7

²⁶ Marty, J. and E. Zakowski. 2019. Monarch Butterfly Habitat Creation in California: A Technical Field Guide. *Environmental Defense Fund*. <https://www.edf.org/sites/default/files/content/Monarch-Butterfly-Habitat-Creation-in-California-A-Technical-Field%20Guide.pdf>

²⁷ Xerces Society. Monarch Migration: Spring and Fall. <https://www.xerces.org/wp-content/uploads/2015/10/MonarchMap-NatureServe-10.20.png>

²⁸ WAFWA, Western Monarch Butterfly Conservation Plan 2019-2069 (January 2019) <https://www.wafwa.org/Documents%20and%20Settings/37/Site%20Documents/Committees/Monarch/Western%20Monarch%20Butterfly%20Conservation%20Plan%202019-2069.pdf>

²⁹ PEIR (3.6-23).

³⁰ PEIR (3.6-40).

decisions about how to reduce the likelihood of catastrophic fires and to fully evaluate the trade-offs required to do so.

If you would like to discuss the ideas expressed in this comment, please do not hesitate to contact the undersigned.

O29-7
cont.

Sincerely,

Eric Holst
Associate Vice President, Working Lands
Environmental Defense Fund
916.492.7080
eholst@edf.org



Letter
O30

August 9, 2019

Via Federal Express overnight delivery

Board of Forestry and Fire Protection
ATTN: Edith Hannigan, Board Analyst
1416 9th Street, Room 1506-14
Sacramento, CA 95814

Re: California Vegetation Treatment Program Draft Program Environmental Impact Report

Dear Ms. Hannigan:

The California Chaparral Institute (“CCI”), Center for Biological Diversity (“Center”), Endangered Habitats League (“EHL”), and Sierra Club submit the following comments on the Draft Program Environmental Impact Report (“PEIR”) for the State’s proposed California Vegetation Treatment Program (“CALVTP” or “Program”).

The Center is a non-profit organization with more than one million members and online activists and offices throughout the United States, including in Oakland, Los Angeles, and Joshua Tree, California. The Center’s mission is to ensure the preservation, protection and restoration of biodiversity, native species, ecosystems, public lands and waters and public health. In furtherance of these goals, the Center’s Climate Law Institute seeks to reduce U.S. greenhouse gas emissions and other air pollution to protect biological diversity, the environment, and human health and welfare.

EHL is southern California’s only regional conservation organization, and it and its members have a direct stake in maintaining the health of Southern California’s unparalleled biodiversity and the native ecosystems that support it. EHL is deeply concerned about the far-ranging environmental impacts that would result from implementation of the VTP. EHL is represented in this matter by the firm Shute, Mihaly, & Weinberger LLP.

The Sierra Club is one of the nation's oldest and largest environmental organizations. It was founded in 1892 by a group of Californians, including John Muir, who valued the state's wilderness areas. Today, the Club has chapters in every state and a national membership that exceeds 1 million. Sierra Club California promotes the preservation, restoration and enjoyment of the environment through regulatory and legislative advocacy on behalf of California's 400,000 members and supporters.

030-1

The California Chaparral Institute is a nonprofit education and research organization dedicated to the protection of the chaparral ecosystem, helping communities live safely in fire prone environments, and inspiring a greater understanding of and appreciation for Nature.

The catastrophic wildfires in northern and southern California these past two years have demonstrated more than ever the urgency of addressing wildfire issues in the state. But the Board and CALFIRE seem to have drawn all the wrong lessons from those tragic events. At a time when the Board should be prioritizing the safety and protection of existing communities and developing strategies for minimizing the number of people and homes that are placed in harm's way, it is instead proposing to waste precious State resources on vegetation treatment strategies that leading wildfire experts agree are ineffectual at protecting lives and property from the most destructive wildfires. Indeed, the proposed CALVTP would serve to facilitate the expansion of development into extremely hazardous wildlands. And it does so at the cost not only of the State's limited fire-fighting resources, but of much of our natural and biological heritage.

Unfortunately, the CALVTP PEIR neither discloses nor provides adequate mitigation for the devastating impacts the program will have on the environment. We had hoped that after the last three iterations of the CALVTP (2013, 2016 and 2017), the new program would address the numerous deficiencies identified by wildlife scientists and environmental organizations and others. But after carefully reviewing the current PEIR, it is clear that the new program has the potential to be even more devastating than the Board of Forestry and Fire Protection's (Board) prior proposals as it proposes to substantially increase the amount of vegetation treated every year. The current PEIR also continues to violate the requirements of the California Environmental Quality Act ("CEQA"),¹ because it: (1) fails to adequately describe the CALVTP; (2) fails to properly analyze the Program's environmental impacts; (3) relies on ineffective and unenforceable Standard Project Requirements (SPRs)/mitigation to conclude that the CALVTP's impacts would be reduced to levels that are less than significant; and (4) fails to undertake a legally sufficient study of alternatives to the Program. Such fundamental errors undermine the integrity of the PEIR.

I. Like the Prior Versions of the CALVTP, the Current CALVTP Will Cause Adverse Environmental Impacts and Will Fail to Its Stated Goal of Safeguarding People and Protecting Property.

The proposed CALVTP is a plan to burn, treat with herbicides, and otherwise modify the vegetative landscape of California on a massive and unprecedented scale. The Board's Program would require the implementation of fuel management activities that would make about 20 million acres of land across the State subject to treatment.² That is an area equal to South Carolina.

¹ Cal. Env'tl. Quality Act ("CEQA"), Cal. Pub. Res. Code § 21000 *et seq.*

² California Board of Forestry and Fire Protection, California Vegetation Treatment Program, Draft Program Environmental Impact Report (June 24, 2019), ("PEIR") at 2-1.

First, the PEIR’s statement of purpose for the CALVTP is vague and unclear, which infects the PEIR’s entire analysis, including the analysis of whether the CALVTP can meet its objectives. The Introduction indicates that the primary purpose of the VTP is “to reduce wildfire risks and avoid or diminish the harmful effects of wildfire on the people, property, and natural resources in the state of California”³

Next, the premise upon which the CALVTP relies—the Board’s view that a substantial part of this vast amount of land must be “treated” to prevent wildfire—is not only grandiose but, for California’s extensive shrub vegetation and forest communities, entirely lacking in scientific basis. For this very large and vital component of the CALVTP, we can find no evidence in the PEIR that the CALVTP would even achieve the Board’s mission of safeguarding the people and protecting the property and resources of California from the hazards associated with wildfire. Nor can we find any evidence in the PEIR that the Program would be effective for non-wind driven fires or that non-wind-driven fires cause significant harm, or that the PEIR would lead to ecological restoration.

Throughout the PEIR, the PEIR consistently conflates the objectives of community fire safety and ecosystem restoration.⁴ However, these are distinct objectives that are accomplished using different management tools. The PEIR must clearly distinguish between these two different objectives—community fire safety and ecological restoration—as well as the management actions that are being proposed to accomplish each objective, how these actions will achieve each objective, and the impacts of the management actions. However, the CALVTP’s proposal to massively ramp up vegetation clearing in the state would accomplish neither objective.

Environmental organizations, wildlife regulatory agencies, and expert scientists in the fields of fire science and ecology, fire management, biogeography, native plant ecology, biodiversity, and wildlife conservation biology submitted extensive comments on the prior versions of the CALVTP and the associated PEIRs.⁵ Wildlife regulatory agencies, including the

³ PEIR at 1-1 (“The proposed CalVTP defines the vegetation treatment activities and associated environmental protections that would occur within the SRA to reduce wildfire risks as one component of the range of actions being implemented by the state to respond to California’s wildfire crisis.”) and 1-3 (“The proposed CalVTP directs the implementation of vegetation treatments to reduce wildfire risks and avoid or diminish the harmful effects of wildfire on the people, property, and natural resources in the state of California.”)

⁴ For example, ecological restoration is categorized as one of the three vegetation treatment types proposed for the purpose of “reducing the likelihood of a ground fire increasing in intensity and helping fire responders more easily contain a fire,” along with WUI fuel reduction and fuel breaks (PEIR at ES-3). However, ecological restoration is not a treatment type, but an objective with its own set of management tools.

⁵ The following letters and reports are attached and are incorporated by reference into this letter: Letter from Dan Silver, Executive Director, Endangered Habitats League to George Gentry, Executive Officer, Board of Forestry and Fire Protection (Feb. 25, 2013) ; Letter from CJ Fotheringham, Research Ecologist, Edith Hannigan (March 31, 2016); Letter from Wayne D. Spencer, Chief Scientist, Conservation Biology Institute to Board of Forestry and Fire Protection (March 31, 2016);and Letter from Alexandra D. Syphard, Research Scientist, Conservation Biology Institute to George Gentry, Executive Officer, Board of Forestry and Fire Protection (Feb. 25, 2013); ; Letter from Shaye Wolf, Senior Scientist, Center for

United States Fish and Wildlife Service and the California Department of Fish & Wildlife, and other environmental organizations also submitted comments on the prior versions of the CALVTP and PEIR.⁶ Each of these letters and reports explained that the prior CALVTPs approach to reducing the severity and frequency of fires lacked a reasoned justification based on science and substantial evidence. These letters remain relevant to the current CALVTP and its PEIR.

The signatories to this letter have a long history of supporting reasonable strategies to protect people and property from the hazards associated with wildfire. Recognizing the critical importance of promoting sound wildfire prevention strategies, EHL for example, has at least twice offered the assistance of its world-renowned scientists to collaborate and assist on an approach to treating vegetation that would better protect natural resources and incorporate the most recent science.

Upon learning that the prior versions of the CALVTP had been withdrawn, we were optimistic that the Board would take these suggestions and offers of assistance to heart and make substantive modifications to the CALVTP and revise the EIR in a manner that complied with CEQA. Yet, after carefully reviewing the 2019 version of the CALVTP and the current PEIR, it is clear that the Board's response to these comments and suggestions is, lamentably, denial. The vast majority of concerns raised by fire ecologists and wildlife regulatory agencies and scientists about the Program and its EIR appear to have been rejected out of hand. Rather than

O30-2
cont.

Biological Diversity to Edith Hannigan, Land Use Planning Program Manager, California Board of Forestry and Fire Protection (Mar. 1, 2019); Letter from Shaye Wolf, Center for Biological Diversity to Edith Hannigan, Board Analyst, California Board of Forestry and Fire Protection (Jan. 12, 2018); Letter from Shaye Wolf, Senior Scientist, Center for Biological Diversity to Edith Hannigan, Board Analyst, California Board of Forestry and Fire Protection (May 31, 2016).

⁶ The following letters and reports are attached and are incorporated by reference into this letter: Letter from Karen A. Goebel, Assistant Field Supervisor, U.S. Department of the Interior, Fish and Wildlife Service to George Gentry, Executive Officer, California Department of Fire and Forest Protection (Feb. 25, 2013); Letter from Robert Taylor, Fire GIS Specialist, Department of the Interior, National Park Service, to George Gentry, Executive Officer, Board of Forestry and Fire Protection (Feb. 25, 2013); Memorandum from Sandra Morey, Deputy Director, Ecosystem Conservation Division, California Department of Fish and Wildlife to George Gentry, Executive Officer, Board of Forestry and Fire Protection, (Feb. 25, 2013); Letter from Van K. Collinsworth, Natural Resource Geographer, to George Gentry, Executive Officer, Board of Forestry and Fire Protection (Feb. 21, 2013); Letter from Richard W. Halsey, Director, California Chaparral Institute to George Gentry, Executive Officer, Board of Forestry and Fire Protection (Jan. 25, 2013); Letter from Richard W. Halsey, Director, California Chaparral Institute and Justin Augustine, Attorney, Center for Biological Diversity to George Gentry, Executive Officer, Board of Forestry and Fire Protection, (Feb. 25, 2013); Letter from Richard W. Halsey, Director, California Chaparral Institute to George Gentry, Executive Officer, Board of Forestry and Fire Protection (Apr. 8, 2013); Letter from Anne S. Fege, Adjunct Professor, Department of Biology, San Diego State University to George Gentry, Executive Officer, Board of Forestry and Fire Protection (Feb. 23, 2013); Letter from Greg Suba, Conservation Program Director, California Native Plant Society to George Gentry, Executive Officer, Board of Forestry and Fire Protection (Feb. 25, 2013); Letter from Frank Landis, Conservation Chair, California Native Plant Society to George Gentry, Executive Officer, Board of Forestry and Fire Protection (Feb. 15, 2013); Letter from Sweetgrass Environmental Consulting to George Gentry, Executive Officer, Board of Forestry and Fire Protection (Feb. 25, 2013).

substantively revise the CALVTP or accurately analyze the environmental harm that would accompany the Program, the CALVTP and its PEIR merely seek to defend the faulty science, erroneous assertions and conclusions of the prior documents.

O30-2
cont.

Indeed, as with the prior versions of the CALVTP, the current CALVTP indefensibly treats the diverse ecological regions of the state with the same broad brush. For the scrub systems of Southern California, in particular, its management prescriptions—to the extent they could be gleaned from the PEIR—are bereft of scientific basis and lack demonstrable efficacy. Furthermore, the assumption that fire safety could be manufactured through vegetation removal is illusory as certain of the strategies contemplated by the CALVTP are likely to result in an increase in fire frequency. Equally problematic, the CALVTP would encourage the continued expansion of the Wildland Urban Interface (“WUI”) and the resulting vicious cycle of additional home construction in high fire hazard areas. Furthermore, despite admonitions from world-renowned fire scientists and wildlife ecologists, the current CALVTP would *substantially increase the pace and scale of treatments compared to the prior CALVTPs*. While the prior CALVTPs called for treating 60,000 acres per year, the current program has a target of treating 250,000 acres per year!⁷

O30-3

CALFIRE’s response to the 2017 catastrophic fires throughout the state epitomizes the agency’s flawed approach to wildfire management largely because it continues to conflate fire prevention and fuel treatment. According to Ken Pimlott, “CALFIRE is focused on increasing the pace and scale of fire prevention activities, including vegetation management, across the state.”⁸ “These activities play a critical role in helping reduce the impacts large, damaging wildfires have on our communities.”⁹ We agree that any sound wildfire plan must include fire prevention techniques that reduce sources of ignitions (e.g., arson watch programs, undergrounding powerlines, building roadside barriers to make it harder for motor vehicles to start roadside fire, regulating commerce in fireworks and teaching people not to operate power equipment in the weeds in red flag weather), but the CALVTP does not actually include any fire prevention techniques. Instead, the CALVTP focuses on fuel treatments such as prescribed burns that have been proven to be ineffective in suppressing the wind driven fires that currently plague California. In fact, as fire scientists explain, in southern California, there is no evidence of any inhibitory effect of past fire on subsequent fire. This is because fire occurs in only two percent of the vegetation statewide each year and, therefore, the probability of a wildfire encountering a recently burned area is very low.¹⁰ In addition, California shrub and grass fuels accumulate rapidly and are sufficient to carry a repeat fire very soon (e.g., within 1 or 2 years) after previous fire.¹¹

O30-4

In contrast to prior versions, the PEIR correctly acknowledges that the proposed vegetation treatments will be ineffective in slowing or stopping the extreme wind-driven fires

O30-5

⁷ See PEIR, at 2-1 and 2017 CALVTP PEIR, at 2-2.

⁸ See Press Release, Bd. of Forestry and Fire Prot. and CALFIRE, Working to Increase Pace and Scale of Wildfire Prevention Activities (Dec. 19, 2017).

⁹ See Press Release, Bd. of Forestry and Fire Prot. and CALFIRE, Working to Increase Pace and Scale of Wildfire Prevention Activities (Dec. 19, 2017).

¹⁰ See Price, Owen et al., The impact of antecedent fire area on burned area in southern California coastal ecosystems, 113 J. of Envntl. Mgmt. 301 (Apr. 18, 2012).

¹¹ *Id.*

that cause the majority of homes and lives lost in California.¹² Given this reality, the PEIR then asserts that the key justification for the CALVTP is that proposed vegetation treatments will help slow and suppress non-wind-driven fires and help contain extreme fires when weather conditions shift.¹³ However, the PEIR nowhere provides empirical scientific support for these assertions. Instead the PEIR in the Wildfire analysis in section 3.17 repeatedly makes statements that are unsupported by the cited references, misrepresent the main conclusions of the studies it cites, and omits key studies and entire areas of research that are relevant to the CALVTP.

Specifically, in its Wildfire analysis, the PEIR cites three studies for its foundational claim that the proposed vegetation treatments will help slow and suppress non-wind-driven fires, thereby increasing public safety and firefighting effectiveness: Carey and Schuman (2003), Prichard et al. (2010), and Kalies and Yocom-Kent (2016):

Vegetation treatment is the primary approach to wildfire management, because it can reduce the intensity and severity of wildfire, slowing fire movement and creating favorable conditions for firefighting to protect targeted, high-value resources (Carey and Schuman 2003, Prichard et al. 2010).¹⁴

While evidence has not yet definitively concluded that forest fuel treatments lead to a reduction in the overall size of a fire (USFS 2009, Schoennagel et al. 2017), such treatments can aid in protecting public safety and homes and other structures by reducing wildfire intensity and severity in treated areas under normal fire conditions, and increasing firefighting effectiveness (Kalies and Yocom Kent 2016).¹⁵

Firefighting effectiveness was also reportedly increased by treatments, due to increased visibility in treated areas, decreased heat and smoke of wildfire, increased penetration of retardant to surface fuels, safe access to the fire, and the ability to quickly suppress spot fires in treated areas (Kalies and Yocom Kent 2016).¹⁶

¹² PEIR at ES-1 and ES-2 (“The Board also acknowledges that, given the current severity of fire hazards in the SRA, vegetation treatments may not be able to slow or halt extreme wind-driven fires.”) and 1-3 (“While vegetation treatments under the CalVTP may not be able to slow or halt the extreme fires.”)

¹³ PEIR at ES-2 (“However, most fires that occur within the state are not highly wind driven and the proposed vegetation treatments can help slow and suppress them. Vegetation treatments can also play a valuable role in containing the more extreme fires, when weather conditions shift, wind subsides, and fire intensity decreases.”) and 1-3 (“While vegetation treatments under the CalVTP may not be able to slow or halt the extreme fires, most fires that occur within the state are not highly wind driven, and the proposed vegetation treatments can help slow and suppress them. Vegetation treatments can also play a valuable role in containing the more extreme fires, when weather conditions shift, wind subsides, and fire intensity decreases.”)

¹⁴ PEIR at 3.17-3.

¹⁵ PEIR at 3.17-4.

¹⁶ PEIR at 3.17-4.

However, the cited review by Carey and Schuman (2003) specifically does not support the PEIR’s proposition, instead concluding that there is no consensus on how vegetation treatment affects wildfire hazard:

Although the assertion is frequently made that reducing tree density can reduce wildfire hazard, the scientific literature provides tenuous support for this hypothesis. This review indicates that the specifics of how prescriptions are to be carried out and the effectiveness of these treatments in changing wildfire behavior are not supported by a significant consensus of scientific research at this point in time.¹⁷

While Prichard et al. (2010) reported that thinning followed by prescribed burning reduced wildfire severity in a dry mixed conifer forest study area in Washington, while thinning alone did not, the study did not state or provide evidence that these vegetation treatments slowed fire movement or created favorable conditions for firefighting, as asserted by the PEIR.

Importantly, Kalies and Yoccom Kent (2016)’s review of empirical studies in the western U.S. specifically concluded that there is not good evidence that fuel treatments lead to increased public safety or firefighting effectiveness. Kalies and Yoccom Kent (2016) classified the data as “weak” for assessing fuel treatment effectiveness for saving human lives and property (i.e., speed of evacuation; number of homes lost/saved) and for increasing firefighting safety and decreasing firefighting costs.¹⁸ Specifically, the six papers that reported on fuel treatment effectiveness for firefighter safety, suppression factors, homes burned, heat and smoke, and visibility, were anecdotal reports except for one published study. The single published study was an anecdotal account of a single fire in a small area that provides no quantitative scientific evidence.

By contrast, numerous experts have weighed in on the inability of vegetation treatment to achieve the state’s fire management goals and the environmental impacts of these approaches. Submitted under separate cover and incorporated by reference into this letter are reports prepared by Dr. Wayne Spencer and Dr. Alexandra D. Syphard to California Board of Forestry and Fire Protection, January 10, 2018; letter from CJ Fotheringham, Research Ecologist, USGS to California Board of Forestry and Fire Protection, January 9, 2018; letter from R. Halsey et al., to California Board of Forestry and Fire Protection, January 12, 2018; letter from CJ Fotheringham, Research Ecologist, USGS to E. Hannigan, California Board of Forestry and Fire Protection, May 31, 2016; and letter from Frank Landis, Conservation Chair of the San Diego Chapter of the California Native Plant Society to E. Hannigan, California Board of Forestry and Fire Protection, May 30, 2016. These letters commented on prior versions of the CALVTP and PEIR, but the comments raised therein remain applicable to the current CALVTP and PEIR. We respectfully request that the Final EIR respond separately to each of the points raised in these letters as well as to the points raised in this letter.

¹⁷ Carey, H. and M. Schumann, Modifying wildfire behavior – the effectiveness of fuel treatments, National Community Forestry Center, Southwest Region Working Paper (2003) at 14.

¹⁸ PEIR at 3.17-4.

O30-6
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O30-7

II. The PEIR's Justifications for Failing to Provide a More Detailed Analysis of the VTP's Environmental Impacts Are Groundless.

Among the PEIR's most notable deficiencies is the lack of a detailed accounting of the CALVTP's environmental impacts. The PEIR attempts to defend its vague analysis by suggesting that the document serves as a first-tier document for later CEQA review of individual projects included in the Program and that further analysis will be undertaken as each project is implemented. This justification is unavailing. Not only does the PEIR improperly defer analysis of ascertainable environmental impacts to a future process, but that future process lacks any workable means for analyzing and mitigating the impacts of individual projects, and effectively shuts out public participation.

Under CEQA, the "programmatic" nature of this PEIR is no excuse for its lack of detailed analysis. The PEIR grossly misconstrues both the meaning and requirements of a "program" EIR by suggesting that the broad scope of the CALVTP plays an important role in determining the appropriate level of detail to include in the PEIR.¹⁹ This approach is flawed, at the outset, because CEQA mandates that a program EIR provide an in-depth analysis of a large-scale project, looking at effects "as specifically and comprehensively as possible."²⁰ Indeed, because it is designed to look at the "big picture," a program EIR must (1) provide "more exhaustive consideration" of effects and alternatives than can be accommodated by an EIR for an individual action, and (2) consider "cumulative impacts that might be slighted in a case-by-case analysis."²¹

Furthermore, regardless of whether a lead agency prepares a "program" EIR or a "project-specific" EIR under CEQA, the requirements for an adequate EIR remain the same.²² "Designating an EIR as a program EIR also does not by itself decrease the level of analysis otherwise required in the EIR."²³ Even a program-level EIR must contain "extensive, detailed evaluations" of a plan's effects on the existing environment.²⁴ The "extensive, detailed evaluations" required by CEQA are absent from the PEIR.

The PEIR's reliance on future, project-level environmental review is also misplaced. Again, CEQA's policy favoring early identification of environmental impacts does not allow agencies to defer analysis of a plan's impacts to some future EIR for specific projects

¹⁹ PEIR at 3-1.

²⁰ 14 Cal. Code. Regs. ("CEQA Guidelines") § 15168(a) & (c)(5).

²¹ § 15168(b)(1)-(2).

²² CEQA Guidelines § 15160.

²³ *Friends of Mammoth v. Town of Mammoth Lakes Redevelopment Agency*, (2000) 82 Cal. App. 4th 511, 533.

²⁴ *Environmental Planning and Info. Council v. Cnty. of El Dorado*, (1982) 131 Cal. App. 3d 350, 358. See also *Kings Cnty Farm Bureau v. City of Hanford* (1990) 221 Cal. App. 3d 692, 721-723 (where the record before an agency contains information relevant to environmental impacts, it is both reasonable and practical to include that information in an EIR).

O30-8

O30-9

contemplated by that plan.²⁵ As CEQA Guidelines section 15152(b) explicitly warns, “[t]iering does not excuse the lead agency from adequately analyzing reasonably foreseeable significant environmental effects of the project and does not justify deferring such analysis to a later tier EIR or negative declaration.”

Moreover, as discussed below, there is no guarantee in this case that such future, detailed environmental review will happen or, if it does, that environmental impacts will be identified or mitigated. Under these circumstances, a detailed environmental impact analysis must be performed now, prior to the CALVTP’s approval. As the Court of Appeal explained in *Stanislaus Natural Heritage Project v. County of Stanislaus*, CEQA requires that this environmental review take place before project approval.²⁶ In *Stanislaus*, the court rejected the argument that a programmatic EIR for a specific plan and general plan amendment could ignore site-specific environmental review because future phases of the development project would include environmental review, stating that tiering “is not a device for deferring the identification of significant environmental impacts that the adoption of a specific plan can be expected to cause.”²⁷

Because the Board intends to allow unspecified project-level approvals in reliance on this PEIR, and because there is no indication that any meaningful future environmental review will take place, the PEIR must include a detailed, project-level analysis of the impacts that could arise from the implementation of all aspects of the CALVTP, as well as a meaningful discussion of alternatives and mitigation measures, so the Board and the public can understand the consequences of the CALVTP before considering whether it should be approved.

One approach the Board could take is to prepare separate EIRs for each of the ecological regions in the state. As the PEIR explains, the setting description and environmental analysis for the CALVTP are organized into geographic regions reflecting different environmental characteristics.²⁸ Despite this alleged organizational structure, the EIR preparers appear to have been tasked with a herculean task – the program is simply too massive to easily facilitate the level of impact analysis CEQA requires. Preparing separate EIRs for the state’s geographic regions would greatly enhance the ability of the EIR preparers to comprehensively analyze—and the public to meaningfully comment on—the environmental effects of the CALVTP.

O30-9
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²⁵ See *Bozung v. Local Agency Formation Comm’n* (1975), 13 Cal.3d 263, 282-84; *Christward Ministry v. Superior Court*, (1986) 184 Cal.App.3d 180, 194 (; *City of Redlands v. Cnty. of San Bernardino*, (2002) 96 Cal. App. 4th 398, 409.

²⁶ *Stanislaus Natural Heritage Project v. County of Stanislaus* (1996) 48 Cal. App. 4th 182, 196.

²⁷ *Id.* at 635.

²⁸ PEIR at 3-3.

III. The PEIR's Description of the CALVTP Is Vague and Not Finite.

An accurate description of a proposed Program is “the heart of the EIR process” and necessary for an intelligent evaluation of the project’s environmental effects.²⁹ Consequently, courts have found that, even if an EIR is adequate in all other respects, the use of a “truncated project concept” violates CEQA and mandates the conclusion that the lead agency did not proceed in a manner required by law.³⁰ Thus, an inaccurate or incomplete project description renders the analysis of significant environmental impacts inherently unreliable. While extensive detail is not necessary, the law mandates that EIRs should describe proposed projects with sufficient detail and accuracy to permit informed decision-making.³¹

Here, one of the essential defects of this PEIR is its thoroughgoing failure to accurately describe the Program. The PEIR identifies categories of fuel management treatment types (e.g., wildland-urban interface; fire breaks and ecological restoration) and explains that within each of these treatment categories, a menu of treatment activities would be implemented to modify fuels within the landscape. These treatment activities include, for example, prescribed burning, mechanical and manual treatments, and herbicide applications.³² The scale of the Program is staggering as it would subject about 20 million acres of land throughout the state to fuel management treatments.³³ The PEIR identifies the objective of the CALVTP as substantially increasing the pace and scale of treatments to achieve a statewide total of at least 500,000 acres per year on non-federal lands which results in a target of up to 250,000 acres per year.³⁴ Yet, when one attempts to drill down to determine how the Program would actually be implemented, it becomes clear that the Board has no idea which program activities would take place or where they would be implemented. Consequently, the vagueness of the PEIR’s description of the CALVTP creates numerous, varied, and incurable analytical problems.

For example, the PEIR states that the factors to be considered when designing and implementing, for example, prescribed burning, would include environmental impacts.³⁵ Yet, the PEIR provides no criteria as to how the vague reference to “environmental impacts” would be applied in determining whether prescribed burning would be conducted in any particular location. How would the Board decide whether an area proposed for a prescribed burn should come at the expense of important environmental resources such as special-status plant or wildlife species? How would the Board decide whether and where to implement a mosaic pattern for a prescribed burn? This built-in conflict is bound to arise over and over again during the Program’s implementation, yet the PEIR does not provide even a hint as to how conflicts such as these would be resolved. In essence, the Project Description here is no more than an idea – an idea that may be changed in a never-ending variety of ways over the next decade or more.

²⁹ *Sacramento Old City Ass’n*, 280 Cal. Rptr. at 485; see *Rio Vista Farm Bureau v. Cnty. of Solano*, (1992) 5 Cal. App. 4th 351, 369-370 (project description is the “sine qua non” of an informative and legally sufficient EIR) (citations omitted).

³⁰ *San Joaquin Raptor/Wildlife Rescue Ctr.*, (1992) 27 Cal. App. 4th 713, 728 (citations omitted).

³¹ See CEQA Guidelines § 15124 (requirements of an EIR).

³² See PEIR at 2-7; 2-18.

³³ *Id.* at 2-4.

³⁴ *Id.* at 2-1.

³⁵ *Id.* at 2-20.

As another example, the PEIR includes principles for implementing fuel break treatment projects but the principles are so broad and vague as to be meaningless. The PEIR explains that “given the diversity of California fuel types, topography, and weather conditions, general guidelines under this program for standardized fuel width or volume of fuels to remove *would not be feasible*.”³⁶ Again, without specificity regarding this critical Program component, there can be no analysis of the environmental impacts that would result from the construction of fuel breaks that are proposed over 3.1 million acres of land.³⁷

O30-10
cont.

Piling even more uncertainty on top of the already vague Project Description, this PEIR, like its predecessors, lacks sufficient maps of potential treatment areas. The PEIR explains, for example, that the area to be treated by a wild urban interface (“WUI”) fuel reduction activity was defined through a complex modeling process.³⁸ The PEIR shows a map of WUI treatment areas.³⁹ However, Figure 2.4 is not a serious tool of measurement to identify treatment locations within the WUI areas because its scale is too small to be useful. There is no logical reason why the maps could not have been printed at a larger scale on multiple pages.

The deficient maps undermine the PEIR’s ability to adequately describe the Program. Importantly, as Frank Landis explains, the maps are based on an outdated and problematic fire hazard analysis, which, in turn, was based on faulty science.⁴⁰ Consequently, the PEIR does not even disclose the location of specific lands that would be treated by the CALVTP. As Frank Landis explains:

O30-11

How can local impacts be analyzed if the time and place affected by any program is not specified? How can cumulative impacts be analyzed if there is insufficient local data on where and when the program occurs, and what is affected? How can landowners determine whether they or neighboring properties are susceptible to the CALVTP, in case they want to take action? Why does the PEIR show maps that are insufficiently detailed for any landowner to determine whether they are subject to the proposed program or not?⁴¹

It is especially disconcerting that the CALVTP relies on deficient mapping because state agencies, including the California Department of Fish & Wildlife and the California Native Plant Society, have mapped California’s vegetation and have created two editions of *The Manual of California Vegetation* (MCV).⁴² Dr. Landis explains that the MCV contains a wealth of information on fire ecology.⁴³ CEQA requires an EIR to include the precise location and boundaries of a proposed project to be shown on a detailed map.⁴⁴ Because the CALVTP PEIR fails to include this fundamental information, there can be no meaningful evaluation of the

³⁶ PEIR at 2-13 (emphasis added).

³⁷ *Id.* at 2-13.

³⁸ *Id.* at 2-9.

³⁹ PEIR Figure 2.4.

⁴⁰ See Letter from Frank Landis, Conservation Chair, California Native Plant Society to Edith Hannigan, Board Analyst, Board of Forestry and Fire Protection (May 30, 2016) (incorporated by reference).

⁴¹ See *Id.* at 4.

⁴² *Id.* at 10.

⁴³ *Id.*

⁴⁴ CEQA Guidelines § 15124(a).

Program’s environmental impacts. Further, the failure to include a sufficiently detailed map contravenes the PEIR’s purpose as an informational document that engenders public participation.⁴⁵

O30-11
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Perhaps the most problematic component of the PEIR’s Project Description though pertains to the Program’s approach to the “Implementation Framework” processes. We understand that the CALVTP is meant to provide an overview of the comprehensive wildfire risk reduction program, but the PEIR must still provide sufficient information to be able to determine how the CALVTP would be implemented and how it will affect environmental resources. The document suggests that subsequent review would occur during the implementation process,⁴⁶ but the Board’s consideration of this EIR and the CALVTP is the only opportunity for the public to understand and weigh in on the big-picture questions that will determine the magnitude of ecological impacts that would accompany the broad implementation of this Program. There is no indication anywhere in the PEIR that subsequent implementing projects will undergo environmental review.

O30-12

The PEIR states that CALFIRE would evaluate a proposed treatment project by completing a Project-Specific Analysis (PSA), the purpose of which is to evaluate the proposed treatment site and activity to determine whether the environmental effects have been addressed in the program EIR.⁴⁷ Yet, there are so many loopholes in the CALVTP’s suggested mechanism, that it is almost impossible to envision that a comprehensive evaluation of the CALVTP’s environmental impacts would *ever* be undertaken.

First, the sheer number of treatment projects that are envisioned to be implemented on a yearly basis and the geographic scope of these projects alone would suggest that determining each subsequent activity’s environmental impacts would not be subject to a sufficient level of scrutiny. In other words, the multi-step project implementation process—of which the determination of environmental impacts is only one part—would be extraordinarily cumbersome, to put it mildly. While we can find no indication in the current PEIR of the number of projects the Board anticipates undertaking on an annual basis, the prior CALVTP called for implementing about 230 projects every year at an average project size of 260 acres.⁴⁸ That is about one project for every workday of the year. Compared to the prior version of the CALVTP, the current CALVTP would, at a minimum, more than quadruple the amount of area treated on an annual basis (from 60,000 acres per year to at least 250,000 acres per year).⁴⁹ Assuming 250,000 acres of land per year and the same project size, this could equate to more than 900 discrete treatment projects per year. Yet, the PEIR also acknowledges the Executive Order B-52-18 target of treating 500,000 acres of land per year within a five year period.⁵⁰ If this target were reached, this could equate to 1,800 discrete treatment projects per year.

O30-13

⁴⁵ See e.g. *In re Bay-Delta Programmatic Env’t Impact Report Coordinated Proceedings* (2008) 43 Cal. App. 4th 1143, 1162; *No Oil Inc. v. City of Los Angeles* (1974) 13 Cal. 3d 68.

⁴⁶ PEIR at 2-29.

⁴⁷ *Id.*

⁴⁸ California State Board of Forestry and Fire Protection, Program Environmental Impact Report for the Vegetation Treatment Program (2017) (2017 PEIR) at 2-12.

⁴⁹ PEIR at 2-2.

⁵⁰ PEIR at 6-6.

For each such project, CALFIRE would have to: (a) prepare the PSA; (b) submit the PSA for three levels of review (county, regional and state); and (c) send the final determination to the Sacramento CEQA Coordinator.⁵¹ Does the state even have sufficient staff to undertake this process for each of the projects that are proposed for implementation every year? The 2017 PEIR itself answers this question in the negative, stating that one key advantage of the Program compared to the No Program alternative is that the No Program alternative would require the preparation of further CEQA review – which is “costly, time consuming, repetitive, and *unsustainable from a personnel standpoint.*”⁵²

O30-13
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Second, despite the state’s lack of capacity to carry out such review, there is simply no assurance that the SPR Process would ensure that environmental resources are protected. The PEIR explains that a CEQA Coordinator would make a final determination as to whether the subsequent activity is considered within the scope of the Program EIR.⁵³ If it is determined that the subsequent activity falls within the scope of the Program EIR, then “*no additional CEQA documentation would be required.*”⁵⁴ Thus, it would appear that a subsequent activity need only be included in the scope of the Program EIR to escape further environmental review. Due to the excessively broad scope of the CALVTP and the fact that the PEIR acknowledges the potential environmental impacts from all projects that could be implemented over a 20 million acre area, it is almost impossible to imagine the CEQA Coordinator(s) making a determination that a subsequent activity is outside the scope of the Program EIR. Given the absence of any specific environmental analysis in the Program EIR, the process is effectively designed so that such analysis will never occur.

O30-14

Third, there is no assurance that the PSR process would result in meaningful project-level environmental review pursuant to CEQA. The PEIR includes numerous statements indicating that this PEIR satisfactorily evaluates the environmental impacts that would occur from the CALVTP’s projects. For example, it states: “Because the intent of the PEIR is to disclose potentially significant impacts that are reasonably foreseeable to occur from any of the treatments within the extent of the treatable landscape, it is expected that, due to site-specific conditions, many proposed vegetation treatment projects will result in less severe impacts than those identified in the PEIR.”⁵⁵ Statements such as these give the distinct impression that the Board and CALFIRE have pre-determined that any environmental impacts will be effectively addressed by the measures in the PEIR and that no further environmental review need be undertaken.

Moreover, there is no indication that a Coordinator would have the necessary expertise to evaluate all of the projects’ potential environmental consequences—much less to do so at the rate envisioned by the CALVTP. A Coordinator may have sufficient experience to generally manage an environmental review process, but it is highly unlikely that this person has, for example, the necessary hydrologic expertise to evaluate a treatment project’s potential to degrade water quality. Indeed, the PEIR explains that the project proponent would actually be responsible for

O30-15

⁵¹ *Id.* at 2-29; 2-30.

⁵² 2017 PEIR at 3-8 (emphasis added); *see also* 2017 PEIR, at 2-37.

⁵³ PEIR at 2-30.

⁵⁴ *Id.* (emphasis added).

⁵⁵ *Id.* at PD-3/4.

making the determination as to whether mitigation measures would even need to be applied.⁵⁶ Proper environmental review requires experts covering the range of impact categories of which CEQA requires analysis—the opinion of a “coordinator” on these subjects does not pass legal muster. In light of these procedural uncertainties, the PEIR’s assurance that future projects would undergo further environmental review is meaningless, misleading, and disingenuous.

O30-15
cont.

It is particularly disconcerting that the CEQA Coordinator’s review and determination would happen behind closed doors.⁵⁷ It is clear that the public would have no opportunity to be notified of, or influence, the process. The public’s right to participate in the environmental review process under CEQA is mandated in the statute itself and is vigilantly protected by the California courts that interpret and enforce CEQA.⁵⁸ Put simply, the public participation process is a critical tool to ensure that the public has an opportunity to hold agencies accountable for their actions.

O30-16

Because the PEIR provides no assurance that the environmental impacts from the CALVTP’s subsequent treatment activities will be adequately evaluated or mitigated, the document is grossly deficient. The CALVTP must be redesigned and the PEIR revised to commit to a program that ensures that each subsequent activity will receive full environmental review pursuant to CEQA *with full public participation*. As part of this program redesign, the revised PEIR must demonstrate, with substantial evidence, that the state has sufficient staffing to provide comprehensive environmental review for all of the subsequent activities given its current staffing and budgetary limitations.

O30-17

In sum, the total failure of the Project Description makes the rest of the PEIR inadequate as well. Because the specific details of the Program are unknown, its environmental impacts cannot be accurately analyzed, nor can effective mitigation be identified. The fog of uncertainty surrounding the Program and its impacts leads inevitably to deferred analysis and mitigation; over and over again the PEIR states essentially that impacts will be determined as they happen and mitigation will be worked out then. This strategy is not surprising given the inadequate Project Description, but it is unlawful under CEQA.⁵⁹

IV. The PEIR’s Mitigation Measures Are Flawed.

O30-18

The PEIR’s approach to mitigation is flawed in a number of ways in addition to the unlawful deferred mitigation contemplated in the PEIR and described above. The PEIR unlawfully purports to rely upon Standard Project Requirements in lieu of mitigation measures,

⁵⁶ See PEIR at PD-3/4 (“Through the PSA, the project proponent will document the significance of each relevant impact and if determined to be less than significant, mitigation measure(s) need not apply.”).

⁵⁷ See *id.* at PD-3/1 (stating that if a treatment project is within the scope of this Program EIR, the project proponent may act on the project “*without public circulation of any additional environmental document*”) (emphasis added).

⁵⁸ CEQA § 21091.

⁵⁹ CEQA Guidelines § 15162(a)(1)(B) (“Formulation of mitigation measures shall not be deferred until some future time.”)

fails to include monitoring and reporting requirements to ensure mitigation measures achieve their desired goals, and neglects to consult with other agencies as required by Senate Bill 85.

O30-18
cont.

A. SPRs Are Mitigation Measures and Must Be Treated As Such.

Throughout the PEIR, CALFIRE presents Standard Project Requirements (“SPRs”) that “are intended to avoid and minimize environmental impacts and comply with applicable laws and regulations.”⁶⁰

The PEIR broadly presumes these SPRs will mitigate any potentially significant impacts from the project.⁶¹ But this approach runs afoul of CEQA’s requirement that impacts first be fully disclosed and analyzed separately from the mitigation analysis. As the court noted in *Lotus v. Dep’t of Transportation*, separation of significance and mitigation/alternatives analysis ensures that appropriate mitigation measures have been considered and that decision makers and the public can “intelligently analyze the logic of the [agency’s] decision.”⁶²

O30-19

In *Lotus*, the EIR for a highway through an old-growth redwood stand assumed that because certain mitigation measures to minimize damage were proposed as part of the project, the impact was non-significant. The court, however, held that the EIR was deficient because it failed to first identify the significant impacts and then appropriate alternatives and mitigation measures, consequently “subvert[ing] the purposes of CEQA by omitting material necessary to informed decisionmaking and informed public participation.”⁶³ Similarly, the PEIR impermissibly conflates the impacts analysis and mitigation analysis to the extent that it assumes SPRs will reduce impacts to the level of non-significance.

B. The Mitigation Measures Should Include a Monitoring and Reporting Requirement.

CEQA’s requirements for mitigation measures are intended to ensure those measures are enforceable and are actually implemented. CEQA prohibits public agencies from approving projects with significant environmental impacts unless all feasible mitigation measures to minimize those impacts are adopted.⁶⁴

O30-20

In doing so, the lead agency must “ensure that feasible mitigation measures will actually be implemented as a condition of development, and not merely adopted and then neglected or disregarded.”⁶⁵ Mitigation measures must be “fully enforceable,” either through conditions of approval or through incorporation into a project itself.⁶⁶ Where feasible mitigation measures exist, a public agency cannot approve a project without specifically finding that legally adequate

⁶⁰ PEIR at p. 2-31; 3-2

⁶¹ See, e.g. PEIR at 3.2-16; 3.8-37; 3.8-38.

⁶² *Lotus v. Dept. of Transportation*, (2014) 223 Cal. App. 4th 645, 655-656.

⁶³ *Id.* at 658.

⁶⁴ See Pub. Res. Code §§ 21002, 21002.2(b).
21081.

⁶⁵ *Federation of Hillside and Canyon Assns. v. City of Los Angeles*, 83 Cal.App.4th 1252, 1261 (2000) (italics omitted).

⁶⁶ CEQA Guidelines § 15126.4(b).

measures have been incorporated into the project.⁶⁷ An agency also must adopt a mitigation monitoring and reporting plan to ensure that measures are actually implemented following project approval.⁶⁸ If mitigation is infeasible, the agency must make a specific finding to this effect, and must adopt a statement of overriding considerations before it can approve the project.⁶⁹ Here, the PEIR fails to provide for monitoring and reporting to ensure that, once projects are undertaken pursuant to the Program, the mitigation measures actually reduce impacts down to less-than-significant levels.

O30-20
cont.

C. The Mitigation Measures Violate SB 85.

Senate Bill 85, passed in the 2019-2020 session, provides that CALFIRE must collaborate with California Department of Fish and Wildlife, the U.S. Fish and Wildlife Service, and the California Water Board “when selecting a fuel reduction project” in order to “ensure the design of the fuel reduction project protects water resources and wildlife habitat while addressing fire behavior and public safety.” There is absolutely no indication in the PEIR that such consultation occurred. CALFIRE should consult these three agencies, as required, and update the PEIR’s mitigation measures accordingly.

O30-21

V. The PEIR’s Analysis and Mitigation of the VTP’s Environmental Impacts are Inadequate.

A. The PEIR Fails to Adequately Analyze and Mitigate Impacts to Air Quality.

The PEIR acknowledges that air quality impacts from treatment plans are potentially significant and unavoidable.⁷⁰ Exhaust from off-road equipment, machine-powered tools, helicopters, and on-road vehicle trips, fugitive dust emissions from vehicle travel and other activities, and smoke generated by prescribed burns will emit criteria pollutants in quantities that exceed the levels of significance established by California’s air districts.⁷¹ However, the PEIR’s analysis of these impacts is insufficient because (1) the PEIR’s assumption that prescribed burns emit fewer criteria and toxic air pollutants than wildfires is not based on substantial evidence; (2) the PEIR fails to analyze all reasonably foreseeable air quality impacts from the CALVTP; and (3) the finding that emissions from the combustion of vegetation treated with herbicides will have no significant health impacts is not based on substantial evidence. As such, the PEIR is inadequate and the air quality impacts of the CALVTP must be revisited.

O30-22

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⁶⁷ See Pub. Res. Code § 21081(a)(1).

⁶⁸ Pub. Res. Code § 21081.6(a)(1); CEQA Guidelines § 15097.

⁶⁹ Pub. Res. Code § 21081(a)(3), (b); CEQA Guidelines §§ 15091(a)(3), 15093.

⁷⁰ PEIR at 3.4-26; 33.

⁷¹ PEIR at 3.4-26.

i. The PEIR’s analysis of air quality impacts is based on the faulty assumptions that prescribed burns will significantly reduce the prevalence of wildfires and the associated air quality impacts.

All determinations in an EIR must be supported by substantial evidence.⁷² The PEIR’s assertion that “wildfires are generally far more likely to result in adverse air quality and public health impacts than prescribed burns,” which cites an unpublished fact sheet by Berger et al. (2018), is not supported by substantial evidence.⁷³ On this point, the PEIR fails to accurately represent the state of scientific studies on the air quality and public health impacts of prescribed and wildfire smoke, which is an evolving research area. In regard to PM2.5 exposure, a 2018 review by Navarro et al. (2018) that examined the differences in ambient community-level exposures to particulate matter (PM2.5) from smoke from wildfire fire versus prescribed fire found that “PM2.5 concentrations from wildfire smoke were found to be significantly lower than reported PM2.5 concentrations from prescribed fire smoke.”⁷⁴ The study noted that their “review highlights a need for a better understanding of wildfire smoke impact over the landscape” in order to properly assess population exposure to smoke from different fire types.

Further, the PEIR asserts that wildfires have a long smoldering phase which is associated with higher output of particulate matter. However, the PEIR never cites any evidence that wildfires have more smoldering combustion than prescribed fires for the same amount of acreage burned or biomass consumed. Rather, prescribed burns are typically characterized by low-intensity fire and associated smoldering combustion, while mixed-severity wildfires include high-intensity fire patches with high-efficiency flaming combustion that produces less particulate matter for the same amount of biomass consumed.⁷⁵

Most importantly, the PEIR’s assertion that wildfires are more likely than prescribed fires to result in adverse air quality also requires confirmation that prescribed burning will significantly reduce the prevalence of wildfires, and this has not been established. Prescribed fires do not stop wildfires, and there is a low probability that areas that treated with prescribed burn will overlap with wildfire occurrences. Further, any potential reduction in fire intensity resulting from prescribed fire lasts only 10 to 20 years, meaning that using prescribed fire as a means to reduce the intensity of wildland fire requires burning a forest area every 10-20 years.⁷⁶ This represents a large increase over current rates of burning and the associated emissions of criteria air pollutants and hazardous air pollutants, which must be accounted for.

O30-23

⁷² See Pub. Res. Code § 21168.5.

⁷³ PEIR at 3.4-19 (“Thus, wildfires are generally far more likely to result in adverse air quality and public health impacts than prescribed burns (Berger et al. 2018).”)

⁷⁴ Navarro, Kathleen M. et al., A review of community smoke exposure from wildfire compared to prescribed fire in the United States, 9 Atmosphere 185 (2018).

⁷⁵ Reid J.S. et al., A review of biomass burning emissions part II: intensive physical properties of biomass burning particles, 5 Atmospheric Chemistry and Physics 799 (2005).

⁷⁶ Rhodes, John J. and William L. Baker, Fire probability, fuel treatment effectiveness and ecological tradeoffs in western U.S. public forests, 1 Open Forest Science Journal 1(2008).

ii. The PEIR impermissibly fails to analyze all significant impacts to air quality.

An EIR must identify and describe the project’s significant environmental effects, including direct, indirect, and long-term effects.⁷⁷ The failure to do so violates CEQA. The PEIR’s analysis of the air quality impacts of the CALVTP is inadequate because it fails to analyze (1) emissions associated with hauling or processing of biomass and (2) emissions generated by pile burning.⁷⁸

O30-24

1. The PEIR impermissibly fails to analyze the air quality impacts from biomass hauling and bioenergy operations.

The PEIR does not consider emissions associated with any hauling or processing of biomass, ostensibly because these impacts are too uncertain to quantify.⁷⁹ In the alternative, the PEIR claims that the fact that biomass facilities must conduct CEQA review obviates the agency from its responsibility to consider emissions from biomass facilities.⁸⁰ Neither assertion is correct, and the PEIR’s failure to adequately analyze these emissions renders the impacts analysis inadequate.

The fundamental purpose of an environmental impact report is to provide public agencies and the public in general with detailed information about the effect which a proposed project is likely to have on the environment.⁸¹ To that end, the EIR must include a detailed statement setting forth *all* significant effects on the environment of the proposed project.⁸²

O30-25

Both biomass energy generation and biomass hauling have serious implications for air quality. Biomass generation can result in significant emissions of nitrogen oxides, carbon monoxide, particulate matter, and black carbon.⁸³ Biomass combustion for energy also emits large amount of federally regulated hazardous air pollutants (“HAPs”), including hydrochloric acid, dioxins, benzene, formaldehyde, arsenic, chromium, cadmium, lead, and mercury.⁸⁴ Many biomass air pollution emissions can exceed those of coal-fired power plants even after application of best available control technology.⁸⁵ Exhaust from biomass hauling—generally performed by diesel-powered trucks—emits criteria pollutants, as mentioned in the PEIR.⁸⁶ The fact that the percentage of vegetation hauled to biomass facilities “is expected to increase over time” renders these emissions even more significant.⁸⁷

⁷⁷ Pub. Resources Code § 21100(b)(1); 14 CCR § 15126.2(a).

⁷⁸ PEIR at 3.4-27.

⁷⁹ PEIR at 3.4-27.

⁸⁰ *Id.*

⁸¹ Pub. Res. Code, § 21061.

⁸² Pub. Res. Code, § 21100 (b)(1) (emphasis added)

⁸³ Booth, Mary S., *Trees, Trash and Toxics: How biomass energy has become the new coal* (2004), available at <https://www.pfpi.net/wp-content/uploads/2014/04/PFPI-Biomass-is-the-New-Coal-April-2-2014.pdf>.

⁸⁴ *Id.* at p. 38.

⁸⁵ *Id.* at p. 41.

⁸⁶ PEIR at 3.4-26

⁸⁷ PIER at 2-23.

Biomass energy generation is an integral part of the vegetation treatment plan that is the subject of this PEIR and therefore the impacts on air quality from these activities must be analyzed in the PEIR. A Program EIR is an EIR which may be prepared for a series of actions that can be characterized as “one large project.”⁸⁸ Activities comprise “one large project” if they are related geographically, as logical parts in the chain of contemplated actions, in connection with common governing rules, regulations, or plans, or as individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways.⁸⁹ Both biomass energy generation and hauling fit each of these requirements—although only one must be met for an action to be considered part of a project for the purposes of CEQA review. First, Biomass hauling and biomass energy generation occurs in the same vicinity as treatment; the feedstock is trucked from the treatment location to the biomass generation facility, and biomass generation facilities (particularly the smaller-capacity facilities required pursuant to Senate Bill 1122⁹⁰) are generally sited near the feedstock source in order to reduce transportation costs. Next, biomass hauling and biomass energy generation are logical endpoints of the treatment plan. The mechanical treatments contemplated under the project include chipping, masticating, and chopping targeted vegetation.⁹¹ These end-products are not suitable for use as merchantable timber; instead, they can be processed into alternative wood products, burned in piles, or combusted in a biomass generation facility. And, in fact, the PEIR explicitly contemplates that “approximately 5 percent [of vegetation removed during mechanical treatment will be] hauled to a biomass facility.”⁹² Further, biomass energy generation is intrinsically connected with the CALVTP because treatment conducted pursuant to the plan will provide the feedstock. Finally, biomass hauling and generation is subject to the same clean air statutes and regulations as treatment activities and will have the same impacts as the treatment activities—emissions of criteria pollutants and, as discussed below, toxic air pollutants and greenhouse gases.⁹³

O30-25
cont.

Next, the fact that individual biomass facilities must also comply with CEQA does not obviate CALFIRE of its duty to identify and analyze all significant impacts of the Program. CALFIRE’s failure to analyze the emissions from biomass hauling and processing amounts to impermissible deferment. CEQA contemplates consideration of environmental consequences at the “earliest possible stage, even though more detailed environmental review may be necessary later.”⁹⁴ Consequently, “CEQA's demand for meaningful information is not satisfied by simply stating information will be provided in the future.”⁹⁵ The CEQA Guidelines explain, “Tiering

O30-26

⁸⁸ CEQA Guidelines § 15168(a)

⁸⁹ *Id.* at § 15168(a)(1-4)

⁹⁰ Senate Bill 1122 (Rubio 2012).

⁹¹ *See e.g.*, PEIR at 3.4-26.

⁹² PEIR at 2-23.

⁹³ *See generally*, PEIR Section 3.4.1.

⁹⁴ *Environmental Protection Information Center v. California Dept. of Forestry & Fire Protection*, 44 Cal. 4th 459, 503 (2008)

⁹⁵ *Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova*, 40 Cal. 4th 412, 431 (2007) (internal citations omitted)(EIR held to be inadequate because it did not adequately identify and evaluate future water sources for a mixed-used development and therefore failed to consider all significant impacts from the project); *see also Stanislaus Natural Heritage Project v. County of Stanislaus*, 48 Cal. App. 4th 182, 199 (1996) (EIR for proposed multistage development project that

does not excuse the lead agency from adequately analyzing reasonably foreseeable significant environmental effects of the project and does not justify deferring such analysis to a later tier EIR or negative declaration.”⁹⁶ Tiering “is not a device for deferring the identification of significant environmental impacts that the adoption of a specific plan can be expected to cause.”⁹⁷

Emissions from biomass hauling and biomass energy generation are reasonably foreseeable impacts of the Program and must be adequately analyzed. The PEIR claims that emissions from biomass hauling and bioenergy generation are unquantifiable due to a “high level of uncertainty about what types of processing-related activities would occur and the distances feedstock would be hauled,”⁹⁸ but this is not the case. Indeed, the PEIR *explicitly predicts* that 5 percent of biomass from mechanical treatments will be hauled to a biomass facility.⁹⁹ And the emissions from biomass energy generation are well-known. Biomass power plants must submit emissions data to the California Air Resources Board (“CARB”) annually, and this information is available on CARB’s website.¹⁰⁰ Smaller biomass energy facilities such as those eligible for the biomass feed-in tariff (“BioMAT”) must apply for air permits from their local air pollution control districts; these applications and concomitant CEQA analysis quantifies estimated emissions from these smaller facilities. For example, the Mariposa Biomass Project Conditional Use Permit estimates emissions from a 2.4 MW community-based biomass energy facility that uses forest-based woody biomass as feedstock.¹⁰¹

O30-26
cont.

Table 1. Stationary Source Emission Estimates

	IC Engine*		WoodRoll**		Flare***		Total for 2.4 MW	MC APCD CEQA Threshold	Major Source and ERC Threshold
	Emission Factor	Total Emissions	Emission Factor	Total Emissions	Emission Factor	Total Emissions			
	(lb/hr)	TPY	(lb/hr)	TPY	(lb/hr)	TPY	TPY	TPY	TPY
VOC	1.12	4.90	0.05	0.20	0.003	0.002	5.80	100	100
NOx	1.67	7.30	0.71	3.10	0.133	0.100	11.93	100	100
CO	5.55	24.30	0.07	0.30	0.027	0.020	27.96	100	100
PM10	0.23	1.00	0.07	0.30	0.000	0.000	1.48	100	100
PM2.5	0.23	1.00	0.07	0.30	0.000	0.000	1.48	100	100
SOx	0.43	1.90	0.48	2.10	0.000	0.000	4.55	100	100

* - IC Engine emission factors from Manufacturer's (GE Jenbacher specifications w/SCR control device and catalytic converter

** - WoodRoll emissions factors based on measurements conducted by Cortus Energy

*** - Emergency/standby flare emissions factors from Cortus Energy based on ordinary LPG/Propane burner

contained no analysis of water supply impacts of later phases, and deferred analysis to later EIRs, held to be inadequate)

⁹⁶ 14 CCR § 15152

⁹⁷ *Stanislaus* 48 Cal. App. 4th at 199.

⁹⁸ PEIR at 3.4-27.

⁹⁹ PEIR at 2-23.

¹⁰⁰ California Air Resources Board, Facility Search Engine,

<https://www.arb.ca.gov/app/emsinv/facinfo/facinfo.php?dd=> (last visited on August 5, 2019)

¹⁰¹ County of Mariposa, CEQA Initial Study for Mariposa Biomass Project Conditional Use Permit CUP 2017-117 (2018), available at <https://www.mariposacounty.org/DocumentCenter/View/63721/CUP-2017-117-MARIPOSA-BIOMASS-CEQA-INITIAL-STUDY-SUBSEQUENT-MND>

Further, the locations of the biomass facilities are readily available. The California Public Utilities Commission (“CPUC”) provides information on the location of all biomass energy facilities with generation capacity equal to or greater than 1 MW—effectively, all biomass energy facilities.¹⁰² The byproducts of mechanical treatments will be hauled to the nearest biomass facility in order to reduce transportation costs and emissions from vehicle exhaust.

Contrary to CALFIRE’s representations, emissions from biomass energy deriving feedstock from the Program is reasonably foreseeable: CALFIRE has estimated the quantity of feedstock that will be hauled and processed in biomass energy facilities, and the emissions and location data for these facilities is readily available. Further, when producing an EIR, an agency “is encouraged to make reasonable forecasts.”¹⁰³ The clearly defined contours of the Program and the available information regarding biomass facility locations and emissions render an analysis of the impacts of biomass hauling and processing exceedingly reasonable.

O30-26
cont.

2. The PEIR impermissibly fails to analyze emissions from pile burning.

The PEIR fails to disclose that the emissions analysis for Impact AQ-1 presented in Table 3.4-6 does not report emissions that would come from pile burning, and therefore the impacts analysis is inadequate. The Program description clearly identifies pile burning as one of the treatment activities that will occur under the prescribed burning category, where piling burning is defined as placing removed fuels in piles on site and burning them, as distinct from broadcast burning.¹⁰⁴ Of vegetation removed from mechanical thinning, 25 percent will be burned in piles.¹⁰⁵ As such, pile burning is clearly part of the “one large project” contemplated in the PEIR and CEQA requires that its impacts be analyzed.¹⁰⁶

O30-27

Nowhere in the PEIR does CALFIRE claim that these emissions are too speculative to quantify. Rather, the emissions analysis for Impact AQ-1 presented in Table 3.4-6 simply fails to report emissions that would come from pile burning. The treatment emissions analysis in Appendix AQ-1 does not appear to calculate the emissions that would come from pile burning, and only appears to calculate emissions from broadcast burning. The failure to analyze impacts from pile burning renders the impacts analysis inadequate.

iii. The PEIR’s assertion that combusting vegetation treated with herbicides poses no significant human health risk is unfounded.

O30-28

The two studies that the VTP relies on to assert that there are no human health risks from burning vegetation treated with herbicides (Bush et al. 1998, McMahon and Bush 1998) are more than 20 years old, and the cited National Wildfire Coordinating Group report (NWCG 2018)

¹⁰² California Energy Commission, California Operational Power Plants May 2018 (2018), available at https://ww2.energy.ca.gov/maps/powerplants/Power_Plants_Statewide.pdf

¹⁰³ *San Francisco Ecology Center v. City and County of San Francisco*, (1975) 48 Cal. App. 3d 584, 595 (emphasis added) (court upheld an EIR that allegedly overestimated the number of passengers who would use a proposed airport because the estimate was supported by expert opinion).

¹⁰⁴ PEIR at 2-18, Table 2-3.

¹⁰⁵ *Id.*; See also PEIR at 2-23.

¹⁰⁶ 14 CCR § 15168(a).

refers these older studies rather than providing updated information. Importantly, the cited studies do not appear to have tested all the herbicides that are proposed for use in the Program, and Bush et al. (2000) reported Margin of Safety (MOS) values for triclopyr ester and imazapyr (both proposed herbicides under the VTP) that were below the MOS values that are considered safe.¹⁰⁷

O30-28
cont.

B. The PEIR Fails to Adequately Analyze and Mitigate Impacts from Greenhouse Gas Emissions.

The PEIR acknowledges that GHG emissions from treatment activities pose a potentially significant and unavoidable impact.¹⁰⁸ Exhaust from off-road equipment, machine-powered tools, and helicopters, exhaust from on-road vehicle trips, and smoke generated by prescribed burns are projected to emit 4,051 million metric tons of GHGs annually—the equivalent of 860,085 passenger vehicles driven for one year.¹⁰⁹ However, this figure dramatically understates the true climate implications of the Program. The PEIR is fundamentally flawed in that (1) the regulatory setting fails to consider U.S. obligations under international law; (2) the environmental setting is predicated on the flawed assumption that climate change will lead to greater fire severity; (3) the environmental setting fails to address evidence that mechanical treatments emit more GHGs than wildfires; (4) the PEIR erroneously claims compliance with all existing plans and policies aimed at reducing GHG emissions; (5) the PEIR fails to identify a clear and consistent baseline against which to measure climate impacts; (6) the PEIR fails to consider that reduction in forest carbon stocks may lead to a net GHG emissions increase; (7) the PEIR fails to analyze GHG emissions from biomass hauling and processing and pile burning.

O30-29

i. The regulatory setting should consider U.S. obligations under international law.

The Regulatory Setting section outlines the federal, state, and local regulations that apply to greenhouse gas emissions. This section should also discuss U.S.’s climate commitment under the Paris Agreement.¹¹⁰ The United States committed to the climate change target of holding the long-term global average temperature “to well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels” under the Paris Agreement, as a legally binding instrument through executive agreement.¹¹¹ The Paris Agreement established the 1.5°C climate target given the evidence that 2°C of warming would lead to catastrophic climate harms, as synthesized in the Intergovernmental Panel on Climate

O30-30

¹⁰⁷ Bush, P.B. et al., Fire and pesticides: a review of air quality considerations, *in Fire and forest ecology: innovative silviculture and vegetation management*, W. Keith Moser and Cynthia E Moser (eds.) (2000) at 135.

¹⁰⁸ PEIR at 3.8-17.

¹⁰⁹ PEIR at 3.8-11.

¹¹⁰ Under the Paris Agreement rules, the U.S. cannot officially pull out of the Paris Agreement until November 4, 2020 at the earliest.

¹¹¹ United Nations Framework Convention on Climate Change, Conference of the Parties, Nov. 30-Dec. 11, 2015, Adoption of the Paris Agreement Art. 2, U.N. Doc. FCCC/CP/2015/L.9 (December 12, 2015), <http://unfccc.int/resource/docs/2015/cop21/eng/109.pdf> (“Paris Agreement”). The United States signed the Paris Agreement on April 22, 2016 as a legally binding instrument through executive agreement, and the treaty entered into force on November 4, 2016.

Change (IPCC) *Special Report on Global Warming of 1.5°C*.¹¹² In pathways consistent with limiting warming to 1.5°C, global net anthropogenic CO₂ emissions must decline by about 45 percent from 2010 levels by 2030, reaching net zero around 2050.¹¹³ For a two-thirds chance for limiting warming to 1.5°C, CO₂ emissions must reach net zero in 25 years.¹¹⁴

O30-30
cont.

ii. The environmental setting is predicated on the flawed assumption that climate change will lead to greater fire severity.

The CEQA Guidelines require that an EIR “demonstrate that the significant environmental impacts of the proposed project were adequately investigated and discussed and it must permit the significant effects of the project to be considered in the full environmental context.”¹¹⁵ The PEIR fails to provide a scientific basis for the assumption that anthropogenic climate change will result in an increase in wildfire severity, thus justifying vegetation treatments that will ostensibly reduce the incidence and severity of wildfires.¹¹⁶

The assumption that vegetation treatment will reduce the incidence and severity of wildfires is flawed, rendering the discussion of environmental setting inadequate. As detailed elsewhere in these comments, while scientific evidence suggests that anthropogenic climate change is contributing to a longer fire season and more acres burned in California, scientific studies have not found significant trends in fire severity in California’s forests in terms of proportion, area, and/or patch size, including recent studies by Picotte et al. 2016 (California forest and woodland) and Keyser and Westerling 2017 (California forests).¹¹⁷ Most recently, Keyser and Westerling (2017) tested trends for high severity fire occurrence for western United States forests, for each state and each month. The study found no significant trend in high severity fire occurrence during 1984-2014, except for Colorado. The study also found no significant increase in high severity fire occurrence by month during May through October, and no correlation between fraction of high severity fire and total fire size. Furthermore, Parks et al. (2016) projected that even in hotter and drier future forests, there will be a decrease or no change

O30-31

¹¹² Intergovernmental Panel on Climate Change, *Global Warming of 1.5°C*, An IPCC special report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty (2018).

¹¹³ Intergovernmental Panel on Climate Change, *Global warming of 1.5°C*. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty (2018) at SPM-15.

¹¹⁴ Intergovernmental Panel on Climate Change, *Global warming of 1.5°C*. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty (2018) at SPM-15.

¹¹⁵ CEQA Guidelines § 15125(c)

¹¹⁶ PEIR at 3.8-8.

¹¹⁷ Picotte, J.J. et al., 1984-2010 trends in fire burn severity and area for the coterminous US, 25 *International Journal of Wildland Fire* 413 (2016); Keyser, A. and A.L. Westerling, Climate drives inter-annual variability in probability of high severity fire occurrence in the western United States, 12 *Environmental Research Letters* 065003 (2017).

in high-severity fire effects in nearly every forested region of the western U.S., including California, due to reductions in combustible understory vegetation over time.¹¹⁸

O30-31
cont.

iii. The environmental setting fails to address evidence that mechanical treatments generate more greenhouse gas emissions than wildfires.

As stated above, the CEQA Guidelines require that an EIR analyze environmental impacts in light of “the full environmental context” in which the project will take place.¹¹⁹ In its description of the environmental setting against which greenhouse gas (GHG) emissions will take place, the PEIR impermissibly fails to disclose important scientific studies that demonstrate that the PEIR’s estimates of the carbon emissions produced by wildfire in California are large overestimates, and that tree harvest and thinning are a much larger source of carbon emissions than wildfire in the state. The Board has an obligation to disclose these studies¹²⁰ Further, these omissions hinder an accurate assessment of the GHG emissions impacts of massively ramping up vegetation thinning treatments in the state, as proposed by the CALVTP.

O30-32

First, the PEIR fails to acknowledge scientific studies showing that carbon emissions in California, and across the U.S., from tree harvest and thinning are much higher than the emissions from wildfire, bark beetles, or drought. Berner et al. (2017) reported that logging was the largest cause of tree mortality in California forests between 2003 and 2012, followed by wildfire and then bark beetles.¹²¹ Furthermore, Harris et al. (2016) reported that between 2006 and 2010 logging was responsible for 60% of the carbon losses from California’s forests, compared to 32% from wildfire.¹²² This is because wildfire consumes only a minor percentage of forest carbon while improving availability of key nutrients and stimulating rapid forest regeneration. When trees die from drought and native bark beetles, no carbon is consumed or emitted initially, and carbon emissions from decay are small and slow; meanwhile, decaying wood keeps forest soils productive and enhances carbon sequestration capacity over time. In contrast, logging and thinning results in a large net loss of forest carbon storage, and a substantial overall increase in carbon emissions that can take decades, if not a century, to recapture with regrowth.¹²³

¹¹⁸ Parks, S.A. et al., How will climate change affect wildland fire severity in the western US? 11 Environmental Research Letters 035002 (2016).

¹¹⁹ [CEQA Guidelines § 15125\(c\)](#).

¹²⁰ *Madera Oversight Coalition, Inc. v County of Madera* 199 Cal. App 4th 48, 104 & FN 32 (2011), overruled on other grounds in *Neighbors for Smart Rail v Exposition Metro Line Constr. Auth.* (2013) 57 C4th 439.

¹²¹ Berner, Logan T. et al., Tree mortality from fires, bark beetles, and timber harvest during a hot and dry decade in the western United States (2003-2012), 12 Environmental Research Letters 065005 (2017).

¹²² Harris, N.L. et al., Attribution of net carbon change by disturbance type across forest lands of the conterminous United States, 11 Carbon Balance and Management 24 (2016).

¹²³ Searchinger, T.D. et al., Fixing a critical climate accounting error, 326 Science 527 (2009); Hudiburg, T.W. et al., Regional carbon dioxide implications of forest bioenergy production, 1 Nature Climate Change 419 (2011); Campbell, J.L. et al., Can fuel-reduction treatments really increase forest carbon storage in the western US by reducing future fire emissions? 10 Frontiers in Ecology and Environment 83 (2012); Holtmark, Bjart, The outcome is in the assumptions: Analyzing the effects on atmospheric CO₂ levels of increased use of bioenergy from forest biomass, 5 GCB Bioenergy 467 (2012); Mitchell, S.R. et

Secondly, the PEIR fails to disclose that its estimates of wildfire carbon emissions in the state are significant over-estimates due to the use of invalid modeling assumptions, as described most recently by Stenzel et al. (2019).¹²⁴ These carbon accounting errors undermine the CALVTP's approach to wildfire and vegetation management and corrupt the PEIR's analysis.

Stenzel et al. (2019) demonstrates that commonly-used models for estimating wildfire emissions typically significantly over-estimate these emissions by using unrealistic biomass combustion factors and failing to accurately quantify biomass in standing dead trees. The study highlights that commonly used models overestimate the wildfire emissions from California's carbon-dense forests by three-to-four times that of actual field-based values, based on reviewing Yosemite forests as a case study: "Our results illustrate that the use of inaccurate combustion coefficients in models can double forest fire emissions estimates across the western United States. Overestimates increase to three to four times in carbon-dense forests such as the YFDP [Yosemite Forest Dynamics Plot], mostly because models incorrectly combust live trees. Treating carbon released over years to centuries as an immediate emission by equating combustion with mortality is simply inaccurate. Omitting snag representation in models compounds this error, because of altered decay and combustion dynamics."¹²⁵ Stenzel et al. (2019) found that the largest discrepancies between modeled and observed combustion of aboveground biomass exist for live, mature trees, which are the dominant pool of aboveground carbon. While models estimate live tree stem combustion at 30%–80% in high-severity events, post-fire observations in the western United States indicate actual combustion is nearly nonexistent for mature trees in fire-prone ecosystems. Most models also lack standing dead tree carbon pools.

Stenzel et al. (2019) highlights California as an example where the government is making land management decisions based on faulty overestimates of wildfire emissions:

Contemporary CO₂ emissions to the atmosphere from fire are often significantly exaggerated because of public and policymaker misconceptions that forests commonly "burn to the ground" during fire and that mortality equals emissions. The reality is instead negligible stem combustion of live, mature trees (i.e., <5%), followed by gradual decomposition over years to centuries. Modeled estimates of fire emissions reinforce public misconceptions, as tree mortality is often mistranslated into 30%–80% of tree carbon emitted immediately and is in conflict with observations. It is important to rectify overestimates because governments are currently using mortality and emissions estimates from fire to inform land management decisions intended to mitigate climate change (California, Executive Department, 2018; ...).¹²⁶

The PEIR fails to disclose that its wildfire emissions estimates suffer from the carbon accounting errors highlighted by Stenzel et al. (2019), and represent large overestimates of actual wildfire emissions in California. For example, the wildfire GHG emissions estimates reported in

al., Carbon debt and carbon sequestration parity in forest bioenergy production, 4 Global Change Biology Bioenergy 818 (2012).

¹²⁴ Stenzel, Jeffrey E. et al., Fixing a snag in carbon emissions estimates from wildfires, Global Change Biology DOI: 10.1111/gcb.14716 (2019).

¹²⁵ Stenzel et al. (2019) at 7.

¹²⁶ Stenzel et al. (2019) at 1-2.

PEIR Table 3.8-2 are derived using the First Order Fire Effects Model (FOFEM) model developed by the U.S. Forest Service.¹²⁷ However, the FOFEM model has long been shown to significantly overestimate combustion and therefore wildfire emissions. For example, French et al. (2011) report field-data-based wildfire emissions results compared with FOFEM modeling results, finding that FOFEM over-estimated wildfire emissions generally by twofold to threefold (e.g., Biscuit fire, Boundary fire).¹²⁸

The PEIR also reports estimates of carbon loss from natural and working lands between 2001 and 2014, concluding that the losses are primarily from wildfire¹²⁹ based on the Inventory of Ecosystem Carbon in California's Natural and Working Lands.¹³⁰ However, the Inventory makes the fundamental errors described in Stenzel et al. (2019) in calculating wildfire GHG emissions. Specifically, the LandFire model used by the Inventory classifies post-forest-fire vegetation categories as having less carbon than they actually do. First, the model does not account for the large stores post-fire carbon persisting in killed trees and other unburned fuels.¹³¹ In practice, the model effectively assumes that when trees are killed, they are vaporized immediately and all the carbon goes into atmosphere, which is demonstrably incorrect. Second, the model makes broad assumptions about changes in vegetation categories based on LandFire satellite imagery (which the Inventory acknowledges leads to substantial vegetation category classification inaccuracy¹³²) and the mean carbon density in each vegetation category. Significant wildfire emissions overestimates can occur when a mature forest that has high-intensity fire is reclassified as shrubland but still has large amounts of carbon stores in the snags and downed logs that are not counted.

In short, in failing to provide an accurate assessment the carbon emissions from wildfire and vegetation thinning in the state, the PEIR hinders an adequate assessment of the GHG emissions impacts of massively ramping up vegetation thinning treatments in the state, as proposed by the CALVTP.

¹²⁷ California Air Resources Board, Estimation Methods, <https://ww3.arb.ca.gov/cc/inventory/pubs/estimationmethods.pdf> (last visited Aug. 5, 2019).

¹²⁸ French, Nancy H.F. et al., Model comparisons for estimating carbon emissions from North American wildland fire, 116 *Journal of Geophysical Research* G00K05 (2011).

¹²⁹ PEIR at 3.8-2 (“It is estimated that California’s natural and working lands lost approximately 170 MMT of carbon between 2001 and 2014. Most of these losses were due to wildfire. This loss of carbon is equivalent to cumulative emissions of 630 MMTCO₂e of previously sequestered carbon removed from the land over the same period (applying the atomic weight ratio of 3.67 for carbon to CO₂).”)

¹³⁰ California Air Resources Board, An Inventory of Ecosystem Carbon in California’s Natural and Working Lands, 2018 Edition, https://ww3.arb.ca.gov/cc/inventory/pubs/nwl_inventory.pdf (last visited Aug. 5, 2019).

¹³¹ California Air Resources Board, Technical Support Document for the Natural & Working Lands Inventory, December 2018 Draft, https://ww3.arb.ca.gov/cc/inventory/pubs/nwl_inventory_technical.pdf (last visited Aug. 5, 2019), at 19 (“The fire-attributed stock changes account only for carbon contained in live and dead pools associated with the post-fire (e.g. 2012) vegetation type, and have no memory of the previous vegetation type, i.e. they do not account for potential post-fire carbon persisting in unburned fuels or in killed trees.”)

¹³² California Air Resources Board, An Inventory of Ecosystem Carbon in California’s Natural and Working Lands, 2018 Edition, https://ww3.arb.ca.gov/cc/inventory/pubs/nwl_inventory.pdf, at 47-48.

iv. Compliance with Applicable Land Use Plans Is Not Evidence that the Program Will Reduce Greenhouse Gas Emissions, and the PEIR Fails to Consider that the CALVTP Will Conflict With Greenhouse Gas Emissions Reductions Plans.

The PEIR would comply with the *2017 Scoping Plan*, the *Draft California 2030 Natural and Working Lands Climate Change Implementation Plan*, and the *California Forest Carbon Plan*. The latter two of these plans are fundamentally flawed and compliance with these two plans should not serve as the basis for a finding that implementation of the Program would not result in a cumulatively considerable contribution to climate change.

As detailed in comments from the Center and other groups, a large body of scientific evidence indicates that the management strategies outlined in the Forest Carbon Plan—massive increases in thinning/logging paired with burning of woody biomass in bioenergy facilities — will reduce (not increase) overall forest carbon storage and lead to higher greenhouse gas emissions in the state.¹³³ That comment letter is hereby incorporated by reference.

The Natural and Working Lands Climate Change Implementation Plan calls for similarly massive increases in mechanical thinning and other treatment types that will decrease forest carbon sequestration and increase greenhouse gas emissions. As detailed in a comment letter from the Center, the CALAND model upon which this plan is predicated is plagued with methodological issues that render it incapable of accurately evaluating the carbon consequences of particular management interventions.¹³⁴ The model also fails to even consider conservation-based forest management strategies. The PEIR itself acknowledges that the CALAND model is incapable of adequately assessing the carbon impacts of the treatment activities set forth in the Program.¹³⁵

As such, it is inaccurate to claim, as the PEIR does, that compliance with these two plans will help “reduce GHG emissions and increase carbon sequestration” and therefore have a less than significant impact. Rather, Cal Fire should reevaluate the flawed assumption that treatment types such as mechanical thinning result in net GHG emissions reductions.

Further, the PEIR fails to consider that the Program is inconsistent with other state plans. Increased removals of carbon from forests and increased operational CO₂ emissions over the next 10 years will likely conflict with science-driven greenhouse gas reduction goals established in the 2017 Scoping Plan, Executive Order B-30-15, and Executive Order S-3-05. IN particular, the 2017 Scoping Plan states, “California’s forests should be healthy carbon sinks that minimize black carbon emissions where appropriate, supply new markets for woody waste and

¹³³ The following letter is hereby incorporated by reference: Letter from Center for Biological Diversity et al. to Forest Carbon Action Team, c/o California Department of Forestry and Fire Protection (Mar. 17, 2017).

¹³⁴ The following letter is hereby incorporated by reference: Letter from Center for Biological Diversity to California Air Resources Board and California Natural Resources Agency (Oct. 30, 2017).

¹³⁵ PEIR at p. 3.8-11.

non-merchantable timber, and provide multiple ecosystem benefits.”¹³⁶ Furthermore, Executive Order S-3-05 set a statewide greenhouse gas emissions reduction target of 1990 levels by 2020, and Executive Order B-30-15 set the greenhouse gas target of 40% below 1990 levels by 2030. And while none of these referenced plans set a specific numerical target for forest carbon, removals of carbon from forests and resulting CO2 emissions need to be evaluated in light of these targets and cannot be ignored.

O30-34
cont.

v. The PEIR’s analysis of the significance of impacts from greenhouse gas emissions is flawed.

The PEIR acknowledges that GHG emissions from treatment activities pose a potentially significant and unavoidable impact.¹³⁷ Treatment activities alone will emit approximately 4,051 million metric tons of GHGs. The potential for these activities to reduce forest sequestration indicate the GHG emissions implications of the Program may be much higher. The PEIR’s analysis of the impacts from GHG emissions is inadequate because it (1) fails to identify a clear and consistent baseline against which to measure impacts, (2) fails to consider that treatment activities will negatively impact the forest’s ability to sequester carbon, and (3) neglects to analyze all reasonably foreseeable emissions that will stem from the Program.

O30-35

1. The PEIR’s analysis of impacts from greenhouse gas emissions fails to identify a clear and consistent baseline against which to measure its impacts.

The PEIR’s analysis of impacts of greenhouse gas emissions is predicated on the assumption that climate change will lead to greater fire severity and that the treatment activities outlined in the Program will reduce the incidence of future wildfires. As detailed at length elsewhere in these comments, neither assumption is correct.

The CEQA Guidelines make clear that impacts must be evaluated against the physical environmental conditions that exist when the project is undertaken.¹³⁸ A lead agency may use projected future conditions as baseline for analysis “only if it demonstrates with substantial evidence that use of existing conditions would be either misleading or without informative value to decision-makers and the public.”¹³⁹ CALFIRE has not met that burden here.

O30-36

CALFIRE may not measure the impacts of the Program against the hypothetical future scenario of GHG emissions reductions stemming from treatment activities first because there is not substantial evidence that these activities will actually reduce GHG emissions and second because CALFIRE has failed to demonstrate that measuring the impacts of the Project against the existing physical baseline is misleading or without informative value. In addition, as

¹³⁶ See CAL. AIR RES. BD., CALIFORNIA’S 2017 CLIMATE CHANGE SCOPING PLAN: THE STRATEGY FOR ACHIEVING CALIFORNIA’S 2030 GREENHOUSE GAS TARGETS, Nov. 2017 at E-S 13, available at https://ww3.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf/

¹³⁷ PEIR at 3.8-17.

¹³⁸ CEQA Guidelines § 15125(a)(1); see also *Neighbors for Smart Rail v Exposition Metro Line Constr. Auth.* (2013) 57 Cal. App. 4th 439, 447.

¹³⁹ CEQA Guidelines § 15125(a)(2).

described elsewhere, a vague appeal to long-term future emissions reductions is inconsistent with the timeline of state, federal, and international climate goals.

O30-36
cont.

Further, the use of a qualitative threshold of significance of violates CEQA. The CEQA Guidelines provide that a lead agency’s choice of threshold of significance must be “based to the extent possible on scientific and factual data.”¹⁴⁰ A qualitative predicated on flawed assumptions about the impacts of treatment activities on wildlife incidence and severity is not based on scientific and factual data. Rather, the PEIR should use the numerical thresholds of significance established by air districts for land use development and stationary and non-stationary sources of air emissions.¹⁴¹

O30-37

2. The PEIR fails to adequately consider that the reduction in forest carbon stocks may result in net greenhouse gas emissions increase.

The PEIR does not adequately consider the potential for the CALVTP’s vastly increased vegetation treatment operations to reduce forest carbon stocks in the short term without guaranteeing increased carbon sequestration in the future. Vegetation reduction projects will definitively decrease carbon in the short-term with no scientifically-based guarantee—or at the very least a high probability—that the short-term losses will result in long-term carbon benefits. This is inconsistent with California’s regulations and climate goals. Consequently, the Project will generate greenhouse gas emissions that will both have a significant effect on the environment and impede California’s ability to meet its climate goals.

O30-38

The PEIR is incorrect in asserting that the “long-term” is the most relevant timeframe for evaluating the carbon consequences of the VTP. As highlighted by the IPCC’s *Special Report on Global Warming of 1.5°C*, global GHG emissions must be cut in half over the next decade to avoid catastrophic harms from climate change. Furthermore, Executive Order B-30-15 and Senate Bill 32 establish important GHG reduction target for California of 40 percent below 1990 levels by 2030. These targets require increasingly steep reductions in emissions over the coming decade. Yet this is precisely the time period during which the carbon emitted from the CALVTP will increase atmospheric CO₂ levels without any guarantee of reduced emissions in the longer-term. At a time when emissions must be dramatically reduced, the CALVTP will lead to significant carbon emissions that we cannot afford and which would undermine California’s climate goals.

3. The PEIR impermissibly fails to analyze the greenhouse gas emissions impacts from biomass hauling and processing.

As detailed above in Section 5.A.ii.1 , biomass hauling and processing is indisputably a part of the “one large project” that constitutes the Program for the purposes of CEQA review.¹⁴² However, the PEIR impermissibly declines to analyze them.¹⁴³ The greenhouse gas emissions

O30-39

¹⁴⁰ CEQA Guidelines § 15064(b).

¹⁴¹ PEIR at 3.8-9.

¹⁴² 14 Cal. Code Regs. § 15168(a)

¹⁴³ PEIR at 3.8-12.

impacts from those activities are reasonably foreseeable and therefore must be analyzed in the PEIR.

As discussed above, the location of biomass facilities in relation to treatment areas is reasonably foreseeable. And, like emissions of criteria pollutants, emissions of greenhouse gases from these facilities are reasonably foreseeable. The California statewide greenhouse gas inventory reports biogenic CO₂ emissions from electricity generation.¹⁴⁴ The Mandatory Reporting Regulation (“MRR”) program, data from which are used to generate the state’s inventory, specifically requires reporting of biomass GHG emissions.¹⁴⁵ Additionally, biomass facilities must disclose anticipated GHG emissions in their air permit applications.¹⁴⁶ These impacts are significant—at the stack, biomass facilities emit more GHGs than fossil-fuel combustion—and the PEIR should analyze them.¹⁴⁷

O30-39
cont

4. The PEIR impermissibly fails to analyze the greenhouse gas emissions from pile burning.

As detailed above in Section 5.A.ii.2., Appendix AQ-1 fails to analyze emissions impacts from pile burning, with absolutely no justification. These emissions are part of the CALVTP’s “one large project,” are significant, and must be evaluated in the PEIR.

O30-40

C. The PEIR Fails to Adequately Analyze and Mitigate Impacts to Biological Resources.

The Biological Resources impacts and mitigation analysis in the PEIR is deficient in a number of ways, including (1) failing to set a clear and consistent baseline; (2) failing to appropriately assess and mitigate impacts to (i) special-status species; (ii) natural communities and oak wildlands; (iii) riparian habitats; (iv) riparian habitats; (v) chaparral and sage scrub habitats; and (vi) wildlife connectivity.

O30-41

¹⁴⁴ California Air Resources Board, California Greenhouse Gas Inventory for 2000-2015 — by IPCC Category at 6 (updated June 22, 2018) (“California Inventory”), available at https://www.arb.ca.gov/cc/inventory/data/tables/ghg_inventory_ipcc_sum_2000-16.pdf (visited Nov. 13, 2018). The national inventory produced by U.S. EPA similarly “counts” biomass CO₂, although it uses the IPCC convention of “counting” those emissions in the Land Use, Land Use Change, and Forestry sector rather than in the Energy sector. See U.S. Environmental Protection Agency, Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990 - 2017 (EPA 430-P-17-001) at ES-7, 2-12 (2019) (“EPA GHG Inventory 1990 -2017”), available at https://www.epa.gov/sites/production/files/2017-02/documents/2017_complete_report.pdf (visited July 26, 2017).

¹⁴⁵ 17 Cal. Code Regs., §§ 95101(b)(4), 95103(a)(2), (j).

¹⁴⁶ See e.g. County of Mariposa, CEQA Initial Study for Mariposa Biomass Project Conditional Use Permit CUP 2017-117 (2018), available at <https://www.mariposacounty.org/DocumentCenter/View/63721/CUP-2017-117-MARIPOSA-BIOMASS-CEQA-INITIAL-STUDY-SUBSEQUENT-MND> at p. 76.

¹⁴⁷ Bird, David Neil et al., Zero, one, or in between: evaluation of alternative national and entity-level accounting for bioenergy, 4 *Global Change Biology Bioenergy* 576 (2012), doi:10.1111/j.1757-1707.2011.01137.x, at 584.

i. The PEIR’s environmental setting is inadequate.

The CEQA guidelines provide that an EIR “must include a description of the physical environmental conditions in the vicinity of the project. The environmental setting will normally constitute the baseline physical conditions by which the lead agency determines whether an impact is significant.”¹⁴⁸

O30-42

The PEIR fails to identify any clear and consistent baseline against which the Program’s impacts to biological resources can be evaluated. The PEIR contains a brief, general discussion of the environmental and regulatory setting for the Program, but it does not contain any of the information about existing physical conditions necessary to evaluate the Program’s biological impacts.¹⁴⁹

ii. The PEIR fails to appropriately assess impacts to special-status animals and plants due to treatment activities, and mitigation measures are vague, inadequate, not based on the best available science, and improperly deferred.

The PEIR fails to adequately assess and mitigate impacts to special-status species to less than significant. California is a biodiversity hotspot, with many special-status, endemic, and rare animals and plants. Thus, a statewide program that would impact over 50 pages of special-status animals and plants¹⁵⁰ should adequately assess the potential impacts to these species and provide clear measures and requirements to avoid, minimize, and mitigate impacts to these biological resources due treatment activities. However, the PEIR fails to do so.

O30-43

For example, over a million acres of critical habitat for various federally endangered and threatened mammals, birds, reptiles, amphibians, fish, invertebrates, and plants¹⁵¹ will be impacted by treatment activities. Just a few examples of the extent of impacts to federally threatened or endangered species due to treatment activities include the destruction or adverse modification of more than 500,000 acres of critical habitat for California red-legged frog (*Rana draytonii*), over 200,000 acres of critical habitat for California condor (*Gymnogyps californianus*), over 100,000 acres of critical habitat for Alameda whipsnake (*Masticophis lateralis euryxanthus*), and over 30,000 acres of critical habitat for fleshy owl’s clover (*Catilleja campestris ssp. succulenta*). These species are garnered added protections and designated critical habitat because their extinction is imminent or impending without more careful management of their habitats. Yet the PEIR dismisses and downplays the importance of designated critical habitat and the severity of the impacts to special-status species due to treatment activities, stating that, “Critical habitat may include an area that is not currently occupied by the species, but that will be needed for its recovery. A critical habitat designation only affects activities performed by Federal agencies or that involve a Federal permit, license, or funding, and that are likely to

¹⁴⁸ CEQA Guidelines § 15125(a)(1); see also *Neighbors for Smart Rail v Exposition Metro Line Constr. Auth.* (2013) 57 Cal.4th 439, 447.

¹⁴⁹ See, e.g., *Save Our Peninsula Comm. v. Monterey Cty. Bd. of Supervisors*, 87 Cal. App. 4th 99, 119 (2001) (“Without a determination and description of the existing physical conditions on the property at the start of the environmental review process, the EIR cannot provide a meaningful assessment of the environmental impacts of the proposed project.”).

¹⁵⁰ see PEIR Appendix BIO-3

¹⁵¹ see PEIR Appendix BIO-4

destroy or adversely modify the area of critical habitat. CALFIRE , as a state agency, is not required to consult with USFWS for actions within critical habitat.”¹⁵² The PEIR should more clearly state that critical habitat includes areas that were currently occupied by the species at the time of listing (and potentially still are occupied) and contain features essential to the conservation of the species. Such disregard for large amounts of designated critical habitat for numerous federally threatened and endangered species exhibits the failure of the PEIR to adequately assess and mitigate impacts to special-status species to less than significant.

O30-43
cont.

Further, the PEIR fails to adequately mitigate impacts to special-status species to less than significant and fails to comply with SB 85. SPR BIO-1 only requires the project proponent have a qualified registered professional forester (RPF) or biologist to conduct data reviews and reconnaissance-level surveys prior to treatment; however, if suitable habitat for sensitive biological resources is documented in the project area, the SPR does not provide an adequate requirement that federal, state, or local agencies be consulted to determine whether impacts due to treatment activities can be avoided or minimized or if impacts are unavoidable. The PEIR only states that, if suitable habitat is present, the project proponent, in consultation with a qualified RPF or biologist, will determine if adverse impacts can be avoided.¹⁵³ And if the project proponent deems that suitable habitat is present and adverse effects cannot be clearly avoided, the PEIR states that “[f]urther review may include contacting USFWS, NOAA Fisheries, CDFW, CNPS, or local resource agencies as necessary to determine the potential for special-status species or other sensitive biological resources to be affected by the treatment activity” (*Id.*). This is inconsistent with SB 85, which states, “When selecting a fuel reduction project, the department shall collaborate with the State Water Resources Control Board and the Department of Fish and Wildlife to ensure the design of the fuel reduction project protects water resources and wildlife habitat while addressing fire behavior and public safety.”¹⁵⁴ Additionally, according to SPR BIO-1, “[f]ocused or protocol-level surveys will be conducted as necessary to determine presence/absence.”¹⁵⁵ Stating that such surveys will be conducted “as necessary” is vague and insufficient to minimize impacts to sensitive biological resources. Focused and protocol-level surveys should be required when special-status animals or plants are present or potentially present to determine potential impacts to these resources from treatment activities. The project proponent should comply with SB 85 and consult with CDFW and SWRCB, and they should also be required to consult with other appropriate federal, state, and local agencies, including but not limited to USFWS, NOAA Fisheries, and CNPS, when special-status animals and plants are present or potentially present or when designated critical habitat is present in the project area.

O30-44

SPR BIO-10 constitutes improperly deferred mitigation and similarly violates SB 85. If SPR- BIO-1 determines that there is suitable habitat for special-status wildlife is present and cannot be avoided, “the project proponent will require a qualified RPF or biologist to conduct focused or protocol-level surveys for special-status wildlife species or nursery sites (e.g., bat maternity roosts, deer fawning areas, heron or egret rookeries) with potential to be directly or indirectly affected by a treatment activity. The survey area will be determined by a qualified RPF or biologist based on the species and habitats and any recommended buffer distances in agency protocols. The qualified RPF or biologist will determine if following an established protocol is

O30-45

¹⁵² PEIR at 3.6-17

¹⁵³ PEIR at 3.6-119

¹⁵⁴ Senate Bill 85 (2019) (amending Sections 21 and 412 of the Public Resources Code)

¹⁵⁵ PEIR at 3.6-119

required, and the project proponent may consult with CDFW and/or USFWS for technical information regarding appropriate survey protocols.”¹⁵⁶ Not only does the SPR not comply with SB 85 and require consultation with CDFW and SWRCB, but it also leaves mitigation measures such as buffer distance to be determined at a later date, without providing substantive or quantified measures to mitigate adverse impacts. This amounts to deferred mitigation. Mitigation measures for treatment activities must be considered in the PEIR in order for the proper environmental analysis to take place.¹⁵⁷ Otherwise, the public and decisionmakers are unable to evaluate the effectiveness of the plans in avoiding, minimizing, and mitigating the impacts from treatment activities.

O30-45
cont.

In the limited circumstances in which deferred mitigation is appropriate, the agency must meet all of the following elements: (1) practical considerations prevented the formulation of mitigation measures during the planning process; (2) the agency committed itself to developing mitigation measures in the future; (3) the agency adopted specific performance criteria prior to project approval; and (4) the EIR lists the mitigation measures to be considered, analyzed, and possibly incorporated into the mitigation plan.¹⁵⁸ Here, the PEIR fails to provide specific criteria and adequate mitigation measures to be considered, analyzed, and possibly incorporated to minimize impacts to special-status species due to treatment activities.

The following sections further discuss the PEIR’s inadequacies at effectively avoiding, minimizing, and mitigating impacts to special-status animals and plants and the habitats they rely on for survival and long-term persistence to less than significant.

iii. The PEIR fails to appropriately assess impacts to sensitive natural communities and oak woodlands due to treatment activities, and mitigation measures are vague, inadequate, not based on the best available science, and improperly deferred.

The PEIR fails to appropriately assess and adequately mitigate the impacts of treatment activities on sensitive natural communities, including oak woodlands. California has lost over a million acres of oak woodlands since 1950,¹⁵⁹ and at least another 3,786,501 acres of oak woodlands and blue oak foothill pine woodlands throughout the state will be impacted by the PEIR’s treatment activities. This is alarming because oak woodlands and other wooded areas, such as pine forests and riparian woodlands, provide valuable habitat and connectivity for a wide variety of species.¹⁶⁰ In fact, the PEIR states that “[o]ak woodlands provide important habitat to

O30-46

¹⁵⁶ PEIR at 3.6-124

¹⁵⁷ See *Gentry v. City of Murrieta* (1995) 36 Cal.App.4th 1359, 1396 [it is improper for the EIR to “require the applicant to comply with any recommendations of a report that had yet to be performed”]; *Sundstrom v. Co. of Mendocino* (1988) 202 Cal.App.3d 296.

¹⁵⁸ See *POET, LLC v. State Air Resources Bd.* (2013) 218 Cal.App.4th 681, 736-37 [review denied]

¹⁵⁹ Bolsinger, Charles L., *The hardwoods of California's timberlands, woodlands, and savannas*, U.S. Forest Service Pacific Northwest Research Station, Resource Bulletin PNW-RB-148 (1988).

¹⁶⁰ Bernhardt, Elizabeth & Tedmund Swiecki, *Ecological importance of California oak woodlands*, in *Restoring Oak Woodlands in California: Theory and Practice* (2001), <http://phytosphere.com/restoringoakwoodlands/oakrestoration.htm>; Jedlicka, Julie A. et al., *Vineyard and*

numerous common and special-status wildlife species supporting some 5,000 species of insects, over half of the state's 662 species of terrestrial vertebrates, and several thousand plant taxa (CDFW 2015a, McCreary 2009).¹⁶¹

Not only do oak woodlands provide important habitat for numerous species, they also play a critical role in maintaining important water resources (*i.e.*, for drinking water and agriculture). Reduced forest and woodland cover has been shown to result in increased runoff (*i.e.*, pollutants such as pesticides and fertilizers flowing into groundwater and surface waterways), erosion, sedimentation, and water temperatures; changes in channel morphology; decreased soil retention and fertility; and decreased terrestrial and aquatic biodiversity.¹⁶² In addition, forests and woodlands are important carbon sinks that can help moderate the impacts of climate change,¹⁶³ and some researchers argue that at a global scale, trees are linked to increased precipitation and water availability.¹⁶⁴

Despite the importance of oak woodlands in supporting the state's unique biodiversity, maintaining overall ecosystem health and function, and combatting climate change, the PEIR fails to adequately assess and mitigate impacts due to treatment activities. There is no SPR specific to avoiding or minimizing impacts to oak woodlands. As mentioned previously, SPR

riparian habitat, not nest box presence, alter avian community composition, 126 *The Wilson Journal of Ornithology* 1:60 (2014); Lawrence, Justin E. et al., Effects of vineyard coverage and extent on benthic macroinvertebrates in streams of Northern California, 47 *Ann. Limnol. - Int. J. Lim.* 347 (2011); Napa County, Biological Resources, Ch. 4 in *Napa County Baseline Data Report Version 1* (November 30, 2005); Tietje, William D. et al., Bat activity at remnant oak trees in California central coast vineyards, USDA Forest Service General Technical Report PSW-GTR-251 (2015).

¹⁶¹ PEIR at 3.6-20

¹⁶² Brown, George W. & James T. Krygier, Effects of clear-cutting on stream temperature, 6 *Water Resources Research* 4 (1970); Pess, George R. et al., Landscape characteristics, land use, and coho salmon (*Onchorhynchus kisutch*) abundance, Snohomish River, Wash., U.S.A., 59 *Can. J. fish. Aquat. Sci.* 613 (2002); Dahlgren, Randy A. et al., Blue oak enhance soil quality in California oak woodlands, 57 *California Agriculture* 2 (2003); Houlahan, Jeff E. & C. Scott Findlay, Estimating the 'critical' distance at which adjacent land-use degrades wetland water and sediment quality, 19 *Landscape Ecology* 677 (2004); Opperman, Jeffrey J. et al., Influence of land use on fine sediment in salmonid spawning gravels within the Russian River Basin, California, 62 *Can. J. Fish. Aquat. Sci.* 2740 (2005); Lohse, Kathleen A. et al., Forecasting relative impacts of land use on anadromous fish habitat to guide conservation planning, 18 *Ecological Applications* 2: 467 (2008); Elliot, William J., Effects of forest biomass use on watershed processes in the Western United States, 25 *West. J. Appl. For.* 1 (2010); Lawrence, Justin E. et al., Effects of vineyard coverage and extent on benthic macroinvertebrates in streams of Northern California, 47 *Ann. Limnol. - Int. J. Lim.* 347 (2011); Moyle, Peter B. et al., Rapid decline of California's native inland fishes: A status assessment, 144 *Biological Conservation* 2414 (2011); Zhang, H. & K.M. Hiscock, Modelling the effect of forest cover in mitigating nitrate contamination of groundwater: A case study of the Sherwood Sandstone aquifer in the East Midlands, UK, 399 *J. of Hyrdology* 212 (2011); Jedlicka, Julie A. et al., Vineyard and riparian habitat, not nest box presence, alter avian community composition, 126 *The Wilson Journal of Ornithology* 1:60 (2014).

¹⁶³ Padilla, Francisco, M. et al., Land-use changes and carbon sequestration through the twentieth century in a Mediterranean mountain ecosystem: Implications for land management, 91 *J. of Environ. Mgmt.* 2688 (2010); Pan, Yude et al., A large and persistent carbon sink in the world's forests, 333 *Science* 988 (2011).

¹⁶⁴ Ellison, David et al., On the forest cover-water yield debate: from demand-to-supply-side thinking, 18 *Global Change Biology* 806 (2012).

O30-46
cont.

BIO-1 is vague, inadequate, and fails to comply with SB 85, as it only requires the project proponent have a qualified registered professional forester (“RPF”) or biologist to conduct data reviews and reconnaissance-level surveys prior to treatment, and if suitable habitat for sensitive biological resources is documented in the project area, the SPR does not provide an adequate requirement that federal, state, or local agencies be consulted to determine whether impacts due to treatment activities can be avoided or minimized or if impacts are unavoidable. The project proponent should comply with SB 85 and consult with CDFW and SWRCB, and they should also be required to consult with other appropriate federal, state, and local agencies, including but not limited to USFWS, NOAA Fisheries, and CNPS, when oak woodlands are present or potentially present in the project area. Additionally, focused and protocol-level surveys should be required when sensitive biological resources like oak woodlands are present or potentially present to determine potential impacts to these resources from treatment activities, which is not clear under the vague language of SPR BIO-1, which states that “[f]ocused or protocol-level surveys will be conducted as necessary to determine presence/absence.”¹⁶⁵

O30-46
cont.

In addition to inadequate SPRs, mitigation measures for impacts to oak woodlands due to treatment activities are vague, inadequate, not based on the best available science, and improperly deferred. In MM BIO-3a, the PEIR fails to require consultation with USFWS, CDFW, NOAA, or other federal, state, or local agencies, to determine whether the project proponents’ treatment design and mitigation measures are sufficient to minimize impacts to sensitive natural communities like oak woodlands to less than significant. MM BIO-3a states that only a qualified RFB or botanist will review the design. In addition, no science is provided to support the notion that limiting fuel breaks in oak woodlands to removing 20% of the native vegetation would be effective at minimizing impacts to oak woodlands or reducing the risk of wildfire to structures and human communities. In addition, the PEIR points to compensatory mitigation provided in MM BIO-3b if significant impacts are unavoidable, with the caveat that no compensatory would be required if treatment activities benefit oak woodlands. However, the PEIR fails to require consultation with federal, state, and local agencies when determining the severity of impacts to oak woodlands. The PEIR also fails to provide scientific evidence that supports the potential benefits of such treatments.

O30-47

The PEIR states that the acreage of lost oak woodland will be restored/enhanced or preserved through a conservation easement at a “sufficient ratio to offset the loss of acreage and habitat function”¹⁶⁶ without differentiating between the type of compensatory mitigation (*i.e.*, preserved intact habitats vs. enhanced or restored habitats). If compensatory mitigation includes enhanced or restored habitats, higher mitigation ratios coupled with extended years of effective monitoring and adaptive management strategies are needed to improve chances of establishing equivalent ecological function as the lost habitat.¹⁶⁷ Given the importance of oak woodlands to numerous species and ecosystem function, mitigation ratios should be, at a minimum, 3:1 for

O30-48

¹⁶⁵ PEIR at 3.6-119

¹⁶⁶ PEIR at 3.6-147

¹⁶⁷ Sudol, Mark F. & Richard F. Ambrose, *The US Clean Water Act and Habitat Replacement: Evaluation of Mitigation Sites in Orange County, CA, USA*, 30 *Environmental Management* 5: 727 (2002); Matthew, Jeffrey W. & Anton G. Endress, *Performance criteria, compliance success, and vegetation development in compensatory mitigation wetlands*, 41 *Environmental Mgt* 130 (2008); Stein, Bruce A. et al., *Reversing America's wildlife crisis: Securing the future of our fish and wildlife*, National Wildlife Federation (2018).

preserved oak woodlands and 5:1 for restored/enhanced oak woodlands. Santa Barbara County's Deciduous Oak Tree Protection and Regeneration Ordinance requires a 15:1 mitigation ratio (via replacement planting or protection of naturally occurring oaks between six inches and six feet tall) for removed oak trees.¹⁶⁸ With one third of America's plant and animal species vulnerable to impacts from human activity and one fifth at risk of extinction,¹⁶⁹ it is crucial that strategies to prevent further degradation and loss of biodiversity are explicit and scientifically sound. The compensatory mitigation for oak woodlands described in the MM BIO-3b is vague and severely inadequate.

O30-48
cont.

MM BIO-3b states that the project proponent will prepare a Compensatory Mitigation Plan, which amounts to improperly deferred mitigation. As mentioned previously, mitigation measures for treatment activities must be considered in the PEIR in order for the proper environmental analysis to take place.¹⁷⁰ Therefore, compensatory habitat mitigation and monitoring plans need to be included in the PEIR to enable the public and decisionmakers to evaluate the effectiveness of the plans in avoiding, minimizing and mitigating the impacts from treatment activities.

In the limited circumstances in which deferred mitigation is appropriate, the agency must meet all of the following elements: (1) practical considerations prevented the formulation of mitigation measures during the planning process; (2) the agency committed itself to developing mitigation measures in the future; (3) the agency adopted specific performance criteria prior to project approval; and (4) the EIR lists the mitigation measures to be considered, analyzed, and possibly incorporated into the mitigation plan.¹⁷¹ Here, the PEIR fails to provide specific performance criteria and adequate mitigation measures to be considered, analyzed, and possibly incorporated into the mitigation plan. And although the PEIR mentions long-term monitoring, the compensatory mitigation plan should also include adaptive management strategies, especially for habitats that are enhanced or restored, as it can take many years before enhanced/restored mitigation sites become as ecologically functional as the lost habitat.¹⁷² The success of mitigation sites relies on the appropriate assessment of measurable performance standards based on habitat functions and adaptive management strategies.¹⁷³ The PEIR's mitigation measures should implement acquisition in perpetuity, long-term monitoring, and adaptive management strategies

O30-49

¹⁶⁸ County of Santa Barbara, Deciduous oak tree protection and regeneration, Article IX of Chapter 35 Santa Barbara County Code (June 2003).

¹⁶⁹ Stein, Bruce A. et al., *Reversing America's wildlife crisis: Securing the future of our fish and wildlife*, National Wildlife Federation (2018).

¹⁷⁰ See *Gentry v. City of Murrieta* (1995) 36 Cal.App.4th 1359, 1396 [it is improper for the EIR to "require the applicant to comply with any recommendations of a report that had yet to be performed"]; *Sundstrom v. Co. of Mendocino* (1988) 202 Cal.App.3d 296.

¹⁷¹ See *POET, LLC v. State Air Resources Bd.* (2013) 218 Cal.App.4th 681, 736-37 [review denied]

¹⁷² Sudol, Mark F. & Richard F. Ambrose, *The US Clean Water Act and Habitat Replacement: Evaluation of Mitigation Sites in Orange County, CA, USA*, 30 *Environmental Management* 5: 727 (2002); Ambrose, Richard et al., *An evaluation of compensatory mitigation projects permitted under Clean Water Act Section 401 by the California State Water Quality Control Board, 1991-2002*, Report prepared by California State Water Resources Control Board (2006); Bronner, Colleen E. et al., *An assessment of U.S. stream compensatory mitigation policy: Necessary changes to protect ecosystem functions and services*, 49 *J. of the American Water Resources Assoc.* 2 (2013).

¹⁷³ Matthew, Jeffrey W. & Anton G. Endress, *Performance criteria, compliance success, and vegetation development in compensatory mitigation wetlands*, 41 *Environmental Mgt* 130 (2008).

to minimize adverse impacts to oak woodlands and associated biological resources. By not readily providing compensatory management plans or a list of adequate, concrete mitigation measures to be considered, the PEIR violates CEQA.

The state cannot afford to lose more of its valuable oak woodlands. Removing or degrading important habitats like oak woodlands without applying the best available science to minimize adverse impacts will lead to more erosion, sedimentation, reduced water quality, and degraded habitats while ramping up climate change by releasing more carbon into the atmosphere. The PEIR's finding that significant impacts to oak woodlands will be mitigated to less than significant is not supported by the facts and fails to meet CEQA's requirements.

iv. The PEIR fails to appropriately assess impacts to riparian habitats due to treatment activities, and mitigation measures are vague, inadequate, not based on the best available science, and improperly deferred.

It is estimated that 90-95% of historic riparian habitat in the state has been lost; Southern California and the Central Valley have already lost over 97% and 95% of its historic riparian systems, respectively.¹⁷⁴ Using 2002 land cover data from CALFIRE, the Riparian Habitat Joint Venture estimated that riparian vegetation makes up less than 0.5% of California's total land area at about 360,000 acres.¹⁷⁵ According to the PEIR, at least 179,286 acres of riparian habitat (about half of the remaining riparian areas) would be impacted by treatment activities. This is alarming because riparian habitats perform a number of biological and physical functions that benefit wildlife, plants, and humans, and loss of what little is left will have severe, harmful impacts on special-status species, overall biodiversity, and ecosystem function.

Riparian habitats are transitional areas between terrestrial and aquatic habitats, and they support numerous special-status flora and fauna and maintain a high level of biodiversity. In fact, 60% of amphibian species, 16% of reptiles, 34% of birds and 12% of mammals in the Pacific Coast ecoregion depend on riparian-stream systems for survival.¹⁷⁶ The PEIR states that "a total of 545 amphibians, reptiles, birds, and mammals in California ... utilize riparian habitats, including 67 species that are listed as threatened or endangered under ESA or CESA,"¹⁷⁷ which is likely an underestimate. Many species, including mountain lions and bobcats, often use riparian areas and natural ridgelines as migration corridors or foraging habitat.¹⁷⁸ Given the

¹⁷⁴ Bowler, Dr. Peter A., Riparian Woodland: An endangered habitat in Southern California, Proceedings of the 15th Annual Symposium Southern California Botanists, Allan A. Schoenherr, editor, Special Publication No. 3 (1989); Griggs, F. Thomas, Ph.D., California riparian habitat restoration handbook 2d ed., Riparian Habitat Joint Venture (July 2009).

¹⁷⁵ Ballard, Grant et al., The riparian bird conservation plan: A strategy for reversing the decline of riparian associated birds in California, Riparian Habitat Joint Venture and California Partners in Flight (2004).

¹⁷⁶ Kelsey, K.A. & S.D. West, Riparian wildlife, in River Ecology and Management, R.J. Naiman and R.E. Bilby, eds. (1998).

¹⁷⁷ PEIR at 3.6-20

¹⁷⁸ Dickson, Brett et al., Influence of vegetation, topography, and roads on cougar movement in Southern California, 69 J. of Wildlife Mgmt 1: 264 (2005); Hilty, Jodi A. & Adina M. Merenlender, Use of riparian corridors and vineyards by mammalian predators in Northern California, 18 Conservation Biology 1: 126 (2004); Jennings, Megan & Rebecca Lewison, Planning for connectivity under climate change: Using bobcat movement to assess landscape connectivity across San Diego County's open spaces, San Diego State University (2013); Jennings, Megan & Katherine Zeller, Comprehensive multi-species connectivity

O30-49
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O30-50

potentially threatened status of mountain lions in Southern California and along the Central Coast,¹⁷⁹ impacts to migration corridors like riparian areas should be more closely considered. Additionally, fish rely on healthy upland areas to influence suitable spawning habitat,¹⁸⁰ and over-aggressive removal of riparian areas have been identified as a major driver of declines in freshwater and anadromous fish.¹⁸¹ Loss of biodiversity due to lack of habitat contributes to ecosystem degradation, which will diminish a multitude of ecosystem functions and services in the long-term.

As mentioned previously, reduced forest and woodland cover, including in riparian areas, has been shown to result in increased runoff (*i.e.*, pollutants such as pesticides and fertilizers flowing into groundwater and surface waterways), erosion, sedimentation, and water temperatures; changes in channel morphology; decreased soil retention and fertility; and decreased terrestrial and aquatic biodiversity.¹⁸² In addition, forests and woodlands are important carbon sinks that can help moderate the impacts of climate change,¹⁸³ and some researchers argue that at a global scale, trees are linked to increased precipitation and water availability.¹⁸⁴ Thus, to preserve the state's valuable biodiversity in these habitats as well as water quality, it is important to preserve existing riparian areas as well as develop and implement effective buffer widths from streams and wetlands informed by the best available science.

Despite the importance of riparian habitats for overall biodiversity, ecosystem function, and wildlife migration, the PEIR fails to adequately mitigate impacts of treatment activities on these already-dwindling habitats. SPRs and mitigation measures to minimize impacts to riparian

assessment and planning for the Highway 67 region of San Diego County, California, San Diego State University (2017).

¹⁷⁹ Yap, Tiffany et al., A petition to list the Southern California / Central Coast evolutionarily significant unit (ESU) of mountain lions as threatened under the California Endangered Species Act (CESA), Center for Biological Diversity and the Mountain Lion Foundation (June 25, 2019).

¹⁸⁰ Lohse, Kathleen A. et al., Forecasting relative impacts of land use on anadromous fish habitat to guide conservation planning, 18 *Ecological Applications* 2: 467 (2008).

¹⁸¹ *e.g.*, Stillwater Sciences and Professor William Dietrich, Napa River Basin limiting factors analysis, Final Technical Report prepared for SFBWQCB and CSCC (2002); Lohse et al. 2008; Moyle et al. 2011

¹⁸² Brown and Krygier 1970; Pess et al. 2002; Dahlgren et al. 2003; Houlahan and Findlay 2004; Opperman et al. 2005; Lohse, Kathleen A. et al., Forecasting relative impacts of land use on anadromous fish habitat to guide conservation planning, 18 *Ecological Applications* 2: 467 (2008); Elliot, William J., Effects of forest biomass use on watershed processes in the Western United States, 25 *West. J. Appl. For.* 1 (2010); Lawrence, Justin E. et al., Effects of vineyard coverage and extent on benthic macroinvertebrates in streams of Northern California, 47 *Ann. Limnol. - Int. J. Lim.* 347 (2011); Moyle, Peter B. et al., Rapid decline of California's native inland fishes: A status assessment, 144 *Biological Conservation* 2414 (2011); Zhang, H. & K.M. Hiscock, Modelling the effect of forest cover in mitigating nitrate contamination of groundwater: A case study of the Sherwood Sandstone aquifer in the East Midlands, UK, 399 *J. of Hyrdology* 212 (2011); Jedlicka, Julie A. et al., Vineyard and riparian habitat, not nest box presence, alter avian community composition, 126 *The Wilson Journal of Ornithology* 1:60 (2014).

¹⁸³ Padilla, Francisco, M. et al., Land-use changes and carbon sequestration through the twentieth century in a Mediterranean mountain ecosystem: Implications for land management, 91 *J. of Environ. Mgmt.* 2688 (2010); Pan, Yude et al., A large and persistent carbon sink in the world's forests, 333 *Science* 988 (2011).

¹⁸⁴ Ellison, David et al., On the forest cover-water yield debate: from demand-to-supply-side thinking, 18 *Global Change Biology* 806 (2012).

habitats are vague, insufficient, and not based in the best available science. As mentioned previously, SPR BIO-1 is vague, inadequate, and fails to comply with SB 85, as it only requires the project proponent have a qualified registered professional forester (RPF) or biologist to conduct data reviews and reconnaissance-level surveys prior to treatment, and if suitable habitat for sensitive biological resources is documented in the project area, the SPR does not provide an adequate requirement that federal, state, or local agencies be consulted to determine whether impacts due to treatment activities can be avoided or minimized or if impacts are unavoidable. Additionally, focused and protocol-level surveys should be required when sensitive biological resources like riparian habitats are present or potentially present to determine potential impacts to these resources from treatment activities, which is not clear under the vague language of SPR BIO-1, which states that “[f]ocused or protocol-level surveys will be conducted *as necessary* to determine presence/absence.”¹⁸⁵ The project proponent should comply with SB 85 and consult with CDFW and SWRCB, and they should also be required to consult with other appropriate federal, state, and local agencies, including but not limited to USFWS, NOAA Fisheries, and CNPS, when riparian areas are present or potentially present in the project area.

O30-50
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Although the PEIR states that SPR BIO-4 would require project proponents to “design treatments in riparian habitats to retain or improve habitat functions,”¹⁸⁶ the language is vague and does not provide any science to support the basis of their actions. No science is provided to support the notion that retaining 75% of overstory and 50% of understory canopy would retain or improve habitat function. Additionally, it is unclear how the project proponent will define or implement the retention of “well distributed multi-storied stand composed of a diversity of species similar to that found before the start of treatment activities,” how “removal of large, native riparian hardwood trees (e.g., willow, ash, maple, oak, alder, sycamore, cottonwood) will be minimized to the extent feasible,” or how “ground disturbance within riparian habitats will be limited to the minimum necessary to implement effective treatments” (*Id.*). This language is vague and unenforceable, and these measures do nothing to protect the form and function of riparian habitats. In addition, SPR BIO-4 states that “a different set of vegetation retention standards and protection measures ... may be implemented on a site-specific basis.... [and] implementation of different protection measures will only be approved when the treatment plan incorporates an evaluation of beneficial functions of the riparian habitat and with written concurrence from CDFW,”¹⁸⁷ which amounts to improperly deferred mitigation. In order to evaluate how the impacts will actually be avoided, minimized, and mitigated, the PEIR must provide adequate information on the required avoidance, minimization, and mitigation requirements that would be implemented in order for the public and decision makers to be able to evaluate the effectiveness of the current strategy.

O30-51

If significant impacts to riparian habitats are deemed unavoidable, the PEIR points to compensatory mitigation provided in MM BIO-3c. However, the PEIR fails to require consultation with federal, state, and local agencies when determining the severity of impacts to riparian habitats. The PEIR is also vague, stating that the acreage of lost riparian habitat will be restored/enhanced or preserved through a conservation easement at a “sufficient ratio to offset the loss of riparian habitat function and value”¹⁸⁸ without differentiating between the type of

O30-52

¹⁸⁵ PEIR at 3.6-119

¹⁸⁶ PEIR at 3.6-120

¹⁸⁷ PEIR 3.6-121

¹⁸⁸ PEIR at 3.6-148

compensatory mitigation (*i.e.*, preserved intact habitats vs. enhanced or restored habitats). If compensatory mitigation includes enhanced or restored habitats, higher mitigation ratios coupled with extended years of effective monitoring and adaptive management strategies are needed to improve chances of establishing equivalent ecological function as the lost habitat.¹⁸⁹ Given the importance of riparian habitats to numerous species and ecosystem function, mitigation ratios should be, at a minimum, 3:1 for preserved riparian habitats and 5:1 for restored/enhanced riparian habitats. With one third of America’s plant and animal species vulnerable to impacts from human activity and one fifth at risk of extinction,¹⁹⁰ it is crucial that strategies to prevent further degradation and loss of biodiversity are explicit and scientifically sound. The compensatory mitigation for oak woodlands described in the MM BIO-3c is vague and severely inadequate.

O30-52
cont.

MM BIO-3c states that the project proponent will prepare a Compensatory Mitigation Plan, which amounts to improperly deferred mitigation. As mentioned previously, mitigation measures for treatment activities must be considered in the PEIR in order for the proper environmental analysis to take place.¹⁹¹ Therefore, compensatory habitat mitigation and monitoring plans need to be included in the PEIR to enable the public and decisionmakers to evaluate the effectiveness of the plans in avoiding, minimizing, and mitigating the impacts from treatment activities.

O30-53

In the limited circumstances in which deferred mitigation is appropriate, the agency must meet all of the following elements: (1) practical considerations prevented the formulation of mitigation measures during the planning process; (2) the agency committed itself to developing mitigation measures in the future; (3) the agency adopted specific performance criteria prior to project approval; and (4) the EIR lists the mitigation measures to be considered, analyzed, and possibly incorporated into the mitigation plan.¹⁹² Here, the PEIR fails to provide specific performance criteria and adequate mitigation measures to be considered, analyzed, and possibly incorporated into the mitigation plan. And although the PEIR mentions long-term monitoring, the compensatory mitigation plan should also include adaptive management strategies, especially for habitats that are enhanced or restored, as it can take many years before enhanced/restored mitigation sites become as ecologically functional as the lost habitat.¹⁹³ The success of mitigation

¹⁸⁹ Sudol, Mark F. & Richard F. Ambrose, *The US Clean Water Act and Habitat Replacement: Evaluation of Mitigation Sites in Orange County, CA, USA*, 30 *Environmental Management* 5: 727 (2002); Ambrose, Richard et al., *An evaluation of compensatory mitigation projects permitted under Clean Water Act Section 401 by the California State Water Quality Control Board, 1991-2002*, Report prepared by California State Water Resources Control Board (2006); Matthew, Jeffrey W. & Anton G. Endress, *Performance criteria, compliance success, and vegetation development in compensatory mitigation wetlands*, 41 *Environmental Mgt* 130 (2008); Stein, Bruce A. et al., *Reversing America's wildlife crisis: Securing the future of our fish and wildlife*, National Wildlife Federation (2018).

¹⁹⁰ Stein, Bruce A. et al., *Reversing America's wildlife crisis: Securing the future of our fish and wildlife*, National Wildlife Federation (2018).

¹⁹¹ See *Gentry v. City of Murrieta* (1995) 36 Cal.App.4th 1359, 1396 [it is improper for the EIR to “require the applicant to comply with any recommendations of a report that had yet to be performed”]; *Sundstrom v. Co. of Mendocino* (1988) 202 Cal.App.3d 296.

¹⁹² See *POET, LLC v. State Air Resources Bd.* (2013) 218 Cal.App.4th 681, 736-37 [review denied]

¹⁹³ Sudol, Mark F. & Richard F. Ambrose, *The US Clean Water Act and Habitat Replacement: Evaluation of Mitigation Sites in Orange County, CA, USA*, 30 *Environmental Management* 5: 727 (2002); Ambrose, Richard et al., *An evaluation of compensatory mitigation projects permitted under Clean Water*

sites relies on the appropriate assessment of measurable performance standards based on habitat functions and adaptive management strategies.¹⁹⁴ The PEIR's mitigation measures should implement acquisition in perpetuity, long-term monitoring, and adaptive management strategies to minimize adverse impacts to riparian habitats and associated biological resources. By not readily providing compensatory management plans or a list of adequate, concrete mitigation measures to be considered, the PEIR violates CEQA.

The state cannot afford to lose more of its valuable riparian habitat. Removing or degrading important habitats like riparian areas without applying the best available science to minimize adverse impacts will lead to more erosion, sedimentation, reduced water quality, and degraded habitats while ramping up climate change by releasing more carbon into the atmosphere. The PEIR's finding that significant impacts to riparian habitat will be mitigated to less than significant is not supported by the facts and fails to meet CEQA's requirements.

v. The PEIR fails to appropriately assess impacts to chaparral and coastal sage scrub due to treatment activities, and mitigation measures are vague, inadequate, not based on the best available science, and improperly deferred.

The PEIR fails to appropriately assess and adequately mitigate impacts to chaparral and coastal sage scrub and any special-status animals and plants in and adjacent to these habitats due to treatment activities to less than significant. According to the PEIR, about 2,463,983 acres of chaparral and coastal sage scrub would be impacted by treatment activities, which would have devastating impacts to many special-status plants and animals as well as overall biodiversity and ecosystem function.

Chaparral and coastal sage scrub are important habitats that host high levels of biodiversity and provide important ecosystem services. Chaparral hosts more rare and native California plant species than any other plant community,¹⁹⁵ including the federally endangered Branton's milkvetch (*Astragalus brauntonii*) and coyote ceanothus (*Ceanothus ferrisiae*), and most chaparral flora have high site fidelity, meaning they do not occur in other habitats or plant communities.¹⁹⁶ Chaparral also provides habitat for numerous wildlife species, both seasonally and year-round, and as a whole it supports more species of mammals, birds, and reptiles than many California ecosystems (*Id.*). Coastal sage scrub habitat is important more for many species as well, including the federally endangered Quino checkerspot butterfly (*Euphrdryas editha quino*) and the federally threatened coastal California gnatcatcher (*Polioptila californica californica*). It is estimated that over 90% of the coastal sage scrub habitat in California has been

Act Section 401 by the California State Water Quality Control Board, 1991-2002, Report prepared by California State Water Resources Control Board (2006); Bronner, Colleen E. et al., An assessment of U.S. stream compensatory mitigation policy: Necessary changes to protect ecosystem functions and services, 49 J. of the American Water Resources Assoc. 2 (2013).

¹⁹⁴ Matthew, Jeffrey W. & Anton G. Endress, Performance criteria, compliance success, and vegetation development in compensatory mitigation wetlands, 41 Environmental Mgt 130 (2008).

¹⁹⁵ Halsey, R.W. & J.E. Keeley, Conservation issues: California chaparral, Reference Module in Earth Systems and Environmental Sciences (2016), <http://dx.doi.org/10.1016/B978-0-12-409548-9.09584-1>.

¹⁹⁶ Quinn, R.D. & S.C. Keeley, Introduction to California chaparral, University of California Press (2006).

O30-53
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O30-54

lost, and much of the remaining habitat is highly fragmented.¹⁹⁷ In addition, non-forested habitats, such as chaparral and coastal sage scrub ecosystems, have been shown to store significant amounts of carbon within their vegetation and their soils, which makes them additional resources to help combat climate change.¹⁹⁸ And like forests, these plant communities also provide other ecosystem services, such as soil stability, erosion control, and groundwater recharge.¹⁹⁹

Despite the importance of chaparral and coastal sage scrub for biodiversity and facilitating the persistence of numerous special-status plants and animals, the PEIR provides SPRs and mitigation measures that are vague, insufficient to minimize impacts due to treatment activities, and not supported by the best available science. As mentioned previously, SPR BIO-1 is vague, inadequate, and fails to comply with SB 85, as it only requires the project proponent have a qualified registered professional forester (RPF) or biologist to conduct data reviews and reconnaissance-level surveys prior to treatment, and if suitable habitat for sensitive biological resources is documented in the project area, the SPR does not provide an adequate requirement that federal, state, or local agencies be consulted to determine whether impacts due to treatment activities can be avoided or minimized or if impacts are unavoidable. Additionally, focused and protocol-level surveys should be required when sensitive biological resources like chaparral and/or coastal sage scrub are present or potentially present to determine potential impacts to these resources from treatment activities, which is not clear under the vague language of SPR BIO-1, which states that “[f]ocused or protocol-level surveys will be conducted as necessary to determine presence/absence.”²⁰⁰ The project proponent should comply with SB 85 and consult with CDFW and SWRCB, and they should also be required to consult with other appropriate federal, state, and local agencies, including but not limited to USFWS and CNPS, when chaparral and/or coastal sage scrub are present or potentially present in the project area.

O30-54
cont.

SPR BIO-5 fails to effectively mitigate impacts to chaparral and coastal sage scrub; the measure is vague, inadequate, not based on the best available science, and improperly defers mitigation. According to SPR BIO-5, the “treatment design will seek to maintain a minimum percent cover of mature native shrubs within the treatment area to maintain habitat function”²⁰¹ with no indication of what “minimum percent cover” would be. SPR BIO-5 also states that “the appropriate percent cover will be identified by the project proponent in the development of treatment design and be specific to the vegetation alliances that are present in the identified

O30-55

¹⁹⁷ Bowler, Dr. Peter A., Riparian Woodland: An endangered habitat in Southern California, Proceedings of the 15th Annual Symposium Southern California Botanists, Allan A. Schoenherr, editor, Special Publication No. 3 (1989); Bowler, Dr. Peter A., Coastal sage scrub restoration -I: The challenge of mitigation, 3 Restoration & Management Notes 2 (1990)

¹⁹⁸ Koteen, Laura et al., Invasion of non-native grasses causes a drop in soil carbon storage in California grasslands, 6 Environ. Res. Lett 044001 (2011), doi:10.1088/1748-9326/6/4/044001; Luo, Hongyan et al., Mature semiarid chaparral ecosystems can be a significant sink for atmospheric carbon dioxide, 13 Global Change Biology 386 (2007), doi: 10.1111/j.1365-2486.2006.01299.x; Quideau, S.A. et al., Organic carbon sequestration under chaparral and pine after four decades of soil development, 83 Geoderma 227 (1998).

¹⁹⁹ Napa County, Biological Resources, Ch. 4 in Napa County Baseline Data Report Version 1 (November 30, 2005).

²⁰⁰ PEIR at 3.6-119

²⁰¹ PEIR at 3.6-121

spatial scale used to evaluate type conversions” (*Id.*), which is both vague and improperly deferred mitigation. As mentioned previously, mitigation measures for treatment activities must be considered in the PEIR in order for the proper environmental analysis to take place.²⁰² Without any quantification or science to support the efficacy of treatment design to both improve fire safety for structures and communities and minimize adverse impacts to chaparral and coastal sage scrub, the public and decisionmakers are unable to evaluate the effectiveness of the plans in avoiding, minimizing, and mitigating the impacts from treatment activities.

O30-55
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The PEIR quantifies percent cover of native vegetation for “ecological restoration treatments,” including the retention of 35% of existing shrubs and associated native vegetation, and thinning would be no more than 20% from the baseline density.²⁰³ However, the PEIR fails to provide scientific evidence to support the notion that ecological restoration of chaparral or coastal sage scrub with these parameters would be effective. In addition, SPR BIO-5 vaguely states that “If the stand within the treatment area consists of multiple age classes, patches representing a range of middle to old age classes will be retained to maintain and improve heterogeneity.” (*Id.*) This provides no guidance or enforceable requirement for a practice that is not based on sound science.

O30-56

Chaparral and coastal sage scrub are native California habitats that are adapted to infrequent (every 30 to 150 years), large, high-intensity crown fire regimes.²⁰⁴ However, if these regimes are disrupted, the habitats become degraded.²⁰⁵ When fires or other types of disturbances (*i.e.*, land-clearing) occur too frequently, type conversion occurs and the native shrublands are replaced by non-native grasses and forbs that burn more frequently and more easily, ultimately eliminating native habitats and biodiversity while increasing fire threat over time.²⁰⁶ This can have serious consequences for special-status species that rely on these habitats for survival. Thus, the PEIR fails to adequately assess and mitigate impacts due to treatment activities on

O30-57

²⁰² See *Gentry v. City of Murrieta* (1995) 36 Cal.App.4th 1359, 1396 [it is improper for the EIR to “require the applicant to comply with any recommendations of a report that had yet to be performed”]; *Sundstrom v. Co. of Mendocino* (1988) 202 Cal.App.3d 296

²⁰³ PEIR at 3.6-122

²⁰⁴ Keeley, Jon E. & C.J. Fotheringham, Historic fire regime in southern California shrublands, 15 *Conservation Biology* 6:1536 (2001).

²⁰⁵ Keeley, Jon E., Fire as a threat to biodiversity in fire-type shrublands, USDA Forest Service Gen. Tech. Rep. PSW-GTR-195 (2005); Keeley, Jon E., Fire management impacts on invasive plants in the Western United States, 20 *Conservation Biology* 2: 375 (2006); Syphard, Alexandra D. et al., Chaparral landscape conversion in Southern California, in *Valuing Chaparral*, Springer Series on Environmental Management, Springer Intl. Publishing AG (2018), https://doi.org/10.1007/978-3-319-68303-4_12.

²⁰⁶ Keeley, Jon E., Fire as a threat to biodiversity in fire-type shrublands, USDA Forest Service Gen. Tech. Rep. PSW-GTR-195 (2005); Keeley, Jon E., Fire management impacts on invasive plants in the Western United States, 20 *Conservation Biology* 2: 375 (2006); Syphard, Alexandra D. et al., Conservation threats due to human-caused increases in fire frequency in Mediterranean-climate ecosystems, 23 *Conservation Biology* 3 (2009); Safford, Hugh D. & Kip M. Van de Water, Using fire return interval departure (FRID) analysis to map spatial and temporal changes in fire frequency on national forest lands in California, USDA Forest Service PSW-RP-266 (January 2014); Syphard, Alexandra D. et al., Chaparral landscape conversion in Southern California, in *Valuing Chaparral*, Springer Series on Environmental Management, Springer Intl. Publishing AG (2018), https://doi.org/10.1007/978-3-319-68303-4_12.

chaparral and coastal sage scrub as well as the special-status animals and plants that rely on these habitats to less than significant.

Given the importance of chaparral and coastal sage scrub to numerous species and ecosystem function, the PEIR should provide compensatory mitigation plans for these habitats, and mitigation ratios should be, at a minimum, 3:1 for preserved chaparral and coastal sage scrub. The PEIR's mitigation measures should implement acquisition in perpetuity, long-term monitoring, and adaptive management strategies to minimize adverse impacts to chaparral and coastal sage scrub and associated biological resources. With one third of America's plant and animal species vulnerable to impacts from human activity and one fifth at risk of extinction,²⁰⁷ it is crucial that strategies to prevent further degradation and loss of biodiversity are explicit and scientifically sound.

O30-57
cont.

vi. The PEIR fails to appropriately assess impacts to wetlands due to treatment activities, and mitigation measures are vague, inadequate, and not based on the best available science.

The PEIR fails to appropriately assess and adequately mitigate impacts to wetlands and any special-status animals and plants in and adjacent to wetlands due to treatment activities to less than significant. According to the PEIR, about 454,266 acres of wetlands are located within the treatable landscape and could be impacted by treatment activities.²⁰⁸ This calculation is based on the USFWS National Wetlands Inventory; it does not account for wetlands that may not be recorded in the inventory but could be identified with site-specific analyses or on the ground surveys. Therefore, this calculation is a bare minimum, and the acreage of wetlands is likely much greater.

O30-58

The minimum wetland buffer of 25 feet provided in MM BIO-4 is severely inadequate to preserve the ecological function and biodiversity of wetlands and fails to consider the best available science. A literature review found that recommended buffers for wildlife often far exceeded 100 meters (~325 feet), well beyond the largest buffers implemented in practice.²⁰⁹ For example, Kilgo et al. recommend more than 1,600 feet of riparian buffer to sustain bird diversity.²¹⁰ In addition, amphibians, which are considered environmental health indicators, have been found to migrate long distances between aquatic and terrestrial habitats through multiple life stages.²¹¹ For example, it has been estimated that the federally and state threatened California

O30-59

²⁰⁷ Stein, Bruce A. et al., *Reversing America's wildlife crisis: Securing the future of our fish and wildlife*, National Wildlife Federation (2018).

²⁰⁸ PEIR at 3.6-19, Table 3.6-2

²⁰⁹ Robins, James D., Memo to Charles Wilson, Director, Napa Co Conservation Development & Planning Department re: Stream Setback Technical Memo (October 18, 2002).

²¹⁰ Kilgo, John C. et al., Effect of stand width and adjacent habitat on breeding bird communities in bottomland hardwoods, 62 *J. of Wildlife Management* 1:72 (1998).

²¹¹ Semlitsch, Raymond D. & J. Russell Bodie, Biological criteria for buffer zones around wetlands and riparian habitats for amphibians and reptiles, 17 *Conservation Biology* 5 (2003); Trenham, Peter C. & H. Bradley Shaffer, Amphibian upland habitat use and its consequences for population viability, 15 *Ecological Applications* 4: 1158 (2005); Cushman, Samuel A., Effects of habitat loss and fragmentation on amphibians: A review and prospectus, 128 *Biological Conservation* 231 (2006); Fellers, Gary M. & Patrick M. Kleeman, California Red-Legged Frog (*Rana draytonii*) movement and habitat use: Implications for conservation, 41 *J. of Herpetology* 2: 276 (2007).

tiger salamander (*Ambystoma californiense*) can travel over 500 feet from wetland breeding sites.²¹² Other sensitive species, such as western pond turtles (*Actinemys marmorata*, a candidate species under the Endangered Species Act) and California newts (*Taricha torosa*), have been found to migrate over 1,300 feet and 10,000 feet respectively from breeding ponds and streams.²¹³ Accommodating the more long-range dispersers is vital for continued survival of species populations and/or recolonization following a local extinction.²¹⁴ In addition, more extensive buffers provide resiliency in the face of climate change-driven alterations to these habitats, which will cause shifts in species ranges and distributions.²¹⁵ This emphasizes the need for sizeable upland buffers around streams and wetlands, as well as connectivity corridors between heterogeneous habitats.

Today, with climate change affecting California's water supply, there is renewed interest in protecting and maximizing the state's water supplies. Larger buffer zones along jurisdictional streams and wetlands would provide more stream bank stabilization, water quality protection, groundwater recharge, and flood control both locally and throughout the watershed.²¹⁶ They would also protect communities from impacts due to climate change by buffering them from storms, minimizing impacts of floods, and providing water storage during drought.²¹⁷ Thus, the PEIR should implement larger setbacks from jurisdictional streams and wetlands based on the best available science, especially if these habitats are located within designated critical habitat, support or have the potential to support special-status and/or sensitive species, or if they provide important habitat connectivity or linkages.

²¹² Trenham, Peter C., Terrestrial habitat use by adult California tiger salamanders, 35 J. of Herpetology 2: 343 (2001).

²¹³ Trenham, Peter C., Demography, migration, and metapopulation structure of pond breeding salamanders, Ph.D. Dissertation, University of California Davis (1998); Semlitsch, Raymond D. & J. Russell Bodie, Biological criteria for buffer zones around wetlands and riparian habitats for amphibians and reptiles, 17 Conservation Biology 5 (2003).

²¹⁴ Semlitsch, Raymond D. & J. Russell Bodie, Biological criteria for buffer zones around wetlands and riparian habitats for amphibians and reptiles, 17 Conservation Biology 5 (2003); Cushman, Samuel A., Effects of habitat loss and fragmentation on amphibians: A review and prospectus, 128 Biological Conservation 231 (2006).

²¹⁵ Cushman, Samuel A. et al., Biological corridors and connectivity, in Key Topics in Conservation Biology 2, First ed. (David W. Macdonald & Katherine J. Willis eds. 2013); Heller, Nicole E. & Erika S. Zavaleta, Biodiversity management in the face of climate change: A review of 22 years of recommendations, 142 Biological Conservation 14 (2009); Warren, Rachel et al., Increasing impacts of climate change upon ecosystems with increasing global mean temperature rise, 106 Climatic Change 141 (2011), DOI 10.1007/s10584-010-9923-5.

²¹⁶ Nieswand, George H. et al., Buffer strips to protect water supply reservoirs: A model and recommendations, 26 Water Resources Bulletin 6 (1990); Norris, Vol, The use of buffer zones to protect water quality: A review, 7 Water Resources Management 257 (1993); Whipple Jr., William, Buffer zones around water-supply reservoirs, 119 J. Water Resour. Plann. Manage. 4:495 (1993); Sabater, Francesc et al., Effects of riparian vegetation removal on nutrient retention in a Mediterranean stream, 19 J.N. Am. Benthos. Soc. 4:609 (2000); Lovell, Sarah Taylor & William C. Sullivan, Environmental benefits of conservation buffers in the United States: Evidence, promis, and open questions, 112 Agriculture, Ecosystems and Environment 249 (2006).

²¹⁷ Environmental Law Institute, Planner's guide to wetland buffers for local governments (2008).

MM BIO-4 is further insufficient because it is vague and does not require consultation with USFWS, USACE, CDFW, or other appropriate federal, state, or local agencies to delineate wetland boundaries, determine the potential presence of special status species, or identify avoidance and mitigation measures to minimize impacts due to treatment activities. The PEIR violates SB 85, which states, “When selecting a fuel reduction project, the department shall collaborate with the State Water Resources Control Board and the Department of Fish and Wildlife to ensure the design of the fuel reduction project protects water resources and wildlife habitat while addressing fire behavior and public safety.”²¹⁸

O30-60

The PEIR states, “[t]he buffer will be a minimum width of 25 feet but may be larger if deemed necessary. The appropriate size and shape of the buffer zone will be determined in coordination with the qualified RPF or biologist and will depend on the type of wetland present (e.g., seasonal wetland, wet meadow, freshwater marsh, vernal pool), the timing of treatment (e.g., wet or dry time of year), whether any special-status species may occupy the wetland and the species’ vulnerability to the treatment activities, environmental conditions and terrain, and the treatment activity being implemented.”²¹⁹ The PEIR does not adequately define under what circumstances larger buffers would be “deemed necessary,” nor does it explain how the type of wetland, timing of treatment, and whether any special-status species may occupy the wetland, would impact buffer size and shape. The PEIR fails to provide specifics and lacks the best available science to support the assertion that impacts to wetlands, special-status species that use the wetlands as habitat, and water resources would be less than significant.

O30-61

vii. The PEIR fails to adequately assess impacts to wildlife movement and habitat connectivity and fails to provide appropriate and adequate mitigation measures to minimize such impacts.

The CalVTP fails to adequately assess potential impacts to habitat connectivity and wildlife movement and include measures to minimize impacts at the local and regional scale. Habitat connectivity is vital for wildlife movement and biodiversity conservation. Restrictions on movement and dispersal can negatively affect animals’ behavior, movement patterns, reproductive success, and physiological state, which can lead to significant impacts on individual wildlife, populations, communities, and landscapes.²²⁰ Individuals can die off, populations can become isolated, sensitive species can become locally extinct, and important ecological processes like plant pollination and nutrient cycling can be lost. In addition, connectivity between high quality habitat areas in heterogeneous landscapes is important to allow for range

O30-62

²¹⁸ Senate Bill No. 85 (Stats. 2019, ch. 31); Pub. Resources Code §§ 21, 412.

²¹⁹ PEIR at 3.6-174

²²⁰ Ceiea-Hasse, Ana et al., Population persistence in landscapes fragmented by roads: Disentangling isolation, mortality, and the effect of dispersal, 375 *Ecological Modelling* 45 (2018); Cushman, Samuel A., Effects of habitat loss and fragmentation on amphibians: A review and prospectus, 128 *Biological Conservation* 231 (2006); Haddad, Nick M. et al., Habitat fragmentation and its lasting impact on Earth's ecosystems, *Sci. Adv.* 1:31500052 (March 20, 2015); Trombulak, Stephen C. & Christopher A. Frissell, Review of ecological effects of roads on terrestrial and aquatic communities, 14 *Conservation Biology* 1:18 (2000); van der Ree, Rodney et al., Effects of roads and traffic on wildlife populations and landscape function: Road ecology is moving toward larger scales, 16 *Ecology and Society* 1:48 (2011), <http://www.ecologyandsociety.org/vol16/iss1/art48/>.

shifts and species migrations as climate changes.²²¹ Loss of wildlife connectivity decreases biodiversity and degrades ecosystems.

Wildlife connectivity and migration corridors are important at the local, regional, and continental scale. Examining Napa County as an example, as much of the County is within the identified treatable landscape, it is clear that the impacts of treatment activities will have adverse impacts on wildlife movement, habitat connectivity, and overall biodiversity. Local connectivity that links aquatic and terrestrial habitats is important to allow various sensitive species to persist, including state- and federally-protected California red-legged frogs (*Rana draytonii*) and western pond turtles (*Actinemys marmorata*). Yet buffers around wetlands do not consider the best available science that shows larger buffers connecting wetlands with upland habitats are required to effectively support sensitive species.²²² At a regional scale, medium- and large-sized mammals that occur in Napa County, such as mountain lions (*Puma concolor*), bobcats (*Lynx rufus*), gray foxes (*Urocyon cinereoargenteus*), ring-tailed cats (*Bassariscus astutus*), and mule deer (*Odocoileus hemionus*), require large patches of heterogeneous habitat to forage, seek shelter/refuge, and find mates. Yet riparian habitats, common migration corridors for these and many other species, are not given adequate protections, and connectivity of riparian areas with heterogeneous habitats is not adequately considered. At a global scale, Napa County (and much of California) is an important stop for about 400 resident and migratory bird species within the Pacific Flyway, a north-south migratory corridor that extends from Alaska to Patagonia. For example, while Anna's hummingbirds (*Calypte anna*) often reside in Napa County's chaparral, oak woodlands, and riparian areas year-round, Allen's hummingbirds (*Selasphorus sasin*) migrate from Mexico in the spring to nest in Napa's oak woodlands and riparian areas, and rufous hummingbirds (*Selasphorus rufus*) migrate through Napa on their way to and from their breeding grounds in Canada and their over-wintering grounds in the Gulf Coast. Yet loss of sensitive natural communities and ecological function are not adequately avoided or mitigated, and connectivity among these habitats at a local, regional, and global scale is not assessed or addressed in the PEIR. In addition, anadromous fish, such as Chinook salmon and steelhead trout, are born in some of Napa's waterways, spend several years in the Pacific Ocean, and return to Napa to spawn. Yet hydrological modifications and impacts to soils due to vegetation removal and habitat degradation are not adequately assessed or mitigated. Like the many areas within the identified treatable landscape, Napa County is a critical hub for local, regional, and global biodiversity; wildlife movement and habitat connectivity must be functionally maintained. The PEIR fails to adequately assess and mitigate impacts to wildlife connectivity by failing to protect

O30-62
cont.

²²¹ Heller, Nicole E. & Erika S. Zavaleta, Biodiversity management in the face of climate change: A review of 22 years of recommendations (142 *Biological Conservation* 14 (2009); Cushman, Samuel A. et al., Biological corridors and connectivity, in *Key Topics in Conservation Biology* 2, First ed. (David W. Macdonald & Katherine J. Willis eds. 2013); Krosby, Meade et al., Identifying riparian climate corridors to inform climate adaptation planning, 13 *PLoS ONE* 11:e205156 (2018), <https://doi.org/10.1371/journal.pone.0205156>.

²²² Semlitsch, Raymond D. & J. Russell Bodie, Biological criteria for buffer zones around wetlands and riparian habitats for amphibians and reptiles, 17 *Conservation Biology* 5 (2003); Trenham, Peter C. & H. Bradley Shaffer, Amphibian upland habitat use and its consequences for population viability, 15 *Ecological Applications* 4: 1158 (2005); Cushman, Samuel A., Effects of habitat loss and fragmentation on amphibians: A review and prospectus, 128 *Biological Conservation* 231 (2006); Fellers, Gary M. & Patrick M. Kleeman, California Red-Legged Frog (*Rana draytonii*) movement and habitat use: Implications for conservation, 41 *J. of Herpetology* 2: 276 (2007).

against further fragmentation and piecemealing of intact, heterogeneous habitats at the local, regional, and global scale.

O30-62
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D. The PEIR Fails to Adequately Analyze and Mitigate Impacts from Wildfires.

The Wildfire impacts and mitigation analysis in the PEIR (section 3.17) suffers from numerous deficiencies, including: (1) failing to distinguish between community fire safety objectives and ecological restoration objectives--two fundamentally different goals that require different management approaches; (2) failing to provide evidence that the proposed vegetation treatment activities will protect homes and communities; (3) failing to disclose and analyze research showing that vegetation management in the defensible space immediately surrounding structures is the most effective vegetation treatment to protect communities from wildfire; (4) failing take an ecoregional approach to ecological restoration objectives and the management actions needed to accomplish them; and (5) failing to provide an adequate assessment of the ecological restoration objectives for California’s forests, including omission of key information on the environmental baseline and the effectiveness and impacts of proposed management actions.

O30-63

i. The PEIR’s analysis fails to distinguish between community fire safety objectives and ecological restoration objectives—two fundamentally different goals that require different management approaches.

In conflating two of the primary objectives of the Program—community fire and ecological restoration—the PEIR fails to present a project description that contains sufficient specificity so as to allow for adequate review.²²³The PEIR must distinguish between its community fire safety objectives as separate from the ecological restoration objectives, as these are fundamentally different goals that require different management tools. In the Wildfire analysis and throughout, the PEIR fails to differentiate between these two different objectives, the management actions that are being proposed to accomplish each objective, how proposed management actions will achieve each objective, and the impacts of the management actions.

O30-64

ii. The PEIR fails to provide evidence that the proposed vegetation treatment activities will protect homes and communities.

The CEQA Guidelines require that an EIR “demonstrate that the significant environmental impacts of the proposed project were adequately investigated and discussed and it must permit the significant effects of the project to be considered in the full environmental context.”²²⁴ To achieve this end, the lead agency must make a good faith effort at full disclosure of all the information required for a reasoned analysis of an issue.²²⁵ Further, the findings in the

O30-65

²²³ *Dry Creek Citizens Coalition v. County of Tulare*, 70 Cal. App. 4th 20, 26 (1999).

²²⁴ 14 Cal. Code Regs. § 15125(c).

²²⁵ *Madera Oversight Coalition, Inc. v County of Madera* 199 Cal. App 4th 48, 104 & FN 32 (2011), overruled on other grounds in *Neighbors for Smart Rail v Exposition Metro Line Constr. Auth.* (2013) 57 C4th 439.

EIR must be supported by substantial evidence.²²⁶ The analysis of the impacts of vegetation treatment activities on wildfires is inadequate because it fails to provide the full environmental context of vegetation treatment activities, fails to disclose information that indicates vegetation treatment activities are ineffective at advancing community safety, and is not supported by substantial evidence.

As detailed elsewhere in these comments, the PEIR fails to provide support for its foundational claim that the proposed vegetation treatments will help slow and suppress non-wind-driven fires, thereby increasing public safety and firefighting effectiveness. For example, while the PEIR cites Kalies and Yocom Kent (2016) for this claim, this review specifically concluded that there is not good evidence that fuel treatments lead to increased public safety or firefighting effectiveness.

Instead, recent studies highlight the limitations of fuel reduction approaches in altering fire behavior and reducing wildfire threat to communities, particularly because (a) fuel treatments are largely ineffective under extreme fire weather conditions that create the largest fires and the vast majority of annual area burned; (b) there is a low probability that areas receiving fuels treatment will overlap with wildfires; and (c) fuel treatments are costly and often infeasible to implement widely.²²⁷ As summarized by a 2017 review by fire scientist Tania Schoennagel and eleven co-authors:

Managing forest fuels is often invoked in policy discussions as a means of minimizing the growing threat of wildfire to ecosystems and WUI communities across the West. However, the effectiveness of this approach at broad scales is limited. Mechanical fuels treatments on US federal lands over the last 15 y (2001–2015) totaled almost 7 million ha, but the annual area burned has continued to set records. Regionally, the area treated has little relationship to trends in the area burned, which is influenced primarily by patterns of drought and warming. Forested areas considerably exceed the area treated, so it is relatively rare that treatments encounter wildfire. For example, in agreement with other analyses, 10% of the total number of US Forest Service forest fuels treatments completed 2004–2013 in the western United States subsequently burned in the 2005–2014 period. Therefore, roughly 1% of US Forest Service forest treatments experience wildfire each year, on average. The effectiveness of forest treatments lasts about 10–20 y, suggesting that most treatments have little influence on wildfire. Implementing fuels treatments is challenging and costly; funding for US Forest Service hazardous fuels treatments totaled \$3.2 billion over the 2006–2015 period. Furthermore, forests account for only 40% of the area burned since 1984,

²²⁶ *City of Hayward v. Trustees of California State University*, 242 Cal. App. 4th 833, 839 (2015)

²²⁷ Schoennagel, Tania et al., Adapt to more wildfire in western North American forests as climate changes, 114 PNAS 4582 (2017); Dellasala, Dominick A., Accommodating mixed-severity fire to restore and maintain ecosystem integrity with a focus on the Sierra Nevada of California, USA, 13 Fire Ecology 148 (2017).

with the majority of burning in grasslands and shrublands. As a consequence of these factors, the prospects for forest fuels treatments to promote adaptive resilience to wildfire at broad scales, by regionally reducing trends in area burned or burn severity, are fairly limited.²²⁸ (internal citations removed)

Similarly, DellaSala et al. (2017) concluded that “[o]n public lands, current fire policy promotes thinning over large landscapes (e.g., USDA Forest Service 2002, US Congress 2003, USDA Forest Service 2009, US Congress 2015), which is costly (Schoennagel and Nelson 2011), infeasible over large areas (Calkin *et al.* 2013, North *et al.* 2015a, Parks *et al.* 2015), and largely ineffective under extreme fire weather conditions (Lydersen *et al.* 2014, Cary *et al.* 2016).”²²⁹ Zachmann et al. (2018) found that “[t]he combination of transient treatment effects, variability in the effectiveness of different treatment methods (Kalies and Yocom Kent, 2016; Martinson and Omi, 2013; Prichard et al., 2010), and operational and funding constraints (North et al., 2015) limits the practicality of frequent treatments at the landscape scale; and there is growing recognition that fuels reduction alone may not be able to effectively alter regional wildfire trends (Schoennagel et al., 2017).”²³⁰

Further, Syphard et al. (2019) and Abatzoglou et al. (2018) highlighted that large, wind-driven fire events have been responsible for the vast majority of structures lost in California wildfires, including the recent fires in 2017 and 2018, and that one of the clearest factors that determines whether a fire becomes large is wind speed.²³¹ However, as acknowledged by the PEIR, the vegetation treatments proposed in the VTP are ineffective for altering fire behavior during wind-driven fires.

In addition, some studies indicate that forest thinning can increase fire severity by opening up the canopy, creating hotter and drier conditions and introducing invasive fire-prone grasses. For example, a study in southwestern Oregon forests by Zald and Dunn (2018) found that private industrial forests subjected to intensive harvest experienced higher wildfire severity than more intact forests with a greater proportion of older forest areas.²³² The study suggested that “intensive plantation forestry characterized by young forests and spatially homogenized fuels, rather than pre-fire biomass, were significant drivers of wildfire severity.” Similarly,

²²⁸ Schoennagel, Tania et al., Adapt to more wildfire in western North American forests as climate changes, 114 PNAS 4582 (2017) at 4586.

²²⁹ Dellasala, Dominick A., Accommodating mixed-severity fire to restore and maintain ecosystem integrity with a focus on the Sierra Nevada of California, USA, 13 Fire Ecology 148 (2017) at 152-153.

²³⁰ Zachmann, L.J. et al., Prescribed fire and natural recovery produce similar long-term patterns of change in forest structure in the Lake Tahoe basin, California, 409 Forest Ecology and Management 276 (2018) at 276-277.

²³¹ Syphard, Alexandra D. et al., The relative influence of climate and housing development on current and projected future fire patterns and structure loss across three California landscapes, 56 Global Environmental Change 41 (2019); Abatzoglou, John T. et al., Human-related ignitions concurrent with high winds promote large wildfires across the USA, 27 International Journal of Wildland Fire (2018).

²³² Zald, Harold S.J. and Christopher J. Dunn, Severe fire weather and intensive forest management increase fire severity in a multi-ownership landscape, 28 Ecological Applications 1068 (2018).

Bradley et al. (2016) found that, across the western U.S., pine and mixed conifer forests with the lowest levels of protection from logging tend to burn more severely, while forests with the most protection from logging burned least severely even though they are generally identified as having the highest overall levels of biomass and fuel loading.²³³

iii. The PEIR fails to disclose and analyze research showing that vegetation management in the defensible space immediately surrounding structures is the most effective vegetation treatment to protect communities from wildfire.

As discussed above, the good faith standard requires agencies to disclose all the information required for a reasoned discussion. The PEIR falls short of this standard with respect to research regarding mechanisms to advance community safety in the face of wildfire. A robust body of scientific research demonstrates that the most effective way to protect structures from fire is to reduce the ignitability of the structure itself and the immediate surroundings within about 100 feet from the structure.²³⁴ Importantly, California-focused studies have found that vegetation treatment beyond 100 feet from homes and other structures provide no benefit for protecting those structures from burning.²³⁵ These studies are critical for accurately assessing of whether the proposed vegetation treatments will achieve the VTP’s key purpose of community wildfire protection. However, the PEIR impermissibly omits disclosure and discussion of scientific studies demonstrating that ramping up the vegetation treatment as proposed by the VTP will not increase community wildfire safety.

For example, Calkin et al. (2014) emphasized that treating wildland fuels does not “measurably impact the susceptibility of homes to ignition and subsequent destruction.”²³⁶ The study highlighted that home losses are increasing despite enormous investments in modifying wildland fuels near population areas. This is because home susceptibility to wildfire is a direct function of their ignitability, which is dependent of the small area of the “home ignition zone” which “is independent of fire behavior in the nearby wildlands.” According to the study, “research demonstrates a home’s characteristics in relation to its immediate surroundings principally determine home ignition potential during extreme wildfires.” Calkin et al. (2014) emphasized that “[o]vercoming perceptions of wildland-urban interface fire disasters as a

²³³ Bradley, C.M. et al., Does increased forest protection correspond to higher fire severity in frequent-fire forests of the western United States? 7 *Ecosphere* e01492 (2016).

²³⁴ Cohen, J.D., Preventing disaster: home ignitability in the Wildland-Urban Interface, 98 *Journal of Forestry* 15 (2000); Cohen, J.D. and R.D. Stratton, Home destruction examination: Grass Valley Fire, U.S. Forest Service Technical Paper R5-TP-026b (2008); Gibbons, P. et al., Land management practices associated with house loss in wildfires, 7 *PLoS ONE* e29212 (2012); Scott, J.H. et al., Examining alternative fuel management strategies and the relative contribution of National Forest System land to wildfire risk to adjacent homes – A pilot assessment on the Sierra National Forest, California, USA, 362 *Forest Ecology and Management* 29 (2016).

²³⁵ Syphard, A.D. et al., The role of defensible space for residential structure protection during wildfires, 23 *International Journal of Wildland Fire* 1165 (2014).

²³⁶ Calkin, David E. et al., How risk management can prevent future wildfire disasters in the wildland-urban interface, 111 *PNAS* 746 (2014).

wildfire control problem rather than a home ignition problem, determined by home ignition conditions, will reduce home loss.”

In a California-focused study, Syphard et al. (2014) found that structures were more likely to survive a fire if the vegetation was treated in the defensible space immediately adjacent to them.²³⁷ According to Syphard et al. (2014), “[t]he most effective treatment distance varied between 5 and 20 m (16–58 ft) from the structure, but distances larger than 30 m (100 ft) did not provide additional protection, even for structures located on steep slopes. The most effective actions were reducing woody cover up to 40% immediately adjacent to structures and ensuring that vegetation does not overhang or touch the structure.” As a result, efforts to promote large-scale thinning in areas far away from buildings are often wasteful, expensive, inefficient, carbon-releasing, ecologically-damaging, and relatively ineffective, compared to efforts that focus on buildings and the defensible space in their immediate vicinity.²³⁸ Recent analyses by Syphard et al. (2017) and Syphard et al. (2019) re-affirmed the important role of defensible space near the structure. These studies highlighted that community safety is a multivariate problem that requires a comprehensive solution involving defensible space maintenance, fire-safe construction, and land-use and urban planning decisions that reduce the exposure of homes to wildfires (i.e., by restricting development in fire-prone areas).²³⁹

O30-66
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iv. The PEIR fails to take an ecoregional approach to the ecological restoration objectives and the management actions needed to accomplish them.

The PEIR must take an ecoregional approach when discussing its ecological restoration objectives and appropriate management actions for accomplishing them. California’s forest, shrubland, and grassland ecosystems are being differentially affected by human disturbances to their natural fire regimes—with most forests experiencing too little fire due to a long legacy of fire suppression, but chaparral ecosystems experiencing too much fire due to extensive development in these fire-prone ecosystems paired with human-caused ignitions. The effects of climate change and human-caused fire ignitions on wildfire activity also vary by region. For example, Keeley and Syphard (2016) found that climate change is not a major determinant of fire activity on all landscapes, with lower elevations and latitudes showing little or no increase in fire activity with hotter and drier conditions.²⁴⁰ Syphard et al. (2019) similarly found that the relative importance of climate and housing pattern in explaining fire activity varies across California’s

O30-67

²³⁷ Syphard, A.D. et al., The role of defensible space for residential structure protection during wildfires, 23 *International Journal of Wildland Fire* 1165 (2014).

²³⁸ Scott, J.H. et al., Examining alternative fuel management strategies and the relative contribution of National Forest System land to wildfire risk to adjacent homes – A pilot assessment on the Sierra National Forest, California, USA, 362 *Forest Ecology and Management* 29 (2016).

²³⁹ Syphard, Alexandra D. et al., The importance of building construction materials relative to other factors affecting structure survival during wildfire, 21 *International Journal of Disaster Risk Reduction* 140 (2017); Syphard, Alexandra D. et al., The relative influence of climate and housing development on current and projected future fire patterns and structure loss across three California landscapes, 56 *Global Environmental Change* 41 (2019).

²⁴⁰ Keeley, Jon E. and Alexandra D. Syphard, Climate change and future fire regimes: examples from California, 6 *GeoSciences* 37 (2016).

regions, with climate change having no projected impacts on fire probability in southern California.²⁴¹

O30-67
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- v. **The PEIR fails to provide an adequate assessment of its ecological restoration objectives for California’s forests, including omission of key information on the environmental baseline and the effectiveness and impacts of proposed management actions.**

A key objective of the VTP is to reduce fire severity through vegetation treatments based on the unsupported claim that fire severity is increasing in California’s forests. Although the PEIR cites Westerling et al. (2006) for the assertion of increasing fire severity,²⁴² Westerling et al. (2006) does not provide evidence for increasing fire severity in California’s forests.²⁴³ In addition, the PEIR fails to acknowledge that the weight of scientific evidence indicates that there are no significant trends in fire severity in California’s forests in terms of proportion, area, and/or patch size, including recent studies by Picotte et al. 2016 (California forest and woodland) and Keyser and Westerling 2017 (California forests).²⁴⁴ Most recently, Keyser and Westerling (2017) tested trends for high severity fire occurrence for western United States forests, for each state and each month. The study found no significant trend in high severity fire occurrence during 1984-2014, except for Colorado. The study also found no significant increase in high severity fire occurrence by month during May through October, and no correlation between fraction of high severity fire and total fire size. Furthermore, Parks et al. (2016) projected that even in hotter and drier future forests, there will be a decrease or no change in high-severity fire effects in nearly every forested region of the western U.S., including California, due to reductions in combustible understory vegetation over time.²⁴⁵

O30-68

²⁴¹ Syphard, Alexandra D. et al., The relative influence of climate and housing development on current and projected future fire patterns and structure loss across three California landscapes, 56 *Global Environmental Change* 41 (2019).

²⁴² PEIR at 1-3 (“Historically, California’s wildfires were less severe”) and 3.17-3 (“Although an important practice in limiting fire spread, over time, the land management practice of fire suppression combined with forest regrowth after extensive logging in the late 19th century has led to a buildup of forest fuels and an increase in the occurrence and threat of large, severe fires (Westerling et al. 2006).”

²⁴³ Westerling et al. (2006), using a baseline of 1970 to 2003 and averaging across forested regions in the western United States, reported a shift during the mid-1980s toward a higher frequency of large fires, greater average annual area burned and a longer fire season, which the authors associated with increased spring and summer temperatures and an earlier spring snowmelt, but did not report on trend in fire severity. Westerling, A.L. et al., Warming and earlier spring increase Western U.S. forest wildfire activity, 313 *Science* 940 (2006)

²⁴⁴ Picotte, J.J. et al., 1984-2010 trends in fire burn severity and area for the coterminous US, 25 *International Journal of Wildland Fire* 413 (2016); Keyser, A. and A.L. Westerling, Climate drives inter-annual variability in probability of high severity fire occurrence in the western United States, 12 *Environmental Research Letters* 065003 (2017).

²⁴⁵ Parks, S.A. et al., How will climate change affect wildland fire severity in the western US? 11 *Environmental Research Letters* 035002 (2016).

The PEIR incorrectly suggests that there is currently an excess of high-intensity fire in California's forests that is ecologically detrimental,²⁴⁶ when in fact, scientific research has established that there is an ecological harmful *wildfire deficit* in California's pine and mixed conifer forests, including less high-severity fire, compared with historical conditions. While the PEIR briefly acknowledges the fire deficit in California's forests, it fails to discuss the ecological harms resulting from the long history of industrial fire suppression.²⁴⁷ The PEIR must acknowledge the multiple lines of evidence demonstrating that California's mixed-conifer and ponderosa pine forests have historically been characterized by mixed-severity fire that includes ecologically significant amounts of high-severity fire, which has played an important role in creating heterogeneity, including complex structural diversity and high biological diversity.²⁴⁸

The PEIR must also disclose the extensive research documenting the importance of the biodiverse, ecologically significant, and unique "complex early seral forest" (also called "snag forest habitat") created by high-severity fire, and the under-representation of this snag forest ecotype compared to historical conditions. Scientific research demonstrates that many species, including many at-risk species, depend on the unique habitat created by high-severity fire patches, including the abundance of snags, downed logs, shrub patches, and regeneration of trees.²⁴⁹ For example, Galbraith et al. (2019) found that "within a large wildfire mosaic, severely burned forest contained the most diverse wild bee communities" with 20 times more individuals and 11 times more species captured in areas that experienced high fire severity relative to areas with the lowest fire severity.²⁵⁰ Furthermore, recent California-specific research indicates that natural regeneration is occurring in high-severity fire patches, and high-severity fire is not resulting in type conversion to non-forest or conversion from pine forest to white-fir, Doug fir, and incense cedar forest.²⁵¹

²⁴⁶ PEIR at 1-3 ("The proposed CalVTP directs the implementation of vegetation treatments to reduce wildfire risks and avoid or diminish the harmful effects of wildfire on the people, property, and natural resources in the state of California.")

²⁴⁷ PEIR at 1-1 ("In the last several decades, more than 75 percent of forested areas and other woody vegetation types burned less frequently than historic averages....")

²⁴⁸ Odion, D.C. et al., Examining historical and current mixed-severity fire regimes in Ponderosa pine and mixed-conifer forests of western North America, 9 Plos One e87852 (2014).

²⁴⁹ Swanson, M.E. et al., The forgotten stage of forest succession: early-successional ecosystems on forested sites, 9 Frontiers in Ecology and Environment 117 (2011); DellaSala, Dominick A. et al., Complex early seral forests of the Sierra Nevada: what are they and how can they be managed for ecological integrity? 34 Natural Areas Journal 310 (2014); Hutto, Richard L. et al., Toward a more ecologically informed view of severe forest fires, 7 Ecosphere e01255 (2016).

²⁵⁰ Galbraith, Sara M. et al., Wild bee diversity increases with local fire severity in a fire-prone landscape, 10 Ecosphere e02668 (2019).

²⁵¹ Baker, William L., Transitioning western U.S. dry forests to limited committed warming with bet-hedging and natural disturbances, 9 Ecosphere e02288 (2018); Hanson, Chad T., Landscape heterogeneity following high-severity fire in California's forests, 42 Wildlife Society Bulletin 264 (2018).

The PEIR suggests that vegetation reduction treatments under the VTP will increase forest resilience, particularly under climate change.²⁵² However, research suggests that forest management treatments focused on thinning trees can be counter-productive, and many studies instead recommend restoring natural disturbance processes to increase forest resilience. For example, Carnwath and Nelson (2016) noted that management activities to reduce tree density with the purpose of increasing stand resilience often target trees that may be the most drought-resilient, producing counter-productive results.²⁵³ Similarly, D’Amato et al. (2013) concluded that “heavy thinning treatments applied to younger populations, although beneficial at reducing drought vulnerability at this stage, may predispose these populations to greater long-term drought vulnerability.”²⁵⁴ Keeling et al. (2006) emphasized the importance of restoring ecological processes, especially wildfire, rather than management that tries to create specific stand conditions.²⁵⁵ Keeling’s study in ponderosa pine/Douglas-fir communities found that “fire and absence of fire produce variable effects in the understory and different rates of successional change in the overstory across varied landscapes.” The authors cautioned “against specific targets for forest structure in restoration treatments, and underscore the importance of natural variability and heterogeneity in ponderosa pine forests.” Further, “management may need to emphasize restoration of natural ecological processes, especially fire, rather than specific stand conditions.”

O30-69

Instead, research indicates that restoring forest health and increasing forest resilience requires reestablishing the natural ecological disturbances that forests and wildlife evolved with.²⁵⁶ California’s forests evolved with mixed-severity fire, not mechanical treatments or prescribed fire. Mechanical thinning does not mimic natural wildfire and can reduce the value of mature forest habitat by reducing structural complexity which many rare wildlife species preferentially select, while prescribed fire burning at low-severity outside of the natural fire season does not mimic the mixed-severity wildfire regime that California’s forests evolved with.

Baker (2018) recommended focusing forest restoration on allowing natural disturbance processes—such as wildfire, drought, and bark beetle outbreaks—to proceed to increase forest

O30-70

²⁵² PEIR at ES-3 (“Ecological Restoration: generally outside the WUI in areas that have departed from the natural fire regime as a result of fire exclusion, ecological restoration would focus on restoring...resiliency”).

²⁵³ Carnwath, G.C. and C.R. Nelson, The effect of competition on response to drought and interannual climate variability of a dominant conifer tree of western North America, 104 *Journal of Ecology* 1421 (2016).

²⁵⁴ D’Amato, A.W. et al., Effects of thinning on drought vulnerability and climate response in north temperate forest ecosystems, 23 *Ecological Applications* 1735 (2013).

²⁵⁵ Keeling, E.G. et al., Effects of fire exclusion on forest structure and composition in unlogged ponderosa pine/Douglas-fir forests, 327 *Forest Ecology and Management* 418 (2006).

²⁵⁶ Beudert, Burkhard et al., Bark beetles increase biodiversity while maintaining drinking water quality, 8 *Conservation Letters* 272 (2015); Baker, William L., Transitioning western U.S. dry forests to limited committed warming with bet-hedging and natural disturbances, 9 *Ecosphere* e02288 (2018); Zachmann, L.J. et al., Prescribed fire and natural recovery produce similar long-term patterns of change in forest structure in the Lake Tahoe basin, California, 409 *Forest Ecology and Management* 276 (2018).

resilience and adaptation and enhance forest persistence under climate change, including “(1) refocusing restoration to increase bet-hedging resilience to droughts and beetle outbreaks by retaining small trees and diverse tree species, (2) expanding development of fire-safe landscapes to protect people and infrastructure from unavoidable increased fire, (3) enabling more managed fire to restore and enhance standard landscape-scale bet-hedging, and (4) accepting that LIDs [large infrequent disturbances] will revise resistance, resilience, and adaptation, which enhance forest persistence, particularly if post-disturbance survivors are not logged and trees are not planted.”²⁵⁷

Zachmann et al. (2018) recommended incorporating “prescribed natural regeneration” into forest management planning to increase forest resilience—that is, deliberately allowing natural processes to proceed unimpeded in some areas, which “is often ignored as a viable land-use option.”²⁵⁸ This study found that the structure and fuel variables of mixed conifer forest stands in the Lake Tahoe basin that were treated with prescribed fire appeared to be “moving in a similar direction” as stands that were untreated and left to natural regeneration. The results “suggested that untreated areas may be naturally recovering from the large disturbances associated with resource extraction and development in the late 1800s [even while exposed to a changing climate and longterm fire suppression], and that natural recovery processes, including self-thinning, are taking hold.” The study concluded that “incorporation of natural regeneration into forest management planning can greatly reduce the cost and resource requirements of large-scale restoration efforts, while also providing habitat for fire-dependent and undisturbed old forest dependent species.”

The PEIR entirely fails to consider or analyze using managed wildland fire in the CALVTP as an effective management tool for achieving forest ecosystem restoration. In managed wildland fire, land managers make a decision to allow lightning-caused fires to burn to promote mixed-severity fire effects in order to enhance natural heterogeneity and benefit wildlife. Restoring wildfire in areas away from people is an important part of ecological fire management and increasing the adaptive resilience of forest ecosystems and society to increasing wildfire.²⁵⁹

²⁵⁷ Baker, William L., Transitioning western U.S. dry forests to limited committed warming with bet-hedging and natural disturbances, 9 *Ecosphere* e02288 (2018).

²⁵⁸ Zachmann, L.J. et al., Prescribed fire and natural recovery produce similar long-term patterns of change in forest structure in the Lake Tahoe basin, California, 409 *Forest Ecology and Management* 276 (2018).

²⁵⁹ Caprio, A.C. and D.M. Graber, Returning fire to the mountains: can we successfully restore the ecological role of pre-Euroamerican fire regimes to the Sierra Nevada? *in* Proceedings: Wilderness Science in a Time of Change (2000); U.S. Department of Agriculture & U.S. Department of the Interior, Wildland fire use implementation procedures reference guide, Boise: National Interagency Fire Center (2005); Dale, Lisa, Wildfire policy and fire use on public lands in the United States, 19 *Society and Natural Resources* 275 (2006); Noss, Reed F. et al., Managing fire-prone forests in the Western United States, 4 *Frontiers in Ecology and the Environment* 481 (2006); Ingalsbee, Timothy, Ecological fire use for ecological fire management: managing large wildfires by design, USDA Forest Service Proceedings RMRS-P-73 (2015); Miller, Carol and Gregory H. Aplet, Progress in wilderness fire science: embracing

Schoennagel and coauthors (2018) highlighted that “[m]anaging rather than aggressively suppressing wildland fires can promote adaptive resilience as the climate continues to warm.”²⁶⁰ The 1995 Federal Wildland Fire Management policy was the first federal policy aimed at reintroducing more wildfire on public lands, with U.S. federal agencies now actively managing an average of 75,000 ha of lightning-caused fires per year.²⁶¹ In California, Boisrame et al. (2018) found that the managed wildfire policy in Yosemite National Park over the past several decades has returned diversity to this fire-suppressed landscape, even after protracted fire suppression, and demonstrated that “management of forests to restore fire regimes has the potential to maintain healthy, resilient landscapes in frequent fire-adapted ecosystems.”²⁶² Thus, the aggressive approach to fire suppression, as taken by the VTP, is “counterproductive to building adaptive resilience to increasing wildfire in the long term.”²⁶³

O30-70
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The PEIR fails to discuss the research demonstrating the importance of forest protection, including reducing forest degradation from logging and thinning, for restoring forest ecosystem health and forest carbon storage.²⁶⁴ California’s forests are much less dense in terms of basal area than they were historically due to a long, ongoing history of logging.²⁶⁵ Sierra Nevada forests were about 30% less dense, and Transverse and Peninsular Range forests were 40% less dense, in terms of basal area in the 2000s compared to the 1930s,²⁶⁶ largely due to logging. Logging continues to be the lead driver of carbon losses from California’s forests. Harris et al. (2016) reported that between 2006 and 2010 logging was responsible for 60% of the carbon losses from California’s forests,²⁶⁷ while Berner et al. (2017) reported that logging was the largest cause of tree mortality in California forests between 2003 and 2012.²⁶⁸ Reducing vegetation removal—particularly by restricting harvest on public lands and lengthening harvest cycles on private

O30-71

complexity, 114 *Journal of Forestry* 373 (2016); Ingalsbee, Timothy, Whither the paradigm shift? Large wildland fires and the wildfire paradox offer opportunities for a new paradigm of ecological fire management, 26 *International Journal of Wildland Fire* 557 (2017).

²⁶⁰ Schoennagel, Tania et al., Adapt to more wildfire in western North American forests as climate changes, 114 *PNAS* 4582 (2017).

²⁶¹ Schoennagel, Tania et al., Adapt to more wildfire in western North American forests as climate changes, 114 *PNAS* 4582 (2017).

²⁶² Boisramé, Gabrielle F.S. et al., Vegetation change during 40 years of repeated managed wildfires in the Sierra Nevada, California, 402 *Forest Ecology and Management* 241 (2017).

²⁶³ Schoennagel, Tania et al., Adapt to more wildfire in western North American forests as climate changes, 114 *PNAS* 4582 (2017).

²⁶⁴ Watson, James E.M. et al., The exceptional value of intact forest ecosystems, 2 *Nature Ecology and Evolution* 599 (2018).

²⁶⁵ McIntyre, P.J. et al., Twentieth-century shifts in forest structure in California: denser forests, smaller trees, and increased dominance of oaks, 112 *PNAS* 1458 (2015).

²⁶⁶ *Id.* at Figure 1a.

²⁶⁷ Harris, N.L. et al., Attribution of net carbon change by disturbance type across forest lands of the conterminous United States, 11 *Carbon Balance and Management* 24 (2016).

²⁶⁸ Berner, Logan T. et al., Tree mortality from fires, bark beetles, and timber harvest during a hot and dry decade in the western United States (2003-2012), 12 *Environmental Research Letters* 065005 (2017).

lands—are important actions for increasing forest health and net ecosystem carbon balance.²⁶⁹ Overall, rather than promoting a massive ramp-up of thinning and further loss of carbon from forest ecosystems, the VTP should prioritize the opportunities to keep forest carbon/biomass circulating within forest ecosystems.²⁷⁰

O30-71
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E. The PEIR Fails to Adequately Analyze or Mitigate the Program’s Water Quality Impacts.

As detailed in the attached Technical Report from hydrologic consultant, Greg Kamman (Kamman & Kamman Hydrology), the PEIR’s analysis of water quality impacts is seriously flawed.²⁷¹ The document generally concedes that the various treatment activities have the potential to harm water quality but it never does the hard work of actually analyzing how the various treatment activities would affect impaired specific water bodies around the state. This approach is in direct violation of CEQA. Meaningful analysis of impacts effectuates one of CEQA’s fundamental purposes: to “inform the public and its responsible officials of the environmental consequences of their decisions before they are made.”²⁷² To accomplish this purpose, an EIR must contain facts *and* analysis, not just an agency’s bare conclusions.²⁷³ Moreover, a legally adequate EIR “must contain sufficient detail to help ensure the integrity of the process of decisionmaking by precluding stubborn problems or serious criticism from being swept under the rug.”²⁷⁴ Here the PEIR masks the true nature of the Program’s effects on water quality which could potentially be quite severe.

O30-72

i. The SPRs, identified to reduce the VTP’s impacts to a less than significant level are vague, incomplete and unenforceable.

Instead of providing meaningful analysis, the PEIR relies on a series of Standard Project Requirements, or SPRs, before concluding that the CALVTP’s water quality impacts would be less than significant.²⁷⁵ But this approach runs afoul of CEQA’s requirement that impacts first be fully disclosed and analyzed separately from the mitigation analysis. Determining whether or not a project may result in a significant adverse environmental impact is a key aspect of CEQA.²⁷⁶ An EIR must “separately identify and analyze the significance of the impacts . . .

O30-73

²⁶⁹ Law, Beverly E. et al., Land use strategies to mitigate climate change in carbon dense temperate forests, 115 PNAS 3663 (2018).

²⁷⁰ In addition, the PEIR fails to adequately consider the impacts that the CALVTP will have on chaparral habitats. To that point, this letter incorporates by reference Letter from Richard W. Halsey, Director, California Chaparral Institute, to Edith Hannigan, Board Analyst, Board of Forestry and Fire Protection (Aug. 9, 2019).

²⁷¹ See Kamman, Greg, PG, CHG, Letter and hydrology report on Draft PEIR California Vegetation Treatment Program submitted to Shute, Mihaly & Weinberger LLP on August 2, 2019.

²⁷² *Laurel Heights Improvement Ass’n v. Regents of the Univ. of Cal.*, (1993) 6 Cal.4th 1112, 1123 [hereinafter “Laurel Heights II”].

²⁷³ See *Citizens of Goleta Valley v. Bd. of Supervisors*, (1990) 52 Cal.3d 553, 568.

²⁷⁴ *Kings Cnty. Farm Bureau v. City of Hanford*, (1990) 221 Cal. App. 3d 692, 733; see also 14 Cal. Code Regs. § 15151.

²⁷⁵ PEIR at 3.11-23; 3.11-26—3.11-30.

²⁷⁶ 14 Cal. Code Regs. § 15064(a).

before proposing mitigation measures.”²⁷⁷ When an agency folds discussion of mitigation into discussion of the project and impacts, this “subverts the purposes of CEQA,” because it results in omission of “material necessary to informed decisionmaking and informed public participation.”²⁷⁸ The PEIR here does just that, and in so doing, it fails to recognize that the Program’s impacts on water quality would be significant. Without a significance finding, the PEIR cannot adequately identify mitigation for the impact.

Moreover, merely listing a handful of SPR options that may or may not be selected is not sufficient for decisionmakers to determine whether water quality throughout the state from the treatment activities would in fact be protected. When a lead agency relies on mitigation measures (or SPRs) to find that project impacts will be reduced to a level of insignificance, there must be substantial evidence in the record demonstrating that the measures are feasible and will be effective.²⁷⁹ Substantial evidence consists of “facts, a reasonable presumption predicated upon fact, or expert opinion supported by fact,” not “argument, speculation, unsubstantiated opinion or narrative.”²⁸⁰ Because the PEIR’s conclusions are premised on unsupported assumptions, it fails far short of this threshold. As discussed below, the SPRs intended to protect water quality are deficient as some are vague and incomplete and others are ineffective. For these reasons, all of the SPRs are unenforceable.

- **SPR GEO-3: Stabilize Disturbed Soil Areas.** This SPR calls for the project proponent to stabilize soil disturbed during mechanical and prescribed herbivory treatments.²⁸¹ Yet, the only erosion control measure discussed in this SPR is mulch, which as Kamman explains, is likely not sufficient to stabilize disturbed areas in a manner that protects water quality. For example, the feasibility (and effectiveness) of installing mulch is compromised by remote locations and steep slopes. In addition, mulch treatment areas may require repeat application in order to remain effective for an entire rainy season. According to Greg Kamman, other sediment control measures would be far more effective yet the PEIR fails to include them. For example, if site access and/or conditions preclude the use of mulch, alternatives to mulching include the installation of erosion barriers, including: straw wattles, straw bales, contour-felled log erosion barriers (LEBs), contour trenching and scarification; and other natural and engineered structures that provide a mechanical barriers to slow overland flow, promote infiltration, trap sediment, and thereby reduce sediment movement on burned hillsides. It is illogical that SPR GEO-3 focuses exclusively on the use of mulch to control erosion from treatment activities when there are additional and potentially more effective sediment control measures.

Moreover, SPR GEO-3 only pertains to mechanical and prescribed herbivory treatments. According to Greg Kamman, erosion after a controlled burn can be quite severe. Despite

²⁷⁷ *Lotus v. Dept. of Transp.*, 167 Cal. Rptr. 3d 382, 393, 223 Cal. App. 4th 645, 658 (Cal. Ct. App. 2014).

²⁷⁸ *Id.*

²⁷⁹ *Sacramento Old City Ass'n v. City Council of Sacramento*, 280 Cal. Rptr. 478, 488, 229 Cal. App. 3d 1011, 1027 (Cal. Ct. App. 1991); *Kings Cnty.*, 270 Cal. Rptr. at 667.

²⁸⁰ Pub. Resources Code § 21080(e)(1)-(2).

²⁸¹ PEIR at 3.7-22.

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O30-74

this fact, the PEIR fails to include *any* measures to control erosion after a prescribed burn.

O30-74
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- **SPR GEO-4: Erosion Monitoring.** This measure calls for the inspection of treated areas for proper erosion control prior to the rainy season or after a large rainfall event.²⁸² As an initial matter, the act of monitoring would do nothing to reduce or eliminate impacts. Monitoring, as described in the PEIR, would instead be undertaken to identify impacts. Consequently, this SPR confirms the potential for impacts to occur as a result of treatment. Moreover, although the measure calls for remediation in the event that erosion is discovered, it does not describe what these remediation efforts would involve nor any evidence that such remediation would or could occur prior to the rainy season. Consequently, this SPR is incomplete, ineffective, and unenforceable.
- **SPR GEO-7: Minimize Erosion.** This SPR calls for minimizing erosion by prohibiting heavy equipment on steep slopes.²⁸³ The SPR explains that equipment would be restricted when a slope achieves a particular steepness but the PEIR provides no explanation as to how the particular criteria were developed. The SPR calls for restrictions once a slope exceeds 50 percent. Yet, heavy equipment on slopes that are less steep, e.g., 30 percent, could still cause excessive erosion, which in turn could degrade water quality. Moreover, although the SPR asserts that it applies to all treatment activities and types, it does not address or cover prescribed burn and herbivory treatments on very steep slopes (i.e., greater than 50 percent), which would result in an increased erosion potential. According to Greg Kamman, soil conditions resulting from any of the prescribed treatment activities on moderately steep slopes (i.e., 30-50 percent slopes) could, in combination with heavy rainfall, experience significant erosion. Thus, because SPR GEO-7 does not effectively account for an increase in erosion hazards due to the VTP’s treatment activities, the PEIR lacks evidentiary support that water quality would be protected.
- **SPR GEO-8: Steep Slopes.** This measure calls for a professional to evaluate treatment areas with slopes greater than 50 percent for unstable areas and unstable soils and to identify measures to prevent loss of topsoil in such conditions.²⁸⁴ This SPR is excessively vague and does not provide the required assurance that measures will be implemented in a manner that protects water quality. As an initial matter, the measure does not define the terms “unstable area” and “unstable soil.” Again, slopes that are less steep than 50 percent can experience erosion and water quality impacts. The provision calling for a professional to “identify measures to prevent the loss of topsoil” is also particularly problematic. The PEIR fails to describe the type of measures that would be used to prevent topsoil loss. What if there are no feasible measures to prevent topsoil loss? Would the project proponent halt treatment? Nor does the SPR provide any actual commitment to implement a particular measure once it has been identified. This SPR is a classic example of deferred mitigation. CEQA allows a lead agency to defer mitigation only when: (1) an EIR contains criteria, or performance standards, to govern future

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O30-77

²⁸² PEIR at 2-43.

²⁸³ *Id.* at 3.7-23.

²⁸⁴ *Id.*

actions implementing the mitigation; (2) practical considerations preclude development of the measures at the time of initial project approval; and (3) the agency has assurances that the future mitigation will be both “feasible and efficacious.”²⁸⁵ Here, the PEIR meets none of these requirements. In short, this SPR fails to provide the evidentiary support that water quality would be protected.

O30-77
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- **SPR HYD-3: Water Quality Protections for Prescribed Herbivory.** This SPR calls for the project proponent to implement protections during herbivory treatments through measures such as fencing or the implementation of a 50-foot buffer zone around environmentally sensitive water bodies. PEIR at 3.11-21. Here too, the PEIR offers no evidentiary basis for the 50-foot buffer distance. In the absence of established scientific criteria, the PEIR lacks support for its assumption that a 50-foot buffer would be sufficient to protect environmentally sensitive water bodies. Moreover, the final bullet in this SPR indicates that “Grazing animals will be herded out of an area if accelerated soil erosion is observed.” PEIR at 3.11-21. Moving the herd after damage (accelerated erosion) has already occurred is not mitigation. The EIR errs because it does not identify the corrective action that would be taken once damage is observed.

O30-78

- **SPR HYD-4: Identify and Protect Watercourse and Lake Protection Zones.** This SPR calls for the project proponent to establish Watercourse and Lake Protection Zones (WLPZs) as defined in California Code of Regulations, title 14, section 916.5 of the California Forest Practice Rules.²⁸⁶ Establishing WLPZs has the potential to protect water quality by precluding or restricting forestry within stream corridors with the goal of protecting sensitive riparian/aquatic vegetation and wildlife habitats. However, the specific measures identified in SPR HYD-4 are just one part of the multi-step WLPZ determination process. According to Greg Kamman, the WLPZ width determination procedures presented in the PEIR are over simplified. There are much more stringent (increased width) WLPZ delineation procedures in streams containing anadromous and/or endangered species. The CalVTP does not follow the intent and protocols of the California Forest Practice Rules, but applies an oversimplified WLPZ procedure that would lead to significant threats to water quality, riparian and wetland habitats and aquatic species. In order for this SPR to effectively reduce the potential for water quality impacts, it must incorporate all of the relevant provisions of the WLPZ.

O30-79

- **SPR BIO-1: Review and Survey Project-Specific Biological Resources.** This measure calls for a data review and a survey to be conducted prior to treatment.²⁸⁷ The qualified forester or biologist would identify sensitive habitats such as wetlands, wet meadows, or riparian areas as well as a suitable buffer area for avoidance during project activities.²⁸⁸ This measure is vague and incomplete. As an initial matter, this measure calls for an impact assessment to be completed; it does not ensure that water quality would not be

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²⁸⁵ *Communities for a Better Env't v. City of Richmond*, (2010) 184 Cal. App. 4th 70, 94-95 [hereinafter “CBE”]; *San Joaquin Raptor Rescue Ctr. v. Cnty. of Merced*, (2007) 149 Cal. App. 4th 645, 669-71; 14 Cal. Code Regs. § 15126.4(a)(1)(B).

²⁸⁶ PEIR at 3.11-21.

²⁸⁷ PEIR at 2-35/36.

²⁸⁸ *Id.*

degraded. In those instances where the forester or biologist determines that sensitive habitat cannot be clearly avoided, the measure calls for further surveys and potential consultation with regulatory agencies, yet there is nothing in the measure that calls for any action to be taken to actually protect resources, including water quality. Moreover, Part 1 of the measure, which contemplates a treatment where resources can be avoided calls for physical avoidance, i.e., the establishment of a buffer. Yet the PEIR fails to provide any criteria as to how the buffer would be implemented, e.g., the width and length of the buffer or how the forester or biologist would determine the effectiveness of the buffer. This becomes relevant as the method for delineating wetlands and riparian habitat within floodplains is determined by the WLPZ, Flood Prone Area, and Channel Migration Zones. Although the procedures for determining these zones have been established and are incorporated into CALFIRE management actions and regulatory oversight, all of this information is missing from the SPR. In order for SPR BIO-1 to reduce the potential for water quality impacts, all of the relevant provisions of the WLPZ from the CFPR must be included in this measure.

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- **SPR BIO-5: Avoid Environmental Effects of Type Conversion and Maintain Habitat Function in Chaparral and Coastal Sage Scrub.** This measure calls for the project proponent to design treatment activities to avoid type conversion where native coastal sage scrub and chaparral are present.²⁸⁹ Here too, the PEIR identifies a series of steps that would not, in any event, be sufficient to ensure that type conversion is avoided let alone that water quality is protected. The measure asserts that once a forester or a biologist develops a treatment design that avoids type conversion, the project proponent will demonstrate with substantial evidence that the habitat function of chaparral and coastal sage scrub would be maintained. The PEIR never explains which agency, if any, this evidence would be submitted to. The SPR then asserts that the treatment design “will seek to maintain a minimum percent cover of mature native shrubs to maintain habitat function.”²⁹⁰ Yet this SPR is excessively vague (i.e., it does not identify what percent cover is necessary to maintain habitat function and does not define “habitat function”), and unenforceable (i.e., language such as “seek to maintain” does not provide the required assurance that a suitable amount of cover will in fact be maintained). Moreover, in clear violation of CEQA, the PEIR explicitly defers the criteria for defining and avoiding type conversion to the project proponent.²⁹¹ Finally, it is important to emphasize that SB 1260 is clear that vegetation treatments shall occur “only if [CALFIRE] finds that the activity will not cause ‘type conversion,’”²⁹² yet the PEIR permissively punts this responsibility to the project proponent. In short, there is nothing in SPR-BIO-5 that ensures that treatment activities will not result in type conversion.

O30-81

In sum, the SPRs included in the PEIR are not sufficient to ensure that the Program’s treatment activities would not degrade water quality. Consequently, the PEIR cannot rely on

²⁸⁹ PEIR at 3.11-17/18.

²⁹⁰ PEIR at 3.11-18.

²⁹¹ See CBE, 184 Cal. App. 4th at 93-95.

²⁹² S.B. 1260 § 18.4483(b)(2) (Cal. 2018).

these measures to conclude that the Program’s water quality impacts would be less than significant.

ii. The PEIR fails to adequately disclose, analyze, and assess the significance of, and mitigate for, impacts to water quality that would result from vegetation treatments.

As discussed above, the PEIR fails to provide meaningful analysis of the Program’s water quality effects opting instead to rely on ineffective mitigation measures. The scant impact analysis that does exist is vague and superficial. By failing to analyze the extent and severity of impacts to water quality, the PEIR downplays the effects of the VTP. The end result is a document which is so crippled by its approach that decisionmakers and the public are left with no real idea as to the severity and extent of environmental impacts.²⁹³

The PEIR clearly acknowledges the potential for water quality impacts as a result of, for example, prescribed burning.²⁹⁴ Despite clearly acknowledging that prescribed burns can impact water quality, particularly in chaparral and shrublands, the PEIR stops short of analyzing the severity and extent of these potential impacts. Instead, time and again the document attempts to downplay the effect that the VTP would have on the potential for erosion (and water quality impacts) by asserting that wildfires produce more erosion than do prescribed burns.²⁹⁵ Such statements suggest that the EIR is comparing the Program’s potential to degrade water quality not to the existing environmental setting, as CEQA requires, but instead to a hypothetical scenario where the same plot of land would burn in a wildfire.

The PEIR’s use of a future indeterminate baseline (i.e., future wildfire) to calculate the CALVTP’s impacts violates CEQA. CEQA requires a description of the “physical environmental conditions in the vicinity of the project as they exist at the time the notice of preparation [NOP] is published.”²⁹⁶ In *Neighbors for Smart Rail v. Exposition Metro Line Construction Authority*, the California Supreme Court recognized that, under limited circumstances, a departure from existing conditions (i.e., NOP date) may be appropriate,²⁹⁷ but only when “justified by substantial evidence that an analysis based on existing conditions would

²⁹³ See, e.g., *Berkeley Keep Jets Over the Bay Comm. v. Bd. of Port Comm’rs*, (2001) 91 Cal. App. 4th 1344, 1370-71; *Galante Vineyards v. Monterey Peninsula Water Mgmt. Dist.*, (1997) 60 Cal. App. 4th 1109, 1123-24; *Santiago Cnty. Water Dist. v. Cnty. of Orange*, (1981) 118 Cal. App. 3d 818, 831.

²⁹⁴ See e.g., PEIR at 3.11-23 (“Compared to forested and grassland environments, prescribed fire in chaparral and shrublands is more likely to result in severe burns and increased sediment loading.”); see also PEIR at 3.11-24 (“Prescribed burning in California’s conifer forests have showed little to no increase in erosion, whereas prescribed burning in chaparral vegetation causes a marked increase in runoff and erosion. The higher rates of erosion in chaparral are because prescribed fire in chaparral can burn at higher intensity, remove more surface organic material, and have a higher likelihood for post-fire water repellency”) (citations omitted).

²⁹⁵ See PEIR at 3.11-24.

²⁹⁶ 14 Cal. Code Regs. § 15125(a)(1).

²⁹⁷ 304 P.3d 499, 57 Cal. 4th 439 (Cal. 2013).

tend to be misleading or without informational value to EIR users.”²⁹⁸ The primary underlying legal principle set forth in the *Smart Rail* case is that the use of a future scenario as an impact baseline should be avoided where the practical consequence of such an approach would be to artificially understate the true environmental consequences of proposed projects. That is precisely what the PEIR’s approach does here.

The fundamental problem with the PEIR’s tactic is the underlying premise that fire will inevitably occur in the location where prescribed burns would be implemented and the impacts from wildfire would be worse than those resulting from a prescribed burn. The PEIR’s faulty reasoning results in a substantial underestimation of the Program’s water quality impacts. Because the location of future wildfires is so unpredictable, the most likely scenario is that there would be water quality impacts from prescribed burns *and* from future wildfires. Existing conditions, rather than a hypothetical future scenario (i.e., wildfire) should have been the basis for determining the significance of the VTP’s water quality impacts.

O30-82
cont.

Moreover, the PEIR’s premise—that prescribed burns have less potential for erosion than do wildfires—is contradicted by scientific studies. According to Greg Kamman, recent research by a team from the University of California, Merced and the Desert Research Institute presented in ScienceDaily has identified that low severity burns—in which fires move quickly and soil temperature does not exceed 250 Celsius—cause extensive damage to soil structure and organic matter.²⁹⁹ This research found that soil structure damage associated with prescribed, low severity fires was not apparent immediately after the fire, but deteriorated over the weeks and months that followed the fire. Study results also determined that damage to soil structure is worse if the soils are wet. The effects of the damaged soil structure include reduced water infiltration, increased runoff and increased erosion potential.³⁰⁰ These findings are directly counter to the PEIR’s conclusions. The EIR should be revised to include a comprehensive evaluation of the relationship between low severity burns impact on soil structure and water quality. If impacts are determined to be significant, the revised EIR should then identify feasible mitigation measures or Program alternatives.

O30-83

As discussed above, the PEIR relies largely on the implementation of the SPRs to conclude that prescribed burning would result in less than significant impacts on water quality. However, as we explained above, the SPRs are vague, incomplete and unenforceable and do not provide the required evidentiary support that impacts would be reduced to a less than significant level. In fact, the PEIR concedes this point.³⁰¹ However, in chaparral and shrub dominated environments the risk to water quality is greater due to the potential for severe burns and water repellency. An assertion that an SPR would “minimize the likelihood of an impact” does not constitute substantial evidence that impacts would be less than significant.

Nor does the PEIR provide the required evidentiary support that the implementation of manual or mechanical treatments would have less than significant water quality impacts. The

O30-84

²⁹⁸ *Id.* at 504.

²⁹⁹ See Kamman, Greg, PG, CHG, Letter and hydrology report on Draft PEIR California Vegetation Treatment Program submitted to Shute, Mihaly & Weinberger LLP on August 2, 2019, at 4.

³⁰⁰ *Id.*

³⁰¹ See PEIR at 3.11-25 (“The SPRs described above *would minimize the likelihood* that prescribed burning in trees and grass fuel types would result in adverse effects to water quality.”) (emphasis added).

PEIR calls for the SPRs to incorporate “*relevant elements*” of the CFPRs pertaining to erosion and control of water bodies,³⁰² yet the document never identifies which specific CFPR elements would be incorporated or how they would be expected to control erosion from manual or mechanical treatments. Finally, the PEIR ultimately concludes that manual or mechanical treatments activities would be “*unlikely*” to result in ground disturbance or adverse effects to water quality.³⁰³ Again, CEQA requires more than such vague, qualified assurances that impacts will be less than significant.

O30-84
cont.

The PEIR fares no better in its “analysis” of impacts from the ground application of herbicides. Here, the document clearly acknowledges the potential for severe impacts.³⁰⁴ The PEIR explains that even with the incorporation of SPRs, the accidental misapplication or spill could degrade water quality.³⁰⁵ To address this impact, the PEIR calls for the Program to develop a Spill Prevention and Response Plan that projects would maintain on treatment sites.³⁰⁶ There is no logical reason, however, why this Plan could not have been prepared now, prior to Program approval, so that the public and decisionmakers could verify that the measures included in the Plan would ensure the protection of water quality. A close review of SPR HAZ-5, which is the measure that calls for the Spill Prevention and Response Plan, simply calls for “a list of items required in an onsite spill kit that will be maintained throughout the life of the activity.”³⁰⁷ This vague reference to a “list of items” is not sufficient; the PEIR must identify the specific items that would be used to ensure that water quality is not degraded. As with the PEIR’s analysis of the other treatment activities, the PEIR lacks the required factual support to conclude that impacts from the ground application of herbicides would not result in significant water quality impacts.

O30-85

iii. The PEIR fails to adequately disclose, analyze, and assess the significance of, and mitigate for, cumulative impacts to water quality.

The PEIR fails to adequately analyze or mitigate the Program’s cumulative effects on water quality. First, the list of reasonably foreseeable future projects considered in the EIR is under-inclusive, especially in light of the potential geographic scope of certain potentially significant water quality impacts. As Greg Kamman explains, the list of related projects and plans included in the cumulative impact chapter is dominated by forestry and land use plans. Many important water quality plans that effect and control water quality in watersheds that lie within the Program area are missing from the analysis, including but not limited to: TMDLs for rivers throughout California; Central Coast and Central Valley Agriculture Orders; and vineyard and cannabis General Waste Discharge Requirements.

O30-86

³⁰² *Id.* at 3.11-26 (emphasis added).

³⁰³ *Id.* at 3.11-26 (emphasis added).

³⁰⁴ *See id.* at 3.11-28 (explaining that herbicides can be carried in stormwater runoff or carried through soils to leach into groundwater, and that herbicides can also reach water through drift, which is the airborne movement of herbicides).

³⁰⁵ PEIR at 3.11-29.

³⁰⁶ *Id.*; *see also id.* at 2-44.

³⁰⁷ PEIR at 2-44.

Nor does the PEIR actually conduct the necessary analysis of the Program’s cumulative water quality impacts. In fact, it never even mentions the projects it purports to analyze.³⁰⁸

The PEIR also does not comply with CEQA’s requirement that agencies first determine whether cumulative impacts to a resource are significant, and then determine whether a project’s impacts are cumulatively considerable (i.e., significant when considered in conjunction with other past, present and reasonably foreseeable projects).³⁰⁹ The PEIR skips the first step and focuses only on the second. This error causes the document to underestimate the significance of the Project’s cumulative impacts because it focused on the significance of the Program’s impacts on their own as opposed to considering them in the context of the cumulative problem. It is wholly inappropriate to end a cumulative analysis on account of a determination that a project’s (or Program’s) individual contribution would be less than significant. Rather, this should constitute the beginning of the analysis.

O30-86
cont.

Moreover, the PEIR cannot credibly conclude that the Program would avoid significant impacts to water quality. As we explained, the PEIR fails to provide any meaningful analysis of the water quality impacts that would result from the Program. It also lacks the evidentiary basis that significant water quality impacts would be avoided through the incorporation of SPRs.

The PEIR must be revised to take into account each of the cumulative projects that has the potential to result in cumulatively considerable environmental impacts. Furthermore, the PEIR must identify feasible mitigation measures capable of reducing these environmental impacts.

F. The PEIR Fails to Adequately Analyze and Mitigate the Impacts from Herbicide Application.

i. The PEIR’s description of herbicide application is vague and conflicting.

The PEIR fails to accurately depict the project because it includes a vague and shifting description of the overall project area and treatment methods for herbicide applications. An accurate depiction of the Project is essential to the public’s understanding of the project.³¹⁰

O30-87

The PEIR engages in a shifting description of the area to be treated with herbicides. The PEIR states that 20.3 million acres in California are subject to treatment with “up to approximately 250,000 acres” treated annually.³¹¹ Of this treatment area 10 percent are “reasonably expected” to be treated with herbicides.³¹² This would result in an overall herbicide application of roughly 2.03 million acres with 25,000 acres treated annually.

³⁰⁸ Compare PEIR at 4-3 (which lists the past, present and reasonably foreseeable probable future activities, projects and plans identified as contributing to potential cumulative impacts) with PEIR at 21.

³⁰⁹ 14 Cal. Code. Regs. § 15064(h)(1).

³¹⁰ *Cnty. of Inyo v. City of Los Angeles* (1977) 71 Cal.App.3d 185, 192-193 [“accurate, stable and finite project description is the *sine qua non* of an informative and legally sufficient” CEQA analysis].

³¹¹ PEIR at 2-1.

³¹² PEIR at 2-28.

However, in appendices referencing herbicide toxicity, the PEIR proposes “to treat approximately 6,000 acres with chemical treatments” within the larger “20.3-million-acre treatable landscape.”³¹³ The PEIR also references that the “treatable landscape includes 6 million acres of forest land” and 7 million acres of timberland.³¹⁴ These varying descriptions of treatment areas, by orders of magnitude, fail to provide an accurate description of the scale and magnitude of the herbicide application on the landscape.

O30-87
cont.

ii. The PEIR fails to adequately analyze the risks from herbicide application.

The PEIR fails to adequately analyze the risks from herbicide application by failing to disclose the impacts from individual chemicals and failing to analyze the varying risks from chemicals approved for use.

For example, the PEIR fails to disclose the carcinogenic risk of glyphosate and mischaracterizes the cancer risk from glyphosate. In July 2017 the California Office of Environmental Health and Hazard Assessment (OEHHA) listed glyphosate under Proposition 65 because it is “known to the state of California to cause cancer.”³¹⁵ However, the PEIR claims there is “[n]o evidence of carcinogenicity”, that carcinogenicity is based on “[u]nvalidated claims”, discredits court rulings regarding the risks associated with glyphosate and cancer, and then refers to Appendices HAZ-1 and HAZ-2 for further details.³¹⁶ Appendix HAZ-1 and HAZ-2 also fail to disclose the state of California’s determination that glyphosate is known to cause cancer. The PEIR must fully disclose and analyze the potential risks to humans and the environment from the products approved for use in the PEIR. The failure to fully disclose the toxicity of glyphosate precludes an accurate analysis of the environmental impacts of the use and application of those that product.

O30-88

The PEIR fails to adequately analyze the water quality impacts from herbicides. The massive scale of herbicide application called for in the PEIR leads to potentially significant environmental impacts due to the pollution of water bodies and water supplies from runoff and leaching into groundwater. The PEIR discusses the potential water quality impacts from herbicides in under two pages and improperly analyzes the impacts from those 11 active ingredients.³¹⁷ One way the PEIR fails to accurately disclose and analyze the impacts of herbicide application is by treating all of those products equally and failing to analyze the different chemical qualities of the herbicides approved in the PEIR.

O30-89

The PEIR fails to consider key characteristics of the herbicides, such as water solubility, which impact water quality. For example, Hexazinone and Clopyralid, two herbicides listed under this treatment activity, are highly water soluble which makes them more prone to leach

³¹³ PEIR Appendix HAZ-2 at 4.

³¹⁴ PEIR at 3.3-8.

³¹⁵ Office of Environmental Health and Hazard Assessment, Chemical Listed Effective July 7, 2017 As Known to the State of California to Cause Cancer: Glyphosate, <https://oehha.ca.gov/media/downloads/cnr/finallistingnoticeglyphosate07072017.pdf>

³¹⁶ PEIR at 3.10-14 to 3.10-15.

³¹⁷ PEIR at 3.11-28 to 3.11-29.

into groundwater and affect water quality.³¹⁸ Because hexazinone “is water soluble and does not bind strongly with soils” it “is of particular concern for groundwater contamination.”³¹⁹ Once a water system is contaminated with herbicides, treatment is often infeasible.³²⁰

O30-89
cont.

Since the PEIR does not discuss herbicide characteristics that would affect the likelihood of herbicides reaching waterbodies, it is impossible for it to adequately discuss the impact this treatment activity could have on water quality.

G. The PEIR Fails to Adequately Analyze or Mitigate the Program’s Visual/Aesthetic Impacts.

The signatories to this letter acknowledge that visual impacts are an inevitable component of forest thinning projects. Therefore, it is not our intention that aesthetic considerations stand in the way of critical community and home protection projects. But visual and aesthetic impacts are one of the criteria that the EIR is supposed to disclose analyze, and this DEIR has failed to adequately consider these impacts for a VTP that applies to 20 million acres for the indefinite future. Under CEQA, it is the State’s policy to “[t]ake all action necessary to provide the people of this state with . . . enjoyment of aesthetic, natural, scenic, and historic environmental qualities.”³²¹ Thus, courts have recognized that aesthetic issues “are properly studied in an EIR to assess the impacts of a project.”³²²

O30-90

The CALVTP proposes vegetation treatment on about 20 million acres throughout California’s natural lands. The PEIR acknowledges that the Program could degrade the visual environment and affect scenic vistas,³²³ yet it fails to provide a description of the visual setting sufficient to support a meaningful analysis of these impacts. The document merely discusses the types of scenic views found around the state and provides photographs of tree, shrub, and grass fuel types found throughout California.³²⁴ These vague and non-specific descriptions of the scenic resources that would be impacted by the Program are not sufficient for purposes of CEQA compliance. An EIR’s description of a project’s environmental setting crucially provides “the baseline physical conditions by which a Lead Agency determines whether an impact is significant.”³²⁵ “Without a determination and description of the existing physical conditions on the property at the start of the environmental review process, the EIR cannot provide a

³¹⁸ National Center for Biotechnology Information. PubChem Database. Clopyralid, CID=15553, <https://pubchem.ncbi.nlm.nih.gov/compound/Clopyralid>; National Center for Biotechnology Information. PubChem Database. Hexazinone, CID=39965, <https://pubchem.ncbi.nlm.nih.gov/compound/Hexazinone>

³¹⁹ Tu, Mandy, Hexazinone, Weed Control Methods Handbook, The Nature Conservancy (2001), <https://www.invasive.org/gist/products/handbook/15.Hexazinone.pdf>, at 7f1.

³²⁰ Currell, Christina, Keeping herbicides out of groundwater and surface water, Michigan State University Extension (Feb. 8, 2019).

³²¹ Pub. Resources Code § 21001(b).

³²² *Pocket Protectors v. City of Sacramento*, (2004) 21 Cal. Rptr. 3d 791, 816, 817 (overturning a mitigated negative declaration and requiring an EIR where proposed project potentially affected street-level aesthetics) (citation omitted).

³²³ PEIR at 3.2-16.

³²⁴ *See id.*, Figures 3.2-1, 3.2-3.

³²⁵ CEQA Guidelines § 15125(a).

meaningful assessment of the environmental impacts of the proposed project.”³²⁶ Here, the PEIR fails to adequately disclose the resources that could be affected as a result of the various treatment activities and therefore undercuts the legitimacy of the environmental impact analysis from the outset.

O30-90
cont.

The deficiencies in the PEIR’s aesthetic impact analysis extend beyond its flawed approach to describing the environmental setting. Rather than provide a comprehensive analysis of the Program’s impacts to scenic views, vistas, and other scenic resources, the PEIR concludes that the incorporation of SPRs into the treatment design will ensure that the CALVTP’s treatment activities would not result in significant impacts to visual resources. The PEIR lacks evidentiary support for these conclusions. As we explain below, the SPRs pertaining to scenic resources are vague, incomplete, ineffective, and unenforceable:

O30-91

- **SPR AD-4: Public Notifications for Prescribed Burning.** This SPR calls for the project proponent to notify the public of prescribing burning through the posting of signs, publishing notice in newspapers, and notifying the local county supervisor.³²⁷ None of these actions would do anything to prevent the destruction or degradation of visual resources from the various treatment activities.

O30-92

- **SPR AES-1: Vegetation Thinning and Edge Feathering.** This measure calls for the project proponent to take measures during mechanical and manual treatments to thin and feather adjacent vegetation to mimic forms of natural clearings.³²⁸ This measure is unenforceable as it includes language such as “as reasonable or appropriate.” Because this measure leaves the nature of the thinning and feathering to the discretion of the project proponent, there is no indication it would protect scenic visual resources.

O30-93

- **SPR AES-2: Avoid Staging Within Viewsheds.** This measure calls for the project proponent to stage vegetation treatment vehicles and equipment in a location outside of the viewshed.³²⁹ This measure does not address the vegetation treatment activities themselves and therefore would be completely ineffective in protecting visual resources.

O30-94

- **SPR AES-3: Provide Vegetation Screening.** This SPR calls for the project proponent to take action to preserve sufficient vegetation in treatment areas to screen views.³³⁰ This measure is vague (e.g., calls for preserving *sufficient* vegetation), and unenforceable (e., states that action will be taken as *reasonable or appropriate*). Consequently, this measure would not protect scenic resources.

O30-95

- **SPR AQ-3: Create Burn Plan.** This measure calls for the project proponent to create a burn plan that, among other things, predicts fire behavior, and which calculates consumption of fuels and tree mortality in an effort to minimize soil burn severity.³³¹

O30-96

³²⁶ *Save Our Peninsula Comm. v. Monterey Cnty. Bd. of Supervisors*, 104 Cal. Rptr. 2d 326, 341, 87 Cal.App.4th 99, 119. (Cal Ct. App. 2001).

³²⁷ PEIR at 3.2-14.

³²⁸ *Id.*

³²⁹ *Id.*

³³⁰ *Id.*

³³¹ *Id.* at 3.2-15.

While this is an important measure, it simply calls for the project to be implemented, i.e., burning to occur and fuel vegetation to be consumed. It does nothing to ensure that visual resources would be protected.

O30-96
cont.

- **SPR REC-1: Notify Recreational Users of Temporary Closures.** This measure calls for the project proponent to coordinate with a recreation area or facility’s owner/manager pertaining to temporary closure.³³² A measure calling for the temporary closure of a recreation area during a vegetation treatment activity may be important to protect public health and safety but it would do nothing to protect scenic resources from treatment activities.

O30-97

After identifying the SPRs, the PEIR provides a cursory analysis of each treatment activity’s potential to impact scenic views and scenic vistas before promptly concluding that impacts would be less than significant. The PEIR’s discussion of the visual effects that would result from prescribed burns is particularly flawed. The document devotes the majority of the discussion to views of equipment and vehicles, stating that it would be unlikely that they would significantly degrade views because this equipment would be only temporarily visible for motorists traveling along scenic highways and that, with notification, potential viewers would have the choice to avoid treatment areas.³³³ As an initial matter, the PEIR may not avoid conducting a thorough analysis of the visual effects of prescribed burns under the assumption that such impacts would be temporary. CEQA requires analysis of temporary impacts.³³⁴

O30-98

Nor can the PEIR assume that by providing the public the choice to enter a burned area, the visual effect would somehow be diminished. The fact remains that after a prescribed burn, the natural landscape would be replaced with charred duff. As a comparison of PEIR Figures 3.2-5 and 3.2-7 makes clear, it is self-evident that replacing a natural landscape with charred soils would have a significant adverse effect upon the views and beauty of the treatment area.

Finally, the PEIR claims that because prescribed burning already takes place under existing vegetation treatment programs, the increase in pace and scale of prescribed burning under the proposed CALVTP would not introduce a new activity on the landscape, but would simply expand the areas being treated under the existing program.³³⁵ This absurd statement is tantamount to stating that since habitat is already lost through land use development, additional development would be inconsequential. In fact, the opposite is true. The PEIR must examine the effects from the CALVTP, along with the effects from CALFIRE’s existing treatment program. Moreover, this “drop-in-the-bucket” approach to cumulative impacts has been explicitly rejected by the courts. In *Kings County Farm Bureau v. City of Hanford*, the court invalidated an EIR that concluded that increased ozone impacts from the project would be insignificant because it would emit relatively minor amounts of precursor pollutants compared with the large volume already emitted by other sources in the county.³³⁶ The *Kings County Farm*

O30-99

³³² *Id.* at 3.2-15.

³³³ PEIR at 3.2-17.

³³⁴ CEQA Guidelines § 15126.2(a) (agency must analyze both short- and long-term impacts).

³³⁵ PEIR at 3.2-17.

³³⁶ *Kings County Farm Bureau v. City of Hanford*, 221 Cal. App. 3d at 717-18 (1990).

Bureau court aptly stated, “The relevant question to be addressed in the EIR is not the relative amount of precursors emitted by the project when compared with preexisting emissions, but whether any additional amount of precursor emissions should be considered significant in light of the serious nature of the ozone problems in this air basin.”³³⁷ Similarly, in *Los Angeles Unified School Dist. v. City of Los Angeles*, the court invalidated an EIR that deemed a project’s cumulative traffic noise impact insignificant in light of existing traffic noise in the project area.³³⁸ Likewise, here, the PEIR may not minimize the Program’s aesthetics impacts by comparing them to the already significant impacts from CALFIRE’s existing treatment activities.

O30-99
cont.

In sum, there can be no doubt that the CALVTP’s extensive treatment activities will visually degrade the natural environment.³³⁹ In its current form, the PEIR is simply masking these effects. The EIR should be revised to provide a comprehensive analysis of the CALVTP’s aesthetic impacts and identify feasible mitigation measures or Program alternatives for those impacts that are determined to be significant.

VI. The Alternatives Analysis Is Inadequate and Fails to Consider Less Environmentally Damaging Alternatives.

A. The PEIR’s Alternatives Analysis is Inadequate.

A core substantive requirement of CEQA is that “public agencies should not approve projects as proposed if there are feasible alternatives . . . which would substantially lessen the significant environmental effects of such projects.”³⁴⁰ Accordingly, a major function of the EIR “is to ensure that all reasonable alternatives to proposed projects are thoroughly assessed by the responsible official.”³⁴¹ To fulfill this function, an EIR must consider a “reasonable range” of alternatives “that will foster informed decisionmaking and public participation.”³⁴² As explained below, the PEIR for the CALVTP fails to heed these basic mandates.

O30-100

First, while the document purports to identify five alternatives (in addition to the No Program Alternative), with the exception of Alternative A: Reduced Scale of Treatments, the remaining four alternatives result in similar or even greater environmental impacts. *See* Table 6-1. Alternatives that would increase the Program’s environmental impacts do not contribute to the “reasonable range” of alternatives required by CEQA.³⁴³

³³⁷ *Id.* at 661.

³³⁸ *Los Angeles Unified School Dist. v. City of Los Angeles* 58 Cal. App. 4th 1019, 1025-26 (1997).

³³⁹ PEIR at 4-72.

³⁴⁰ Pub. Resources Code § 21002; *see also* 14 Cal. Code. Regs. §§ 15002(a)(3), 15021(a)(2); *Citizens for Quality Growth v. City of Mount Shasta* 198 Cal.App.3d 433, 443-45 (1988).

³⁴¹ *Laurel Heights Improvement Assn. v. Regents of Univ. of Cal.* (1988) 47 Cal.3d 376, 400 (quoting *Wildlife Alive v. Chickering* (1976) 18 Cal.3d 190, 197).

³⁴² 14 Cal. Code Regs. § 15126.6(a).

³⁴³ *See* Pub. Resources Code § 21100(b)(4); 14 Cal. Code Regs. § 15126.6(a) & (b).

Second, the only alternative that would appear to actually reduce the Program’s significant effects as compared to the proposed Program is Alternative A: Reduced Scale of Treatments.³⁴⁴ The PEIR explains that Alternative A is intended to substantially lessen potentially significant environmental impacts that could result from treatment types by reducing the annual target acreage of treatments.³⁴⁵ Yet, this alternative would appear to be identical to the treatment targets of the prior versions of the CALVTP.³⁴⁶ As environmental organizations, wildlife regulatory agencies, and expert scientists in the fields of fire science and ecology, fire management, biogeography, native plant ecology, biodiversity, and wildlife conservation biology explained in their comments on the prior versions of the CALVTP, the prior CALVTPs would have resulted in devastating environmental impacts. Moreover, the prior VTPs would not have achieved the Board’s mission of safeguarding the people and protecting the property and resources of California from the hazards associated with wildfire. Finally, the Board and CALFIRE must have already determined that the treatment targets in Alternative A are infeasible otherwise these agencies would have continued to pursue the approaches taken in the prior VTPs. For these reasons, it makes no sense to include Alternative A as an alternative to the Program.

O30-101

Third, the Board and CALFIRE have defined the Program’s objectives so narrowly as to preclude a reasonable alternatives analysis. The PEIR states that “CALFIRE must substantially increase the pace and scale of vegetation treatments” to achieve a “target up to 250,000 acres per year” and that “CALFIRE must increase the use of prescribed burning as a vegetation treatment tool.”³⁴⁷ This is tantamount to saying that the objective of the Program is to implement the Program. Narrowing the Program’s goals in this way tilts the analysis of alternatives unavoidably—and illegitimately—toward the VTP as proposed. This problematic approach is best demonstrated in the PEIR’s evaluation of Alternative B: WUI Fuel Reduction Only. Here, the PEIR admits that it could be difficult to identify and plan enough treatment activities to achieve the treatment target area each year.³⁴⁸ The PEIR also illogically rejects measures to implement and enforce defensible space within 100 feet of homes and other structures claiming such measures would not meet the Program’s objectives.³⁴⁹ Yet, such defensible space measures have been repeatedly shown to be effective in protecting people and structures which, of course, is—or should be—the sole purpose of CALFIRE’s Program. Consequently, it appears clear that rather than providing the required reasoned, objective analysis, the PEIR’s alternatives analysis has become “nothing more than [a] post hoc rationalization[.]” for a decision already made.³⁵⁰

O30-102

³⁴⁴ See PEIR at Table 6-1.

³⁴⁵ PEIR at 6-11

³⁴⁶ See PEIR at 6-4, Alternative A: Reduced Scale of Treatments, which would treat up to 60,000 acres per year with a combination of WUI fuel reduction, fuel break, and ecological restoration projects across the entire treatable landscape; see also PEIR at 6-11.

³⁴⁷ PEIR at 2-1.

³⁴⁸ PEIR at 6-19.

³⁴⁹ PEIR at 6-46.

³⁵⁰ *Laurel Heights*, 47 Cal. 3d at 394.

Moreover, the PEIR offers no evidentiary support for its assertion that focusing on defensible space while foregoing vegetation treatments would not achieve the same level of wildfire risk reduction to life and property.³⁵¹ It is particularly problematic that CALFIRE is not enforcing its defensible space program (a program that has been demonstrated to save lives and property) while instead pursuing the ill-advised VTP.³⁵² This article reveals that, according to CALFIRE citation data, violations of defensible space rules are going unaddressed across the state:

Between 2010 and 2018, CALFIRE conducted hundreds of thousands of inspections but issued just 780 fines. By comparison, the Los Angeles County Fire Department, which does its own inspections, issued more than 1,900 citations in fiscal 2013-14. Last year, CALFIRE inspected about 128,000 properties and issued just 62 fines, according to the data. More than 17,000 failed to meet the required guidelines but faced no financial repercussions, even after multiple visits by inspectors. Considering that CALFIRE inspects between 10 and 20 percent of the nearly 700,000 parcels in its jurisdiction every year, there are likely tens of thousands of properties throughout the state overgrown with flammable vegetation, putting entire communities at risk.³⁵³

Again, the PEIR may not define the objectives of its Program so narrowly as to preclude informed decisionmaking. As discussed below, there are viable alternatives to wildfire management that would be far more effective in protecting lives and structures, with far less environmentally destructive consequences. These alternatives must be evaluated in a revised EIR.

Fourth, the PEIR fails to provide an accurate comparative analysis of the No Program Alternative's and the proposed Program's environmental impacts. The No Program Alternative is a continuation of CALFIRE's existing program yet the EIR asserts that the No Program Alternative would have similar environmental impacts compared to the proposed Program. This assertion does not withstand scrutiny, because as discussed below, the magnitude of treatments proposed by the current VTP would be far greater than the prior VTP. Moreover, the PEIR makes clear that the magnitude of treatments under the No Program Alternative would be limited compared to the Program.³⁵⁴ It is illogical then that the PEIR identifies the No Program's environmental impacts as being similar to or even greater than the proposed Program's.

³⁵¹ PEIR at 6-46.

³⁵² See Smith, Joshua E., California's not enforcing wildfire-prevention rules for homeowners, leaving tens of thousands of properties vulnerable to big blazes, San Diego Union Tribune, July 7, 2019, <https://www.sandiegouniontribune.com/news/environment/story/2019-06-11/californias-not-enforcing-wildfire-prevention-rules-for-homeowners-leaving-tens-of-thousands-of-properties-vulnerable-to-big-blazes> (last visited 8/9/19).

³⁵³ *Id.*

³⁵⁴ See PEIR at 6-4 stating, "Under the No Program Alternative, CALFIRE and the Board would need to recognize constraints on the pace and scale of treatments associated with the necessity to use project-by-project environmental review and permitting, because of the absence of programmatic approval of the full

O30-102
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Under CALFIRE 's existing treatment program, vegetation treatments have been limited, averaging approximately 7,000 acres treated annually over the past 14 years.³⁵⁵ Most recently, CALFIRE treated approximately 33,000 acres in 2017/2018 using the same methods proposed under the VTP. *Id.* The proposed Program, on the other hand, would treat 500,000 acres of non-federal lands per year within 5 years.³⁵⁶ Thus, every year, the current proposed Program would treat 467,000 more acres of land than the existing program (the No Program Alternative). This equates to a 1,415 percent increase! Clearly, because the Program would treat so much additional acreage on a yearly basis, it would result in far greater environmental impacts than the No Program Alternative.

The PEIR largely relies on the fact that the proposed Program has more environmental protections than the No Program and thus would result in similar environmental impacts notwithstanding the increase in the amount of land treated. This assertion also does not withstand scrutiny. The PEIR alleges that the SPRs prepared for the proposed Program would avoid and minimize impacts on a statewide basis (PEIR at 6-7), however, this is not the case. As we have explained, the SPRs intended to reduce the VTP's environmental impacts are vague, incomplete, ineffective, and unenforceable. Moreover, as the PEIR clearly acknowledges, CALFIRE 's existing program is currently subject to CEQA so environmental protections are in place.³⁵⁷ The EIR should be revised to provide an accurate comparative analysis of the No Program Alternative's and the Program's environmental impacts.

Fifth, the PEIR states that Alternative C: Modified WUI Fuel Reduction and Fuel Breaks was developed in response to comments that advocates for including an alternative similar to the Fire Management Plan prepared for the Santa Monica Mountains National Recreation Area (SMMNRA Fire Plan).³⁵⁸ Yet, a close review of SMMNRA Fire Plan reveals that it bears no similarity to Alternative C. As an initial matter, the SMMRNA Fire Plan focuses on defensible space of 100 feet from structures generally, and then a reduction of annual grasslands due to their flammability. Unlike Alternative C, the goal of the SMMNRA Fire Plan is "strategic fuel modification" which would apply fuel treatments in discrete areas:

The goal of strategic fuel modification treatments is to create new opportunities for firefighters to practice fire suppression safely and effectively in areas where successfully limiting fire spread could substantially reduce the overall size of an expected large wildfire. The premise of strategic fuel modification is that by studying historic fire progressions and fire weather patterns, and then applying general tactical principles, discrete areas of fuel treatments can be identified that make an important difference in helping firefighters stop spread of large wildfires. It is generally easier to demonstrate

spectrum of management tools"; and "it is reasonable to expect that any increase in the amount of vegetation treatment would be limited without the streamlining provisions of the CalVTP".

³⁵⁵ PEIR at 6-5.

³⁵⁶ PEIR at 6-6.

³⁵⁷ See PEIR at 6-7.

³⁵⁸ PEIR at 6-23.

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O30-104

the effectiveness of defensible space in protecting structures than it is to demonstrate the effectiveness of strategic fuel modification.

As applied in the SMMNRA, the objectives of strategic fuel modification projects are to manage fuels in annual grasslands on NPS and co-operatively managed park lands to reduce fire intensity and reduce the rate of fire spread under expected weather conditions to levels that allow firefighters to employ suppression tactics safely and effectively. Projects are located at potential chokepoints in historic fire corridors to create new tactical opportunities for controlling fire spread, or along important transportation routes to make access and evacuations safer.³⁵⁹ Contrary to this targeted approach to fuel modification, Alternative C would implement the same flawed WUI treatments over 250,000 acres per year, an identical treatment target as the Program itself.³⁶⁰

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Moreover, although the PEIR asserts that Alternative C was included in the PEIR to “avoid” large-scale conversion of chaparral and coastal sage scrub (at 6-23), it would do no such thing. Alternative C simply calls for eliminating prescribed burns (in certain locations) but it would allow for other vegetation treatments that could result in type conversion. We again suggest that CALFIRE and the Board model one of its Program alternatives on the SMMNRA Fire Plan.

Finally, it appears that Alternative C was purposely designed to fail to achieve Objective 5, which calls for improving ecosystem health using prescribed burns. An alternative that is designed to fail a key Program objective is not a feasible alternative. Consequently, rather than imparting serious information about a potentially viable alternative such as the SMMNRA Fire Plan, the EIR instead offers Alternative C as a “straw man” to provide justification for the Program. Such an approach violates the letter and spirit of CEQA. In sum, the EIR’s failure to consider feasible alternatives that reduce the Program’s environmental impacts renders the document inadequate under CEQA.³⁶¹ This critical omission makes the EIR of little utility to the public and decisionmakers, who are left with no reasonable, less damaging option for development of this highly constrained site.

O30-105

B. There Are Valid Alternatives to the CALVTP that Are Far Less Environmentally Damaging.

i. Fuel reduction and fuel breaks are unlikely to deliver the Program’s intended benefits.

O30-106

The PEIR lists a number of general objectives—from reducing risks to natural resources to increasing the pace of vegetation treatment to managing forests as a net carbon sink—that includes an expansive array of potential projects and project types that could be implemented in

³⁵⁹ See SMMNRA Fire Plan at 32, submitted under separate cover.

³⁶⁰ PEIR at 6-23.

³⁶¹ See, e.g., *San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus* 27 Cal.App.4th 713, 735-39 (1994).

any number of locations across millions of acres. However, achievement of the *specific* objectives of reducing risks to particular houses and communities, or improving ecosystem health in a particular area, requires that vegetation management is implemented as an integrated plan that ties together home treatment with defensible space treatment and WUI fuels reduction, in order to protect lives and property. Outside of WUI areas, achieving ecological objectives requires linking fuel breaks and prescribed fire and ecological restoration projects. These projects must be integrated not only geographically, but must occur in the right sequence and at the right times with respect to each other, with appropriate (and often ongoing and long-term) approval, commitment, and funding, in order to be meaningful and effective.

The CALVTP, by combining all of these different potential projects and objectives under the same programmatic EIR, fails to require that any single project will achieve the desired objectives. For example, wildland-urban interface (“WUI”) fuels reduction does not protect lives and property from wind-driven fire. However, the CALVTP does not require that such WUI projects are integrated with home protection and/or defensible space projects. Similarly, a fuel break may be proposed as necessary for implementation of a subsequent prescribed burn, but the CALVTP does not require that the fuel break is actually integrated with the prescribed burn. A WUI fuels reduction and the fuel break may each be broadly consistent with the Strategic Fire Plan and the PEIR, for instance, but both projects will fail to provide the proposed objectives in isolation.

Furthermore, consistency with the Strategic Fire Plan, Executive Order B-52-18, SB 1260 (2018), or the California Forest Carbon Plan, does not guarantee that any project will achieve the objectives stated in these documents. Providing meaningful and lasting benefits for communities or forest ecosystems requires that projects are implemented as part of comprehensive plans that integrate the various components and local and site-specific objectives. By casting a wide net that includes all of these different documents and objectives, the PEIR does not require that any single project achieve any of these objectives, nor that any two projects occur in coordination. This will likely lead to many disjointed projects with extremely limited benefits and no long-term efficacy.

A fuel break in the wildland forest implemented as a stand-alone project without planning and funding for ongoing, long-term maintenance, provides no forest health benefits at all on its own and it provides no benefits with respect to fire management unless a fire occurs within about ten years of the project completion, because fuel levels generally return to pre-thinning conditions within ten to twenty years (in wetter sites and drier sites, respectively).

Likewise, a thinning project in the wildland forest that is supposed to achieve ecological restoration objectives should be linked to the implementation of a comprehensive plan to restore a natural fire regime at a large geographic scale to maintain forest health rather than relying on an assumption of indefinite and increasing forest thinning and investments of funds in perpetuity. Such a plan should include not just fire restoration at the watershed and landscape scales, but also community and home protection projects to protect lives and property within the fire planning area. Such a plan may analyze historic fire regimes, model the effects climate change may have on an area and detail the ideal future state of the area. Given that the CALVTP does

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not require forest thinning projects to be tied to plans, other than being broadly consistent with the goals of any of the named documents, forest thinning implemented under the PEIR is unlikely to contribute to positive forest health outcomes.

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ii. Defensible space maintenance, home hardening, home retrofitting, and building code updates are more likely to deliver the Program’s intended benefits with respect to community safety.

“The proposed CalVTP directs the implementation of vegetation treatments to reduce wildfire risks and avoid or diminish the harmful effects of wildfire on the people, property, and natural resources in the state of California.”³⁶² To this end, the CalVTP chiefly proposes thinning and the creation of fuel breaks within and away from the WUI. However, “Computations, experiments, and disaster examinations show that a home’s ignition potential during extreme wildfire is principally determined by the characteristics of a home’s exterior materials, design, and associated flammable debris related to surrounding burning objects within 100 feet (30 meters) and firebrands (lofted burning embers).”³⁶³ Such research indicates that the focus fire fuels management plans should be on 100-foot defensible space zones and buildings themselves.

The CalVTP briefly addresses CALFIRE’s education and enforcement activities as they pertain to defensible space.³⁶⁴ The CalVTP also points to laws that allow insurance companies and local governments to mandate defensible space maintenance.³⁶⁵ Listing the regulations that pertain to defensible space in California in a plan with the objective of reducing the effect of wildfire on humans and property does not adequately address the treatment of the area that science indicates principally determines whether or not a home will ignite. The CalVTP also fails to consider fire resistant building materials. Modeling and case studies indicate that, “home ignitions are not likely unless flames and firebrand [ember] ignitions occur within 40 meters of the structure.”³⁶⁶ In addition to the creation of defensible space, homes existing homes should be retrofit with fire resistant materials.

O30-107

The CalVTP should require that projects with the purpose of protecting life and property be tied to a plan that will lead to adequate defensible space and fire-resistant retrofits for the overwhelming majority of homes in a given community. If fuel breaks and fuel reduction projects are a component of a properly implemented community protection plan, they will be far more effective in saving lives and property. If projects are disjointed, they will have a minuscule chance of contributing to community safety.

If the state prioritizes the protection of life and property, and dedicates funding and resources for that goal, then those funds and resources should be directed toward projects that provide genuine protection for houses, communities and emergency access. A WUI fuel

³⁶² PEIR at 1-3.

³⁶³ Cohen. 2010. The wildland-urban interface fire problem.

³⁶⁴ PEIR at 1-11.

³⁶⁵ PEIR at 1-12.

³⁶⁶ Cohen, J.D., Preventing disaster: home ignitability in the Wildland-Urban Interface, 98 Journal of Forestry 15 (2000)

reduction project, in this case, must be linked to the implementation of a comprehensive community protection plan which considers risks of wind-driven fire and includes home protection measures such as home hardening and retrofitting of existing structures, along with defensible space treatment and emergency access. Such a plan should also include review of local building codes to ensure adequate home protection, and review of local building and zoning laws to ensure that future development does not continue to place lives and properties unwittingly at risk. A fuel break in the absence of such comprehensive plans, fully and properly implemented, will fail to provide adequate protection from fire risk.

The PEIR must analyze alternatives that lessen the VTP's potentially substantial environmental impacts. Without this opportunity, the public is merely asked to take on "blind trust" that the proposed VTP is the best alternative. This is not only unfair to the people of California, it is unlawful "in light of CEQA's fundamental goal that the public be fully informed as to the environmental consequences of action by their public officials."³⁶⁷ Because the Alternative identified above is reasonable and viable, and because it would achieve the VTP's objectives and lessen its environmental impacts, the Board must examine it in the revised PEIR.

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VII. Conclusion

For the reasons stated above, the PEIR fails to comply with CEQA and the CEQA Guidelines. CALFIRE cannot approve the VTP on the basis of the PEIR. The Center, EHL, and Sierra Club respectfully request that the Board revise the PEIR so that it provides meaningful environmental analysis in full compliance with CEQA. In addition, the Center, EHL, and Sierra Club request that the Board revise its VTP in a manner consistent with the best available scientific research.

Respectfully,



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Dan Silver
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Climate Science Director
Center for Biological Diversity

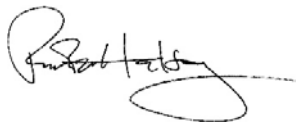
³⁶⁷ *Laurel Heights*, 47 Cal.3d at 404.



Lauren Packard
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Richard W. Halsey
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California Chaparral Institute

IN ADDITION, the following have endorsed and sign onto this letter:

Bryant Baker
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Nan Wishner
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Emily Marquez, Ph.D.
Staff Scientist
Pesticide Action Network North America

Encl.: letters and comments incorporated by reference

Letters and Comments Incorporated by Reference

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Comments from Center for Biological Diversity to Board of Forestry and Fire Protection re: Vegetation Treatment Program (VTP) Draft Environmental Impact Report (submitted May 31, 2016) - with accompanying references

Comments from Center for Biological Diversity et al. to Forest Carbon Action Team c/o California Department of Forestry and Fire Protection re: California Forest Carbon Plan (January 20, 2017 Draft) (submitted March 17, 2017) - with accompanying references

Comments from Center for Biological Diversity et al. to California Air Resources Board and California Natural Resources Agency re: Natural and Working Lands Implementation Plan Proposed Process California Natural and Working Lands Carbon and Greenhouse Gas (CALAND) Model (submitted October 30, 2017) - with accompanying references

Comments from Center for Biological Diversity to Board of Forestry and Fire Protection re: Vegetation Treatment Program Recirculated Draft Environmental Impact Report (submitted January 12, 2018) - with accompanying references

Comments from Center for Biological Diversity to Board of Forestry and Fire Protection re: Notice of Preparation, VTP PEIR (submitted March 1, 2019) - with attached reference

Letter from Van K. Collinsworth, Natural Resource Geographer, to George Gentry, Executive Officer, Board of Forestry and Fire Protection (Feb. 21, 2013);

Letter from Anne S. Fege, Adjunct Professor, Department of Biology, San Diego State University to George Gentry, Executive Officer, Board of Forestry and Fire Protection (Feb. 23, 2013);

Letter from CJ Fotheringham, Research Ecologist, Edith Hannigan (March 31, 2016)

Letter from Karen A. Goebel, Assistant Field Supervisor, U.S. Department of the Interior, Fish and Wildlife Service to George Gentry, Executive Officer, California Department of Fire and Forest Protection (Feb. 25, 2013)

Letter from Richard W. Halsey, Director, California Chaparral Institute to George Gentry, Executive Officer, Board of Forestry and Fire Protection (Jan. 25, 2013)

Letter from Richard W. Halsey, Director, California Chaparral Institute and Justin Augustine, Attorney, Center for Biological Diversity to George Gentry, Executive Officer, Board of Forestry and Fire Protection, (Feb. 25, 2013);

Letter from Richard W. Halsey, Director, California Chaparral Institute to George Gentry, Executive Officer, Board of Forestry and Fire Protection (Apr. 8, 2013)

Letter from Frank Landis, Conservation Chair, California Native Plant Society to Edith Hannigan, Board Analyst, Board of Forestry and Fire Protection (May 30, 2016)

Letter from Frank Landis, Conservation Chair, California Native Plant Society to George Gentry, Executive Officer, Board of Forestry and Fire Protection (Feb. 15, 2013);

Memorandum from Sandra Morey, Deputy Director, Ecosystem Conservation Division, California Department of Fish and Wildlife to George Gentry, Executive Officer, Board of Forestry and Fire Protection, (Feb. 25, 2013)

Letter from Dan Silver, Executive Director, Endangered Habitats League to George Gentry, Executive Officer, Board of Forestry and Fire Protection (Feb. 25, 2013)

Letter from Wayne D. Spencer, Chief Scientist, Conservation Biology Institute to Board of Forestry and Fire Protection (March 31, 2016)

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Letter from Sweetgrass Environmental Consulting to George Gentry, Executive Officer, Board of Forestry and Fire Protection (Feb. 25, 2013)

Letter from Alexandra D. Syphard, Research Scientist, Conservation Biology Institute to George Gentry, Executive Officer, Board of Forestry and Fire Protection (Feb. 25, 2013)

Letter from Robert Taylor, Fire GIS Specialist, Department of the Interior, National Park Service, to George Gentry, Executive Officer, Board of Forestry and Fire Protection (Feb. 25, 2013)

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August 9, 2019

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RE: Draft Program Environmental Impact Report (PEIR) Regarding a Proposed California Vegetation Treatment Program (CalVTP)

Dear Members of the Board:

The undersigned agricultural organizations appreciate the opportunity to comment on the Draft Programmatic Environmental Impact Report (DEIR) for the Vegetation Treatment Program (CalVTP) of the California State Board of Forestry and Fire Protection (BOF).

Collectively, our organizations represent California's agricultural and forestry families. We strive to protect and improve the ability of farmers and ranchers engaged in production agriculture to provide safe, reliable, and healthful food and farm products through responsible stewardship of California's diverse natural resources. As California's forests are comprised of both public and private ownership, our organizations have been actively engaged in addressing the state's wildfire challenges with the Administration, members of the California Legislature, and the respective state regulatory agencies. Members of our organizations have been both the evacuees and victims of these recent wildfires, and continue to feel the emotional, physical and financial impacts associated to these catastrophes. Yet, our members also continue to contribute to the removal of woody and fine fuels on an annual basis through timber harvesting and grazing. The fuel load reduction benefits these practices provide are generally uncompensated by the state; however, they provide a critical asset to the public at large.

The CalVTP is long-overdue. Had this program been implemented more than a decade ago, California's wildlands would have benefited from years of fuel removal and lessened the severity of many of the recent fires, which also happen to have been the most destructive wildfires in the state's history. The CalVTP is about reestablishing wildland resiliency and protecting 11 million Californians (more than 25% of state's population) from catastrophic destruction. The conditions in California's wildlands are changing at a rapid pace and few are willing to acknowledge the real-world consequences of continual inaction.

O31-1

While it can be argued that a combination of natural and manmade factors has contributed to the current conditions in California’s wildlands, the state’s current practices, or lack thereof, and policies related to wildland management are inadequate to accommodate the environmental changes that are said to be occurring. If climate change is exacerbating the current conditions of California’s forests and wildlands, then a robust program of management actions that increase the pace and scale of fuels reduction and increase active management is critical not only to ensure that California’s wildlands remain resilient but also lower the risk of potential wildfire.

O31-1
cont.

We encourage the BOF to continue its steadfast commitment to certify the CalVTP by the end of 2019. Appropriate management of the state’s wildlands, including the reduction of fuels, can ensure that fires burn with less intensity and is an especially important consideration for protecting California’s wildland urban interface (WUI) communities. It is crucially important that the BOF move expeditiously to implement the CalVTP. As such, we offer the following comments regarding DEIR:

Chapter 2: Program Description and Chapter 3: Environmental Setting, Impacts and Mitigation Measures

Agricultural Lands and Williamson Act (Section 2.4 and 3.3.1)

We agree with the BOF and the California Department of Forestry and Fire Protection (CAL FIRE) that the wildfire risks associated with intensive agricultural lands should be considered negligible and, therefore, be excluded from the treatable landscape (DEIR Section 2.4 and 3.3.1). Intensive agricultural lands are largely irrigated and removed from the state’s wildland areas that traditionally burn. This recognition ensures that intensive agricultural lands throughout California would be undisturbed from projects associated with the CalVTP. As such, California’s intensive agricultural lands do not pose an increased fire threat to the state and have been documented as slowing the progression of wildfires, as was documented in the 2017 North Bay and Southern California fires.¹²³⁴

O31-2

However, as discussed in Section 3.3.1, treatable landscape will include lands enrolled under the California Land Conservation Act (Williamson Act) in each of the designated farmland categories: prime agricultural lands, non-prime agricultural lands, farmland security zone, mixed enrollment and non-renewal. Thus, intensive agricultural lands typically deemed prime farmland and enrolled under a Williamson Act contract could potentially receive treatment under the CalVTP. We believe that there may be a substantial misunderstanding regarding the relationship between *intensive agricultural lands* and those lands enrolled under the Williamson Act, as the DEIR exempts *intensive agricultural lands* but not *Williamson Act lands* from the treatable landscape.

¹ Sonoma County; <https://www.sonomacounty.com/Fact-Sheet-one-year-after-wildfires>.

² Geoffrey Mohan, *Vineyards May Have Kept Wine Country Fires from Getting Worse*; Los Angeles Times, October 12, 2017; <https://www.latimes.com/business/la-fi-vineyards-firebreak-20171012-story.html>.

³ Clark Mason, *Grape Growers in Fountaingrove American Viticultural Area Overcoming Loss from Wildfires*; The Press Democrat, July 26, 2019; <https://www.pressdemocrat.com/specialsections/rebuildnorthbay/9808618-181/vines-proven-in-fire?sba=AAS>.

⁴ *North Coast Wildfire Impact Study*; Wine Business Institute at Sonoma State University, January 26, 2018; <https://sbe.sonoma.edu/news/%EF%BB%BFnorth-coast-wildfire-impact-study-signals-strong-recovery-early-findings>

California's agricultural lands are Williamson Act lands. The only distinction between the two is that a private landowner receives a substantially reduced property tax assessment in return for enrolling their land under a Williamson Act contract and is prohibited from developing that land for a non-agricultural use for a defined period. Lands enrolled under the Williamson Act are still producing agricultural commodities; either irrigated crops, dry-land grain crops, or lands utilized for range and grazing cattle. Williamson Act enrolled lands represent nearly 50-percent of California's total farmland. The attempt to distinguish *intensive agricultural lands* as separate and distinct from *Williamson Act lands* is alarming to our respective organizations and contradicts with statements included within Section 2.4 of the DEIR.

O31-2
cont.

We request further refinement of Williamson Act treatable lands to isolate grazing and timber lands that are largely deemed non-prime agricultural lands under the Williamson Act. Private timber and grazing lands would benefit from treatment under the CalVTP to remove woody brush and other combustible fuels that contribute to more intense and devastating wildfires. The application of prescribed fire, mechanical thinning and grazing are all appropriate treatment activities that would not only improve ecological health of the landscape but also meet the treatment objectives of the CalVTP.

We are committed to assist in efforts to refine the definition proposed for agricultural lands and Williamson Act Lands to ensure that the CalVTP still achieves the vegetation management goals while also minimizing the impacts to intensive agricultural lands and increasing the resiliency of timber and grazing lands that intersect with fire prone areas of the state.

Chapter 2: Program Description

Prioritization of Treatment Types (Section 2.5.1)

The CalVTP should prioritize the protection of lives and property through WUI fuel reduction projects and the creation of fuel breaks. Ecological and environmental restoration projects, while an important consideration in maintaining or re-establishing ecosystem sustainability, resiliency and health of ecosystems, will not have the immediate benefit of reducing risks to life and property. The primary objective of the CalVTP is identified in DEIR Section 2.2:

- 1. *Serve as the vegetation management component of the state's range of actions underway to reduce risks to life, property, and natural resources by managing the amount and continuity of hazardous vegetative fuels that promote wildland fire consistent with California's 2018 Strategic Fire Plan.***

O31-3

Further, CAL FIRE's and the BOF's *2018 Strategic Fire Plan* focuses on:

- (1) *Fire Prevention and suppression activities to protect lives, property, and ecosystem services, and (2) natural resource management [...]***

Given that more than 10 million acres of treatable landscape within the CalVTP is identified as WUI fuel reduction treatment areas, the immediate protection of life and property should be prioritized over other restorative projects. Beyond just the economic losses associated to loss of structures and property, WUI fires also coincide with the removal of hazardous wastes and unique environmental contaminations.

California is witnessing significant environmental issues that stem from wildfires ravaging a community in the WUI. There are significant human health concerns and consequences to both residents and first responders from smoke exposures related to burning structures and chemicals. These particulates not only compromise respiratory health but also generate significant amounts of greenhouse gases impacting

O31-4

the ability to mitigate for climate change. As the severity of wildfires increase, so does the amount of greenhouse gas emissions which is completely counterproductive to the state’s desire to serve as a global climate change leader. As was experienced in the North Bay and Camp Fires, WUI fires have also contaminated drinking water with high levels of benzene and other volatile organic compounds. In addition, the millions of tons of burnt debris hauled to various landfills for appropriate disposal is also not without environmental impacts.

O31-4
cont.

O31-5

To minimize the associated damages to another WUI community being destroyed by a future wildfire, the CalVTP should prioritize fuel reduction projects that would include, but not be limited to:

- (1) The reduction of hazardous fuels that if otherwise left untreated would generate high intensity fire adjacent to structures or produce significant embers;
- (2) The reduction of hazards along strategic emergency access and evacuation routes or other critical infrastructure.

O31-6

The need for prioritization also stems from the acknowledgement that implementation of the CalVTP will need to “ramp up” efforts to meet the proposed treatment acreage. CAL FIRE anticipates treating 45,000 acres upon certification of the CalVTP and ultimately reaching 250,000 treatable acres by 2025. To the extent possible, CalVTP’s first projects should include the removal of combustible fuel loads for the protection of California’s communities and establishing strategic locations that would support future fire suppression efforts.

Description of Treatment Activities (Section 2.5.2)

We appreciate the BOF recognizing grazing (or prescribed herbivory) as a viable and effective vegetation management solution for reducing fire fuels in the CalVTP. This long-time practice has proven to reduce the severity of fires, promote healthy forests by grazing the vegetation that crowds out and competes with trees, improve wildlife habitat, and can suppress woody brush and noxious plant species dominating the regrowth on a post fire landscape.

As reported in Table 2-4, *Relative Likelihood of Implementing Treatment Activities by Fuel Type for each Treatment Type*, prescribed herbivory is listed as low likelihood for six categories and medium likelihood for three categories. We believe prescribed herbivory is largely underutilized in the DEIR and may negatively influence the ability of the CalVTP to meet its goals, especially for vegetation treatment in WUI communities.

O31-7

Prescribed herbivory is often assumed to work similarly as other fuel load reduction treatment activities, specifically mechanical treatment or chemical application. However, prescribed herbivory is designed to be part of an overall management plan that addresses lack of proper vegetation management on treatable landscapes. The successful practice of prescribed herbivory requires site-specific knowledge of plant growth, animal nutrition and grazing behavior, and ecosystem function. This distinction between what and how prescribed herbivory is to be utilized in each specific management program determines whether or not it is a low, medium or high likelihood option for reducing fuel loads on treatable landscape.

The DEIR ignores that prescribed herbivory is a successful tool to remove fine fuels and is widely utilized by local jurisdictions to manage and maintain their respective local responsibility areas. Many local communities have implemented grazing management programs instead of traditional methods of vegetation abatement. As described in table 2-4, *Relative Likelihood of Implementing Treatment Activities by Fuel Type for each Treatment Type*, mechanical mastication appears to be the preferred treatment

activity for WUI Communities, listed as high likelihood for both tree and shrub treatments, and medium for grass. Our County Farm Bureaus and other agricultural organizations have worked closely with local governments on methods to reduce fire hazards. Where prescribed burning and mechanical thinning may be less than ideal in terms of effectiveness and acceptance from certain community residents, grazing is an effective alternative. Most local jurisdictions in the state have turned to using livestock to perform vegetation abatement as a method of effectively treating areas that are inaccessible, difficult to manage or are hazardous for work crews. Managed grazing has also been used in sensitive areas where the application of herbicide is problematic.

O31-7
cont.

Of specific concern is the inclusion of cost per acre estimates for each treatment activity. We realize such material is intended to present all available information on each treatment activity; however, by including such data, it implies the cost per acre of each method is static which is misleading. Our producers operate in a dynamic business environment, all costs (direct, indirect, fixed, variable) incurred in carrying out prescribed herbivory are ever-changing in response to demand and supply factors. For example, utilizing prescribed herbivory for fuel load reduction on topography that is flat versus a sloping landscape, or on treatable landscapes with no prior vegetation management versus prior treatment activity, will all entail different requirements and subsequently vary in cost per acre. While our comments reference prescribe herbivory, the dynamic nature and costs per acre also apply to the other treatment activities listed. Therefore, we recommend the cost per acre estimates be removed from the description of treatment activities or be replaced with information that infers the relative cost among the different treatment activities.

O31-8

Further, where costs may be incurred to implement grazing in more populous regions of the state via targeted prescribed herbivory by small ruminants, increased grazing opportunities made available to ranchers may actually generate income for the state or local communities. For example, many California State Parks and public lands owned by the Department of Fish and Wildlife could greatly benefit from targeted or seasonal grazing plans to reduce fine fuels. Although these agencies are routinely provided with the funds to acquire private land, they are not provided with the necessary funds required to manage them. As a result, state owned lands have become a larger contributor to the presence of woody and fine fuels. Ranchers are extremely interested in new leasing opportunities where the land would be cared for and new income would be generated for the lessor. It would be our expectation that new lease opportunities would come with a requirement to submit a grazing management plan to ensure the other uses of the property are protected. The CalVTP should further explore the use of grazing on state owned lands as a unique opportunity to meet the objectives of the CalVTP while also generating income for the state.

Concluding Comments

California's environmental landscapes are suffering from a century of fire suppression and bureaucratic over-regulation. This combination has effectively turned our wildlands into just another monumental infrastructure project with an endless ledger of deferred maintenance. CAL FIRE's *2018 Strategic Fire Plan* acknowledges that the traditional fire season is obsolete, as wildfires now burn on a year-round basis throughout California. The question now is how to balance fire suppression efforts while also utilizing an aggressive and robust wildland management program that minimizes the wildfire risks to nearly 25% of the state's population. Meanwhile, as the state wrestles with the correct approach to wildland maintenance, other related issues such as home insurance non-renewals and increased insurance premiums, and the reality of unreliable electrical service have emerged.

O31-9

The most recent wildfires have also reignited longstanding disagreements as to whether broader vegetation treatment is necessary, or should the state again pivot its focus to private homes and landowners. Residential home hardening is not the solution to this crisis and serves only to divert attention away from the greater land management problems facing our wildlands. Instead of California capitalizing on increased wildland fuel reductions after the October 2003 wildfires, the state forced private homeowners to instead create defensible space. More than fifteen years later, similar arguments are being made that home-retrofits, again undertaken at homeowner expense, will somehow minimize community devastation from a wildfire. The onus is placed on private Californians to save themselves from wildfire, as if somehow the 20.3 million treatable acres of State Responsibility Area (SRA) has become the sole responsibility of private landowners. Wind-driven fires or not, the destructive nature of a wildfire is unpredictable, and the state must lead with the tools that can collectively lessen the potential of wildfire. Fire-wise landscaping and residential design features do not address combustible fuel loads beyond a private residence and has little influence on a fire's behavior or ignition potential. The CalVTP, along with defensible space, home hardening, improved natural resource management and education programs are all equally part of a much broader solution.

O31-9
cont.

We are committed to working with the BOF and CAL FIRE in the further development and refinement of the CalVTP. We are specifically concerned with the applicability of the CalVTP as it relates to agricultural lands enrolled under a Williamson Act contract. Williamson Act enrolled lands represent nearly 50% of all agricultural lands in California and do not pose an increased wildfire risk. Secondly, we believe the CalVTP should prioritize treatments that protect WUI communities, support fire suppression personnel and ensure the protection of lives and property. Lastly, grazing (prescribed herbivory) should have a greater utilization in the CalVTP. Grazing is a successful vegetation abatement program used by many local jurisdictions and may generate revenue for the state and local communities.

O31-10

Respectfully,



Robert Spiegel
Government Affairs Advocate – Forestry and Natural Resources
California Farm Bureau Federation



Justin Oldfield
Vice President, Government Affairs
California Cattlemen's Association



Erica Sanko
Executive Director
California Wool Growers Association



August 9, 2019

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RE: Comments on the Draft Program Environmental Impact Report for the Proposed Statewide Vegetation Treatment Program (CalVTP)

To whom it may concern,

Thank you for the opportunity to provide comments on the CalVTP PEIR. We appreciate the effort by the Board and staff to develop a streamlined regulatory option for reducing hazardous fuels while maintaining public trust values and resources.

The California Fire Safe Council is California’s leader in community wildfire risk reduction and resiliency. We do this by supporting and building capacity for hundreds of community-based Fire Safe Councils, Resource Conservation Districts, Firewise Communities, homeowner’s associations, and other community preparedness groups. As such, our interest in the CalVTP is in terms of its ability to efficiently and effectively facilitate the implementation of hazardous fuel reduction projects around communities at risk from wildfire in California.

O32-1

We are in general agreement with the approach and mitigation measures proposed in the Draft PEIR. We have the following questions.

1. How will this program be used by local organizations if they are not being funded via a CAL FIRE grant? It is not clear how this will function in terms of the lead agency who submits the application. The California Fire Safe Council administers millions of federal and private dollars to local organizations every year to implement hazardous fuel reduction projects in California. Most of those projects require CEQA compliance because they are ground-disturbing projects. Because they are federally funded, they must also comply with several federal laws (e.g MBTA, NHPA, etc.), although not NEPA per se. Will this program provide these organizations with a streamlined regulatory option via CalVTP, and if so, how?
2. How will the process function and will it be easily accessible to community-based organizations? Will there be an online portal for submitting applications? We encourage any such processes to be user-friendly for non-technical project proponents. It will take everyone from HOAs to the timber industry and agencies and all of us in between to reduce hazardous fuels to create fire-resilient landscapes. We are available to work with the BOF to ensure that any online portals function for lay people interested in preparing their communities for the eventuality of wildfire.
3. What is the public notification process related to proposed projects? We are helping to build the social license for treating hazardous fuels in and around California communities, including prescribed fire. It is important that this program is open and transparent, so the public feels included in any projects in their communities, and are inspired to be part of local long-term solutions.

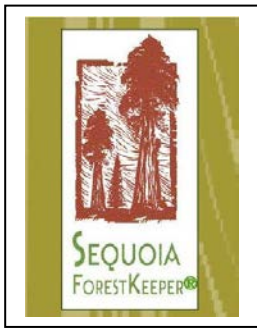
O32-2

O32-3

O32-4

Sincerely,

Tracy Katelman
Executive Director



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August 9, 2019

Re: The California Vegetation Treatment Program Draft Program EIR

Dear Members of the Board, Executive Officer Matt Dias, Deputy Secretary of Forest Resources Management Jessica Morse, Senator Hannah-Beth Jackson, and Edith Hannigan,

We remain hopeful that, by working collaboratively, the State can create an effective Vegetation Management Program (VTP) that can prevent future catastrophic wildfires and protect fragile, native habitats threatened by climate change. We have had detailed discussions with a number of talented individuals within the State government who have shown the courage and insight to break free from bureaucratic constraints, constraints that have prevented this process from succeeding in the past. We urge the Board to reach out to those of us who have challenged the VTP process over the past 15 years to help create a quality document all would be willing to support.

O33-1

The Fundamental Challenge

All of us want to develop a comprehensive program to protect lives, property, and California’s priceless biodiversity. That goal has been frustrated, however, because the State has been asking resource entities to take on a job that involves suburban fire disasters. Hence, the focus remains on managing forests far from communities most at risk and clearing habitat in a manner that often increases the speed and frequency of wildfire. In a devastating example, the town of Paradise was incinerated primarily by a tsunami of embers created by ten-year-old fuels, similar to fuels created by vegetation treatments and logging operations.

The State needs to embrace the goal of eliminating wildfire catastrophes and reject the fatalistic approach that we cannot address the devastating power of wind-driven fire.

O33-2

Unfortunately, the draft EIR remains crippled by fatalism. It pursues its preferred habitat clearance approach with fingers crossed, acknowledging that the vegetation treatments it proposes will likely be ineffective during the wind-driven wildfires that kill most of the people and burn most of the homes. The draft EIR attempts to justify its approach because “most fires that occur within the state are not highly wind driven...” and that vegetation treatments can work, “when weather conditions shift, wind subsides, and fire intensity decreases.”

O33-2
cont.

People die and communities burn during wind-driven fire, not when the weather is cooperating.

What the draft VTP is saying is that the State will only deal with the wildfires that can be controlled, not the ones that cause nearly all the damage.

We can prevent the devastation by acknowledging the simple fact that large, fast, high-intensity wildfires are inevitable – no matter what stories we tell ourselves about past fire suppression, anecdotal experiences, and presumed historical conditions.

However, we can prevent the devastation of our communities.

Although it is often claimed that our recent wildfires are unprecedented and their fury is surprising, history suggests otherwise. Many of the lives lost and homes destroyed in the 2017 and 2018 wildfires could have been saved if a State level entity (with access to funds a mere fraction of what has been recently allocated to protecting public utilities from wildfire liability) had applied the lessons learned during the 2003 Cedar Fire:

O33-3

1. Wildfire devastation (lost lives and homes) ceases **when the weather changes**, not when a fuel break is encountered or a fire crew is present.
2. Homes primarily ignite by **embers travelling a mile or more** ahead of the flame front, not from an imagined wall of flame.
3. Fine fuels (weeds and grasses) that typically grow within vegetation treatments or type-converted areas **increase the flammability of the landscape**.
4. **Evacuation plans typically fail** because they are designed for the same types of wildfires the draft EIR addresses – non-wind-driven fires that provide the time needed to evacuate people in an orderly fashion.
5. Defensible space is a misnomer for most homes because during a large fire, **there are never enough fire crews to defend** all the threatened homes as demonstrated in Coffey Park, Santa Rosa during the 2017 Tubbs Fire.

Yet, with each passing wildfire season, with each growing list of fatalities, the State continues to allocate increasing funds to continue doing the same thing over and over again.

After the 2007 wildfires in southern California, former San Diego Fire Chief Jeff Bowman and others formed the San Diego Regional Fire Safety Forum. Chief Bowman introduced the Forum during a press conference on February 19, 2008, by dropping a large stack of fire task force documents from previous decades on the podium, documents filled with unrealized recommendations.

Eight years later, during the May 25, 2016 meeting of the California Fire Service Task Force on Climate Impacts, Chief Bowman distributed the After Action Report for the 1993 Southern California Wildfire Siege. As he did after the 2007 fires, he pointed out that the report's ninety-five recommendations for improving future responses to major fire incidents were nearly identical to those recommended by the Governor's Blue Ribbon Fire Commission after the 2003 wildfires. Again, most of those recommendations remain unrealized.

World history is littered with examples of preventable disasters when leaders at the time were blinded by prevailing paradigms and group think – the Space Shuttle Challenger explosion, the Deepwater Horizon blowout in the Gulf of Mexico, and the millions of men slaughtered in WWI due generals' failure to understand the changing dynamics of warfare (machine guns vs. swords and cavalry). The loss of so many lives in Paradise during the 2018 Camp Fire and the devastating Montecito debris flow that followed the 2017 Thomas Fire represent similar events that could have been prevented if only we had adapted to the actual challenges that we knew faced us.

With climate change increasing fire risk and threatening to change the distribution of native plant communities across the State, we cannot afford to keep doing the same thing. **We have one last chance to get this right.**

We urge you to break with the conventions that have failed to resolve the wildfire crisis and focus fire risk reduction efforts where it matters most – **directly on our homes and around our communities, not on vegetation projects far from where most of us live or in a manner that will accelerate the loss of native habitat (Attachment 3).**

We provide the following six comments/suggestions for your consideration. Please also see our previous scoping comments for additional details and references.

O33-3
cont.

O33-4

Six Comments/Suggestions on the Draft EIR/VTP

1. The Program's Purpose and Need and Proposed Treatments do Not Address the Wind-Driven Wildfires that Cause Nearly all the Devastation

In examining the 20 most devastating wildfires as per Cal Fire's 2019 list, nearly all have been driven by strong winds (Fig. 1).

However, the draft EIR admits the proposed treatments will not likely protect lives and property during such fires. Instead, the Programs rests almost entirely on dealing with the fires that can be controlled. This is equivalent designing buildings to withstand only 95th percentile earthquake movements, or what you would feel as a result of a magnitude 2.5.

Such an approach would fail even the most basic cost/benefit analysis. We offer an alternative approach in Attachment 3.

Fire/Rank	Deaths	Structures burned	Primary vegetation consumed	Wind-driven	Date
1 Camp	85	18,804	forest/shrubland/grass	X	11/2018
2 Tubbs	22	5,636	woodland/forest/grass	X	10/2017
3 Tunnel	25	2,900	shrubland/grass	X	10/1991
4 Cedar	15	2,820	shrubland	X	10/2003
5 Valley	4	1,955	forest/shrub/grass	X	9/2015
6 Witch	2	1,650	shrubland	X	10/2007
7 Woolsey	3	1,653	grass/shrubland	X	11/2018
8 Carr	8	1,614	forest/shrubland	X	7/2018
9 Nuns	3	1,355	woodland/forest/grass	X	10/2017
10 Thomas	2	1,063	shrubland	X	12/2017
11 Old	6	1,003	shrubland/forest	X	10/2003
12 Jones	1	954	forest/grass	-	10/1999
13 Butte	2	921	forest/shrub/grass	-	9/2015
14 Atlas	6	738	woodland/forest/grass	X	10/2017
15 Paint	1	641	shrubland	X	6/1990
16 Fountain	0	636	forest	X	8/1992
17 Sayre	0	604	shrubland/grass	X	11/2008
18 Berkeley	0	584	shrubland/grass	X	9/1923
19 Harris	8	548	shrubland/grass	X	10/2007
20 Redwood	9	546	forest	X	10/2017

Fig. 1. California's 20 most destructive wildfires including role of wind (X = severe winds) and primary vegetation type involved. https://www.fire.ca.gov/media/5511/top20_destruction.pdf

2. Conform to State Law (PRC 4483 as per SB 1260)

CA Pub Res Code § 4483 (2018) states (*emphasis ours*),

(a) To the extent feasible, the board’s Vegetation Treatment Program Programmatic Environmental Impact Report, when certified, shall serve, in addition to any identified entities in the report, as the programmatic environmental document for prescribed fires initiated by a third party for a public purpose pursuant to Section 4491.

(b) (1) It is the intent of the Legislature that additional consideration be provided for *chaparral and coastal sage scrub plant communities that are being increasingly threatened by fire frequency* in excess of their natural fire return patterns due to climate change and human-caused fires.

(2) Prescribed burning, mastication, herbicide application, mechanical thinning, or other vegetative treatments of chaparral or sage scrub shall occur only if the department finds that the *activity will not cause “type conversion” away from the chaparral and coastal sage scrub currently on site.*

O33-6

The draft EIR violates PRC 4483 in four significant ways.

Attempting to limit protections to the coast

First, SPR BIO-5 (3.6-121) attempts to reduce the extent of PRC 4483 by applying it to only “coastal” chaparral, leaving out inland and forest chaparral. The text reads,

“Develop a treatment design that avoids environmental effects of type conversion in coastal chaparral and coastal sage scrub vegetation alliances.”

O33-7

The law applies to ALL chaparral and sage scrub statewide. It does not limit its protection to the coast. The draft EIR needs to reflect this.

Failure to define type conversion

Second, SPR BIO-5 improperly defines type conversion by limiting it to the terminal condition (shrubland to grassland), rather than considering the actual process that begins with reduced biodiversity.

O33-8

Despite a large body of research on type conversion, as cited in our scoping comments, and the guidance we provided to the state legislature (Attachment 1), the draft EIR claims,

“It is beyond the legal scope of the PEIR to define SB 1260 type conversion...”

The contention that a programmatic EIR cannot establish a proper definition of type conversion is absurd and violates CEQA guidelines.

O33-8
cont.

Avoiding responsibility

Third, the draft EIR passes on the responsibility of defining type conversion and determining to the “project proponent.” Passing off the determination of a key environmental impact of a project to a future, unknown entity not only violates the spirit of SB 1260, but is also a clear violation of CEQA.

O33-9

Allowing type conversion anyway

Finally, the draft EIR opens the door to allow partial type conversion to occur if the “project proponent” shows that,

“...habitat function of chaparral and coastal sage scrub would be at least maintained within the identified spatial scale at which type conversion is evaluated for the specific treatment project.”

How exactly a project proponent is supposed to determine “habitat function” is not offered other than a reference to a paper that reviews a process to evaluate ecosystem goods and services that can be exploited by humans (Groot et al. 2002) (3.6-117). This approach is useless if one is interested in protecting native ecosystems for the actual plants and animals that live there, not the farming or hunting opportunities provided to people.

O33-10

What “habitat function” actually means is that based on a project proponent’s opinion, a chaparral stand could be modified to promote a particular value that has little to do with natural processes. In other words, a rare, old-growth chaparral stand could be treated to create deer browse in order to support the hunting industry, making it more susceptible to type conversion. Such projects have been done in the past, causing significant damage to healthy, intact shrubland plant communities (Fig. 2).

Regardless, we do not have a clear enough understanding of the ecology for the wide variety of chaparral plant communities that exist in California to allow a “project proponent” to justify whatever species mix/shrub cover is being promoted to maintain or improve “habitat function.”



Fig. 2. A large, mixed chaparral stand on the Cleveland National Forest that was cleared to increase deer browse, leaving it susceptible to type conversion.

O33-10
cont.

Yet despite our limited knowledge, somehow the authors of the draft EIR have come up with precise % of habitat clearances in chaparral that are acceptable to maintain “habitat function”:

“A minimum of 35 percent of existing shrubs and associated native vegetation will be retained at existing densities in patches distributed in a mosaic pattern within the treated area or the shrub canopy will be thinned by no more than 20 percent from baseline density...”

The draft EIR needs to establish a clear definition of chaparral type conversion as per example provided by Attachment 2 and provide adequate guidance in how to determine the possibility of its occurrence due to a proposed project.

O33-11

3. Ecological Restoration Not Applicable to Chaparral

Despite a wealth of research demonstrating that chaparral is threatened by high fire frequency and does not need treatment for ecological restoration purposes (as cited in our scoping comments), the draft EIR indicates that ecological restoration treatments can be applied to chaparral and sage scrub when these plant communities are within their natural fire return interval or if a project proponent,

O33-12

“...can demonstrate with substantial evidence that the habitat function of chaparral and coastal sage scrub would be improved.” SPR BIO-5.

Nowhere in the draft EIR is there any indication that chaparral needs ecological restoration or how its “habitat function” can be improved by treatment. There is a map of

modeled ecological treatment areas, but its gross scale makes it impossible to determine the precise location such treatments (2-17).

The draft EIR makes it very clear throughout the document that,

“...California chaparral shrublands have experienced such substantial human population growth and urban expansion that the increase in ignitions in these areas (Schroeder et al. 1964) have offset the effects of suppression to the point that fire frequency exceeds the historic range of variability (Keeley et al. 1999). Because anthropogenic ignitions tend to be concentrated near development, more fires now occur at the urban fringe than in the backcountry (Keeley et al. 2004). Profound impacts on land cover condition and ecological community dynamics are possible if a disturbance regime exceeds its natural range of variability, and these altered fire regimes can lead to cascading ecological effects (Dale et al. 2000)” (2-15).

In addition, the draft EIR explains that many chaparral plant communities are sensitive natural communities. For example,

“Maritime chaparral, characterized by manzanita and California lilac (*Ceanothus* spp.) species adapted to the foggy coastal climate, once dominated sandy hills along Monterey Bay, Nipomo Mesa, Burton Mesa, and Morro Bay. Maritime chaparral is now one of the region’s most threatened vegetation types, with its extent severely reduced by development” (3.6-28).

The draft EIR also warns that,

“While SPRs would minimize impacts, treatment activities could still result in a loss of acreage of sensitive natural communities and habitats, eliminate sensitive natural communities or habitats from a treatment area, or reduce the habitat value or function of sensitive natural communities and habitats” (3.6-180).

As the draft EIR states, California’s native shrublands are not like some of our State’s forests which have missed one more natural fire cycles due to past fire suppression. In fact, fire suppression has protected many chaparral stands from excessive fire which would likely lead to type conversion (as cited in our scoping comments).

The State’s own climate change assessment document shows that the potential loss of chaparral under a hot/dry scenario could be extensive (Fig. 3). Considering such a scenario, it makes no sense at all for the draft EIR to suggest that chaparral needs to be treated with more fire or otherwise modified when the plant community is already under threat from high fire frequency.

Treating chaparral for “ecological restoration” purposes needs to be eliminated from the EIR and the VTP.

O33-12
cont.

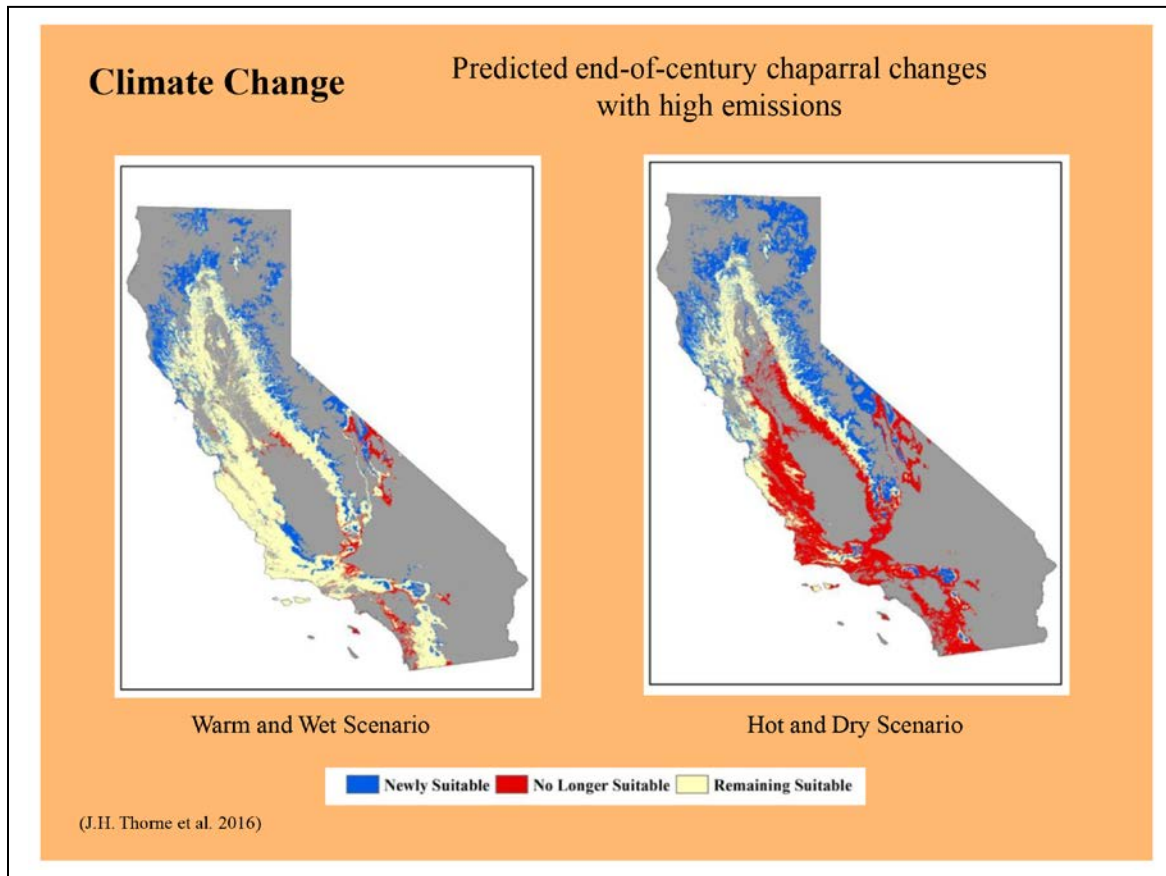
O33-12
cont.

Fig. 3. Under a future high emissions/hot and dry climate scenario for the time period 2070 - 2099, much of the area currently occupied by chaparral will no longer be suitable for that plant community (shown in red). The likely replacement will be highly flammable, non-native weeds. From Thorne et al. 2016.

4. Fire Return Interval Periods Inaccurate

According to SPR BIO-5, a project proponent could burn/treat any chaparral stand in the State when it is above its "average" fire return interval as listed in Table 3.6-1. The table is copied from the California Native Plant Society's Manual of California Vegetation.

"Use prescribed burning as the primary treatment activity in sensitive natural communities that are fire dependent (e.g., closed-cone forest and woodland alliances, chaparral alliances characterized by fire-stimulated, obligate seeders), to the extent feasible and appropriate based on the fire regime attributes as described in *Fire in California's Ecosystems* (Van Wagtendonk et al. 2018) and the *Manual of California Vegetation* (Sawyer et al. 2009)" (3.6-147).

O33-13

This is a serious problem in that most of the intervals listed in the table have no research to support them as they were determined by informal discussions, not data. The only solid

information we have on natural chaparral fire return intervals has been derived primarily from mixed chaparral (30 – 150 years or more) and *Ceanothus megacarpus* chaparral (fire return intervals less than 6 years causes localized extinctions). Please see our previous scoping comments for references.

For example, the low end of the fire return interval for a number of important chaparral types in the table is below 10 years (e.g. chamise, red shanks, cup leaf ceanothus). How one defines these different chaparral types is not clarified (for example, most chaparral has some chamise component). Such a short fire return interval would likely lead to type conversion as per the biodiversity definition reference above.

We are unaware of any literature that offers data that supports a ten-year lower limit for the listed chaparral types. The closest way to determine the lower limit of fire return intervals for a particular area (not a generalized plant community) is to examine local lightning frequencies, the natural ignition source for fire. In many locations where chaparral exists, lightning frequencies indicate natural fire return intervals to be on the order of a century or more, not ten years.

Therefore, the lower limit of a fire regime period listed in the table needs to be considered questionable in deference to preventing environmental damage. At the very minimum, the median year of each fire return interval needs to be considered the lower limit by Cal Fire, NOT the one listed in Table 3.6-1.

The important issue regarding fire return intervals for native shrublands in the draft EIR is to prevent type conversion within fuel treatments near communities, not as a metric to justify treatments for “ecological restoration.”

Fire return intervals for native shrublands in the EIR need to be reexamined and determined by actual data such as lightning frequency (van Wagtenonk and Cayan 2008, Keeley 1982).

5. Old-growth Chaparral is not Protected

The draft EIR allows for ecological restoration “treatment” of chaparral when a stand is older than the average time listed in the fire return interval in Table 3.6-1, OR if the “project proponent says it “needs” to burn for “habitat value.” This will accelerate the already rapid decrease of legacy, old-growth chaparral stands in the State.

“Ecological restoration” treatment for chaparral is an oxymoron. There is no scientific evidence to support the treatment of old-growth chaparral (older than 60 year since the last fire) and the outdated agricultural/ranching-centric policy the draft EIR is attempting to breathe new life into. Old-growth chaparral is becoming increasingly rare due to increasing fire frequencies, climate change. Chaparral is NOT a forest where prescribed burning *can* play an ecological role (Keely et al 2009).

O33-13
cont.

O33-14

The VTP needs to provide additional consideration for protecting old-growth chaparral communities (older than 60 years since last fire) that are being increasingly threatened by fire frequency in excess of their natural fire return patterns due to climate change and human-caused fires. Prescribed burning, mastication, herbicide application, mechanical thinning, or other vegetative treatments of old-growth chaparral shall not occur outside the 100-foot defensible space zone.

O33-14
cont.

6. Cumulative Impacts Likely Considerable

Given the erroneous assumptions within SPR BIO-5, the draft EIR’s conclusion that the implementation of this and other mitigation measures would prevent significant cumulative effects by the VTP is unsupportable (4-18).

O33-15

In summary, the current draft EIR for the Vegetation Treatment Program:

- Fails to adequately explain and justify the purpose and need for the VTP. Nearly all the devastating losses of life and property from wildfires are caused by wind-driven wildfires, yet the draft EIR acknowledges the Program’s proposed treatments, “may not be able to slow or halt extreme wind-driven fires” (ES-2).

O33-16

- Violates state law. Causing type conversion in chaparral through the proposed vegetation treatments and mitigations (SPR BIO-5) is not permitted as per SB 1260 – Jackson.

O33-17

- Contradicts its own statements of fact. The Program recognizes the threat of increasing fire frequencies in chaparral. Yet the Program’s proposed vegetation treatments establishes protocols to burn/treat more chaparral, further threatening the chaparral ecosystem.

O33-18

- Is based on an outdated paradigm that is contrary to the best available science – attempting to control/stop wildfires rather than focusing directly on saving lives and property. Experience and the research have clearly shown that depending on vegetation treatments and waiting for “when weather conditions shift, wind subsides, and fire intensity decreases” to protect communities from wildfire is a failed approach.

O33-19

We respectfully request the Board revise the draft EIR to accept the challenge to develop a plan that *can* address wind-driven fires and *can* protect communities from them by facilitating a comprehensive approach to wildfire risk reduction.

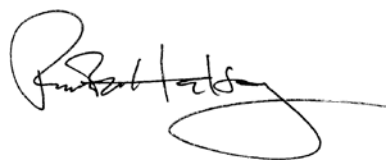
O33-20

The draft EIR needs to comply with CEQA and the CEQA guidelines as described in our comments below and in our joint letter with Impett et al. 2019.

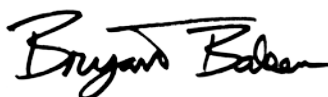
The draft EIR should recommend the formation of a Community Flammability working group/entity that is responsible for preventing wildfire catastrophes – not wildfire itself – that is composed of diverse talents (see Attachment #1).

O33-21


Sincerely,



Richard W. Halsey
Director
California Chaparral Institute



Bryant Baker
Conservation Director
Los Padres ForestWatch



Ara Marderosian
Executive Director
Sequoia ForestKeeper

Cited References

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Attachment 1: Suggested Composition of a Community Flammability Group

While large wildland fires are inevitable, the destruction of communities by those fires is not. Therefore, we propose the establishment of a state sponsored working group with the specific mission of dramatically reducing the loss of life and property within communities that face the potential of **being devastated by wind-driven wildfire storms**. The group would be composed of physicists, meteorologists, geographers, architects, educators, municipal fire experts, structural fire behavior analysts, catastrophic risk management (CRM) analysts, urban planners, psychologists, building engineers, native landscape architects, and environmental/community advocates who have an expertise in understanding the impact of fire on communities and the needs/challenges of diverse neighborhoods within those communities.

This group is a community flammability group, not a wildland fire group. As such, it will be addressing the impact of wildland fire in a manner that has not been addressed before. Therefore, the composition of the group must focus on a diverse mix of people who represent the state, provide expertise in the full range of fire disaster preparedness and mitigation research/practice, and eager to explore and develop innovative options that are not currently common practice – and see those options actualized within communities.

O33-22

Attachment 2: Type Conversion provide to the California State Legislature for SB 1260

Type conversion as related to California chaparral and coastal sage scrub is the process by which the dominant plant species of a native chaparral and / or coastal sage scrub plant community (shrubs and/or forbs) are extirpated over time by a series of disturbance events (e.g. short fire return intervals, mastication, grazing) or after a single disturbance event (e.g. cool season fires), leading to the reduction of biodiversity and often to the invasion of non-native annual grasses and forbs. In chaparral plant communities, fire return intervals less than 30 years, depending on soil, aspect, and climatic conditions, can lead to type conversion by compromising the ability of chaparral shrub species, especially obligate seeding species (e.g. *Ceanothus spp.*, *Arctostaphylos spp.*, etc.), from properly regenerating. Resprouting species (e.g. *Adenostoma fasciculatum*) can also be negatively impacted by short fire return intervals since these plants need sufficient time to recharge their underground starch supplies to produce viable resprouts; short fire return intervals short-circuit this process. Native annuals that contribute to rich postfire species diversity are also negatively impacted by short fire return intervals as invasive non-native species out-compete them for nutrients and space. Coastal sage scrub communities are somewhat more resilient to fire return intervals less than 30 years because of a general lack of obligate seeding shrub species. Too-frequent fire disturbance in either chaparral or coastal sage scrub favors the establishment of rapidly reproducing non-native annual grasses and forbs that have a higher ignition probability and produce cooler fires than chaparral or coastal sage scrub communities. Establishment of grasses and forbs in place of shrubs can lead to an undesirable feedback loop called the grass-fire cycle.

O33-23

Illustrations



Figure 1. Example of type conversion (chamise chaparral to non-native grassland) due to a single prescribed burn conducted during the cool season in the 1980's within Pinnacles National Park, California.



Figure 2. Type conversion of mixed chaparral to non-native grassland due to various vegetation treatments in the Cleveland National Forest, Trabuco Ranger District.



Figure 3. The type conversion of manzanita/mixed chaparral to non-native grassland due to mastication in the Los Padres National Forest, Santa Barbara Ranger District. An older treatment area is in the background, being invaded by non-native grasses. The most recent treatment is in the foreground. Note soil disturbance which facilitates the spread of non-native grasses.

O33-23
cont.

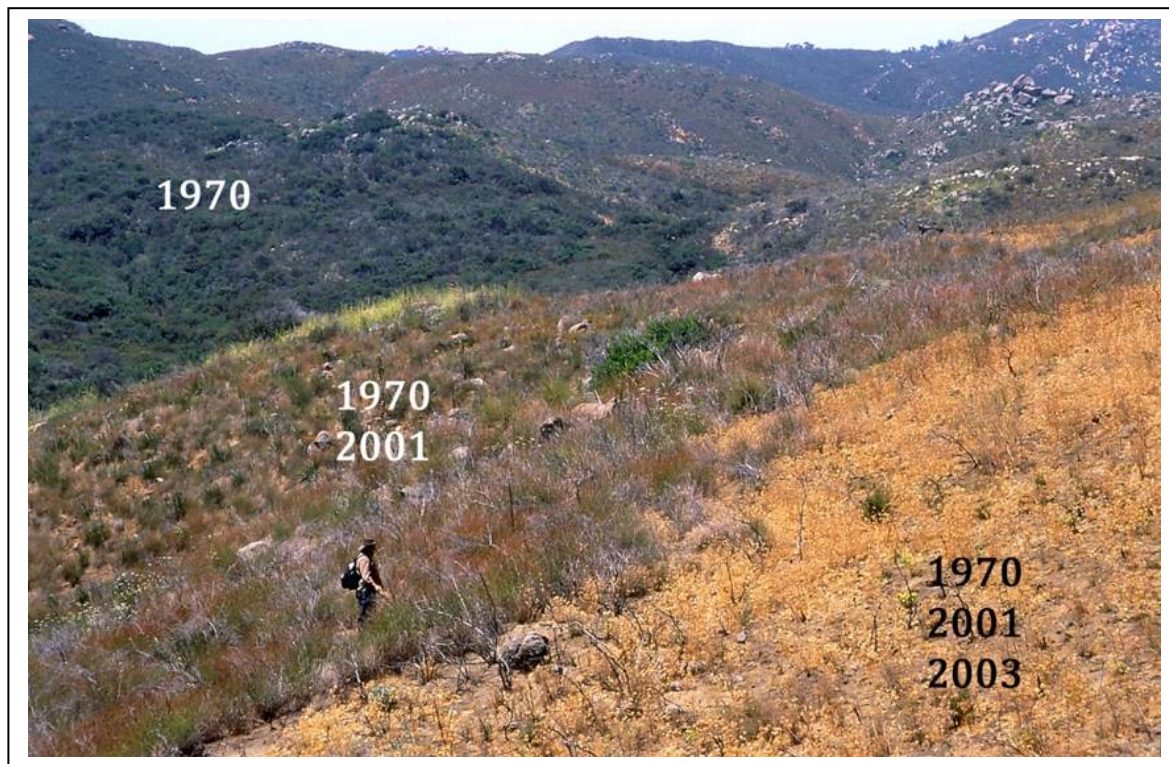


Figure 4. Type conversion of mixed chaparral resulting in reduced biodiversity. The far left shows an old-growth chaparral stand last burned during the 1970 Laguna Fire. The middle/left of the picture shows an area recovering from the 2001 Viejas Fire. It is composed primarily of chamise, deerweed, and several other shrub species. To the right is a portion of the Viejas Fire scar reburned in the 2003 Cedar Fire. The Cedar fire scar is now filled with non-native grasses. The majority of the resprouting shrubs have been killed and no obligate seeding species, such as *Ceanothus*, are present. The site was resurveyed in 2018. Results indicated a continued loss of obligate seeding species, a significant loss of resprouters, and large areas colonized by non-native grasses.

O33-23
cont.

Attachment 3: Op-Ed: Wildfire is inevitable, but the destruction of our communities is not

Los Angeles Times

By Richard W. Halsey

Dec. 11, 2018

Our current approach to wildfire is killing us. Instead of making communities fire safe, we're mostly trying to manage habitat to suppress fire, and it's failing to protect our lives and our property. Bureaucratic inertia and hubris are preventing needed change. Until the public understands the true nature of wildfire and demands the same of government, the staggering losses will continue to mount.

The sad fact is that strategies capable of preventing much of the devastation in Paradise and Malibu have been known for nearly two decades. But instead of pursuing those strategies, our wildfire agencies stubbornly pursue fire control. A case in point: After the massive fires of 2017 in Santa Rosa and in Ventura County, the state Legislature stepped in with this response: More money to increase logging and prescribed burns in forests far from where the fires occurred and far from communities with substantial populations.

As Jack Cohen, a former lead fire scientist with the U.S. Forest Service, has demonstrated through decades of study, extreme, uncontrollable wildfires are inevitable, but wildland-urban wildfire disasters are not. To stop those disasters, we must accept some basic principles based on experience and research. First among them is that the wildfire problem is a home ignition problem, not a wildfire control problem.

*What does prevent house ignition is fairly simple,
and compared with the cost of destructive fires,
relatively inexpensive.*

Embers are the biggest threat. Most structures ignite from embers that can travel a mile or more from the fire front in high winds. Of the 1,650 structures destroyed in the 2007 Witch Creek fire in San Diego County, there were few, if any, reports of homes that burned as a result of direct contact with flames from wildland fuels. Although 100 feet of defensible space around structures is a worthwhile effort, the nearly exclusive focus by wildfire agencies on other kinds of habitat clearance — creating huge fire breaks and logging — isn't going to prevent wind-driven embers from setting communities on fire.

What does prevent house ignition is fairly simple, and compared with the cost of destructive fires, relatively inexpensive: Retrofitting houses or requiring that new houses be built with such measures as ember-resistant attic vents, nonflammable roofing (not Spanish-style tile roofs, which can trap embers in the spaces beneath the rounded tiles), and exterior sprinklers. The effectiveness of such sprinklers was proved during the 2007 wind-driven Ham Lake fire in Cook County, Minn., where they had been installed on 188 properties. Those properties survived; more than 100 neighboring properties didn't.

Federal Emergency Management Agency hazard mitigation grants had covered the majority of the cost of the sprinklers.

Unfortunately, most wildfire agencies have shown little interest in Cohen's research. Despite the fact that one of the main goals of U.S. Forest Service vegetation clearance is to protect homes from wildfires, the agency rejects addressing home flammability because it is beyond the "official scope" of the projects. Similarly, after nearly 18 years of scientific input showing that the California Department of Forestry and Fire Protection's Vegetation Treatment Program isn't protecting homes from wind-driven fires, the agency refuses to change direction. In a recent Community Wildfire Protection Plan in Santa Barbara County, the only attempt to address home ignition is the suggested production of an educational brochure.

Making homes fire safe acknowledges that we must coexist with fire. But coexistence doesn't preclude evacuation. Experience shows us that it too needs to be reconsidered. We have known since the 2003 Cedar fire in San Diego County that a large percentage of civilian fatalities occur when people are trying to evacuate during huge, wind-driven conflagrations. Such fires move too fast, warning systems often fail, people panic and the fire overtakes jammed roads.

Poor land planning makes the problem worse. Last summer, the San Diego County Board of Supervisors approved a new housing development in a known fire corridor, with only one way out. Paradise, with only a few roads in and out, had narrowed the main route through the town. These planning failures must be resolved with statewide standards.

Paradise also serves as an example of an alternative approach to evacuation. As the Los Angeles Times reported, heroic first responders "shepherded" evacuees from the gridlocked roadway to a concrete parking lot that was somewhat sheltered from the wind. They saved the lives of 150 people. Every housing development in a high-fire hazard area needs to have such a safety zone, a "fire park." The Eureka Springs development in Escondido provides a model, a purpose-built large, grassy area that's easy for everyone in the community to get to.

Every community should consider one more strategy that acknowledges our need to live with fire: forming Community Emergency Response Teams with a dedicated group of specially trained volunteers who stay behind expressly to help stranded people and to extinguish ember-ignited spot fires.

We must focus on why and how our communities burn. Protecting homes and families is not about controlling wildfire, but reducing the flammable condition of our communities and making sure new ones are not built in harm's way.

Richard W. Halsey is director of the California Chaparral Institute.

O33-24
cont.



August 9, 2019

Board of Forestry and Fire Protection
Attn: CalVTP
PO Box 944246
Sacramento, CA 94244-2460

To Whom it May Concern:

The California Professional Firefighters (CPF), state council of the International Association of Fire Fighters, representing over 30,000 career firefighting and emergency medical service personnel statewide, would like to express our support for the California Vegetation Treatment Program Programmatic Environmental Impact Report (CalVTP).

O34-1

Unfortunately, extreme, destructive wildfires have become a frequent occurrence in California. In 2018 alone, California experienced the Mendocino Complex Fire, the largest fires in recorded history in California and the Camp Fire, the most destructive fire in California history, among others. Climate change and other factors have led to a fire season that has become year-round. These fires have threatened or claimed lives and property and present immeasurable challenges and mounting risk for the men and women in California's fire service.

O34-2

In addition to the direct loss of life and property, these extreme wildfires are creating significant environmental harm, including air quality and greenhouse gas emission impacts along with long term ecological impacts to California's forests and watersheds.

These larger, more frequent and more intense wildfires are destroying our communities at an alarming rate and are having significant health impacts on our communities, including the men and women battling these blazes. As these losses continue to mount, it has become clear that public and private partners need more tools to implement wide-ranging fire prevention programs in their communities.

Since his inauguration, Governor Newsom has been at the forefront of efforts to address and mitigate wildfire risk in California. These efforts have included significant resource

O34-3

commitments to fire prevention and suppression activities in the California State Budget, Executive Orders to ensure enhanced coordination and action to mitigate risk and unwavering support for the members of the fire service as they are on the front lines battling these fires.

O34-3
cont.

Enhancing the State's management of vegetation will help lead the state on a path to reduce the risk and severity of wildfires. The California Vegetation Treatment Program Programmatic Environmental Impact Report (CalVTP) is a California Environmental Quality Act (CEQA)-compliant program that would create a streamlined process for communities to engage in prevention projects that would reduce hazardous vegetative fuel conditions and restore ecosystem resiliency. These efforts to spur community action and resiliency will have a material impact in mitigating wildfire risk and the significant environmental impact of extreme wildfire events.

A combination of manmade and natural factors has resulted in drastic increases in economic and societal impacts of wildfires, including the significant loss of life, homes and infrastructure. This crisis requires a statewide strategy. The ability to tier the environmental analysis for these projects off a statewide programmatic environmental impact report (PEIR) would substantially reduce costs to communities and allow them to address hazardous vegetative fuel in a timely manner and potentially reduce catastrophic losses.

O34-4

The CalVTP provides a framework for communities to plan and implement fuel reduction and ecosystem resiliency projects to protect their landscapes from wildfire.

We these issues in mind, the California Professional Firefighters would like to lend its support to the Board of Forestry and Fire Protection in the development of the CalVTP.

Sincerely,



Brian K. Rice, President

cc: Caroline Godkin, Deputy Secretary for Legislation, California Natural Resources Agency
Rhys Williams, Office of Governor Gavin Newsom

California Board of Forestry and Fire Protection
Edith Hannigan, Land Use Planning Program Manager
CalVTP@bof.ca.gov
P.O. Box 944246
Sacramento, CA 94244-2460

Dear Ms. Hannigan,

Thank you for this opportunity to comment on this long-awaited VTP PEIR. We applaud the expanded role of prescribed fire and a valued tool for restoration and maintenance of much of the California wildland landscape. The suggestion that “50%” of the total treatment acres will be prescribed burning is strongly supported by much of the conservation community, especially an efficient “\$150 per acre” cost estimate. The ecologically appropriate and effective use of a key natural process to maintain fuels at reasonable levels, enhance biodiversity as envisioned in the 2018 California Biodiversity Initiative and the “restoration of fire regimes on managed forests” as expressed in the VTP PEIR are commendable. We participated in the development of SB 1260 with its emphasis on expanded prescribed fire use and support Executive Order EO B-52-18 and funding in the 2018 Budget Trailer Bill expanding support for air regulators (monitoring-modeling-messaging) collaboration with fire managers to expand prescribed fire and improved protection for public health. This has been the shared goal of the Fire MOU Partnership, of which I am the co-chair. While the Fire Restoration Group has signed on to the conservation coalition letter, we offer more specific comments on several areas related to prescribed fire, wildfire, air quality, herbicide use, alternatives analysis and cumulative effects analysis.

O35-1

Section-Specific Comments of the CAL FIRE VTP PEIR:

1. Prescribed Fire

A. The characterization of prescribed fire impacts lacks scientifically robust explanation of the causes of unstable forest landscapes (lack of fire resilience) directly related to past and current management and fire suppression. The PEIR should scrutinize language bias and provide positive framing of fire within the range of natural variation for the California landscape as a key natural process—a process that is as old as the piece of geography we call California.

Scientifically defined, natural range of variation of fire, smoke, fire related tree-mortality is a part of the State’s natural history, like rainfall. Rainfall can damage homes, drown people, flood farmland, blow our dam spillways and send significant sediment in important aquatic ecosystems yet we never hear anyone suggest we fight to end rainfall. Over a century of fire suppression and historic fire exclusion coupled with the high-grading and clear-cutting of ecologically important large and old growth fire-resilient trees has fostered one of the greatest ecological tragedies since California statehood. The PEIR should explicitly counter the failure of our shared culture to “get it right” regarding fire’s role in the health, diversity and resilience of the California landscape.

O35-2

California has a strongly fire-promoting climate and strongly fire-associated vegetation. The PEIR, at every turn, should do the best job of educating and reinforcing that California and fire

are inseparable and that the current fire disasters are a result of a century-long misunderstanding of the landscape we live in.

O35-2
cont.

B. Prescribed Fire acres as a percentage (50%) of overall VTP treatments. In the Executive Summary (ES-3) the PEIR states that prescribed fire category includes both “pile burning” and “broadcast burning” within this category. We certainly agree that pile burning (the piling of woody material and burning it) is a fuel treatment, it otherwise has little ecological relevance or comparability to broadcast burning—which is what most people think of when the term prescribed fire is used in an ecological context. The extent that fuels crews cut and pile fuels for pile burning treatments compared to likely acres of broadcast burning should be delineated. The ecological value of broadcast burning has significant, multiple benefits over simple pile-burning. The extent of those benefits should be explained to the public and policy makers. See Silvas-Bellanca, K. 2011; Webster and Halpren 2010 for the broader ecological values of fire restoration. Please provide a clear description of how much ecological broadcast burning will likely occur, as a marker of restored fire for broader ecological benefits, and fully disclosed broadcast burning levels separated from the amount of pile burning in the final document.

O35-3

C. Section 02 Program Description Prescribed Fire in WUI—In Table 2-4, p. 2-19 Likelihood of Implementing Treatment Activities by Fuel Type for each Treatment Type.

While we understand the challenges of living in and burning in WUI designated areas, where I have lived for forty years, the generalization of limited burning opportunities in WUI environments should be driven by site preparation, willing landowners, general community understanding, whether there is a Prescribed Burn Association and/or UC Fire Advisors available to teach support private landowners regarding the planning and safeguards needs to conduct a successful burn. Prescribed fire use in the WUI is particularly useful in maintaining resilience once it is achieved. It is more an issue of capacity and timing and acceptance. People in rural communities’ love to burn and burn all the time—mostly in piles, but that is changing. Let’s not discourage prescribed fire in the WUI.

O35-4

D. Prescribed fire utility p. 2-21

The PEIR misstates the focus and utility of prescribed fire as targeting “ground and litter fuels”. It is commonly understood that prescribed fire is particularly useful in limiting both surface and ladder fuels and creating height-to-live-crown separation in forest stands, limiting fires ability to reach the overstory canopy. Using prescribed fire to reach the range of fire outcomes consistent with the known fire regime (generally low and mixed severity fire) is valid but is constrained by fire crew availability and lack of experience (social problems that can be remedied) but is clearly consistent with landscape fire need and the best available science.

O35-5

II. Air Quality page ES 4

Impact AQ 6—“Expose people to objectional odors from smoke during prescribed burning” should be struck as arbitrary and too value laden. People regularly seek out and enjoy campfire smoke to barbeque smoke and some of us actually enjoy smoke from prescribed burns because it

O35-6

is a sign that fire managers are doing good fire restoration work which is a beneficial impact. The only way that increases in toxic pollutants and odors will increase with certainty is if we don't do more planned burning.

O35-6
cont.

III. Characterization of Alternative D – No Prescribed Fire

There are several flaws in the Alternative D description. The first of which is the failure to describe the key role of prescribed fire in reducing surface and ladder fuels—the key element that drives fire behavior in many California forests. Second, fire's role in California as a key ecological process that provides for biodiversity, wildlife habitat, resilience to disturbance, nutrient cycling, etc. defines the natural history of California—it is not an option we get to pick and choose . . . it is an ecological reality, like precipitation is an ecological reality. Third, although prescribed fire produces smoke, the absence of prescribed fire will mean much more smoke from unplanned events during the time of year when we least want it. Forth, the PEIR fails to recognize that Native Californians have been managing their natural resources with extensive fire use for thousands of years and consider themselves part of the ecosystem they live within whereas western Europeans mistakenly think of themselves (in general) as living outside of nature. We have paid a serious social, ecological and economic price for that backwards thinking. In Scott Stephen's (UC Berkeley Fire Science Professor) recent fire TED Talk <https://www.youtube.com/watch?v=2r7JI6zVwf0> he offered that roughly half the historic fire levels were attributable to Native Californian's use of fire. This is over a timeframe that shaped California's vegetation types and their association with fire. Finally, given climate and fire trends in California with larger scale, uncharacteristic wildfire on the increase, the emissions which result from these fire trends are also uncharacteristic and have huge impacts on human health (Long et al. 2017).

O35-7

O35-8

O35-9

O35-10

Even though the CAL FIRE VTP PEIR acknowledges the value of prescribed fire and included prescribed fire in the proposed program of work, as directed by recent law and policy described in the PEIR, the development of a no prescribed burn alternative is a flawed and unfeasible construction since the effort to avoid negative public health effects from burning will be defeated and significantly exacerbated by expanding wildfire trends and mega-emissions that do greater damage to public health. There is No-No Fire Option in California.

We recommend that you abandon this alternative and explain to the public and whomever offered the--no prescribed fire idea--as a possibility that CEQA, fire scientists, fire policy experts and 30 years of fire science research and the historic evidence of fire in California's natural history make the idea of a no prescribed burning unfeasible on its face. The fact that humans light, or can not light, a prescribed burn offers nothing to mitigate the impact of smoke in the air in California. Wildfire emissions (the harm) will grow, not lessen with a No Prescribed Fire Alternative. The PEIR at page ES 6 is incorrect to suggest Alt D could be the environmentally preferable alterative because of "avoided short-term smoke impacts from prescribed burning" when the likely outcome of no prescribed fire would be significantly exacerbated short and longer-term smoke impacts from expanding, unplanned wildfire.

O35-11

IV. Herbicide Use in the VTP.

We are generally opposed to chemical herbicides in forest management and are strongly opposed to the blanket use of chemical herbicides in “brown and burn” spraying prior to prescribed fire use (program description 2-20). Burns can be timed in dry periods and when shrubs have “needle drape” to increase flammability. The State of California should take Glyphosate off the acceptable use list (page 2-26) based on its recent listing as a potential carcinogen and the massive level of litigation in play in California. Workers should not be exposed to regular use of this chemical and Californian’s should not be exposed to the liability.

O35-12

We can accept the limited use of some chemical herbicides to attempt to halt invasive plant invasions as long as the long-term goal it to re-establish fire (not chemicals) as the primary maintenance tool and the source pathway of future plant invasions is addressed.

V. Visual Impacts 3.2-17

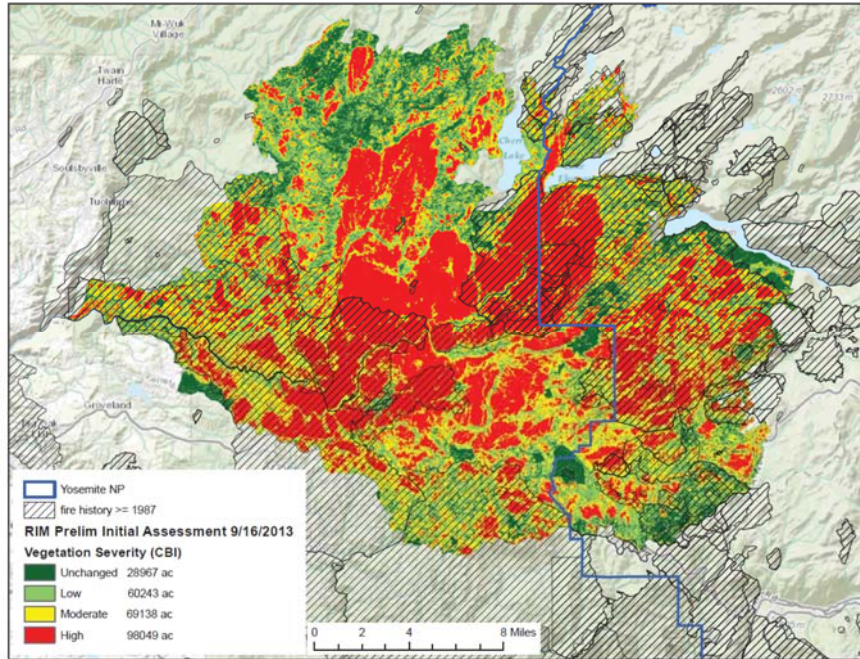
Please explain the values scoring you are embracing is the characterization at 3.2-17 which suggests that “prescribed burning could temporarily degrade the visual character and quality of an area”? This is a value judgement that should be removed from the document. Many Californians who understand the natural history of the State are overjoyed to see blackened acres from prescribed burning. How does good restoration work that re-establishes natural fire “degrade the visual character and quality of an area? This is laden with cultural bias and should be removed from this analysis.

O35-13

VI. Environmental Setting

In Table 3.17-1 at page 3.17-2 of the largest fire is California it would be much more accurate to define the number of acres of uncharacteristic, damaging wildlife within each of these listed burns in Table 3.17-1 and not generalize. There were many damaging acres and many beneficial (within NRV) acres in these fires on the list. For example, the 2013 Rim Fire Burn Severity Maps show roughly 160,000 acres were classified as unchanged, low or moderate severity out of 257,000 acres that burned. When discussing past fires, it would be a good educational tool, and more transparent, to list the fire effects by severity class and not just generalize about the total acres and not mention that many of the acres were beneficial, and some not.

O35-14



O35-14
 cont.

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References

Silvas-Bellanca, K. 2011. Ecological burning in the Sierra Nevada

<https://www.sierraforestlegacy.org/Resources/Conservation/FireForestEcology/FireScienceResearch/FuelsManagement/FM-SFLFireWhitePaper2011.pdf>

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Webster, K.M., and Halpren, C. B., 2010. Long term vegetation responses to reintroduction and repeated use of fire on mixed-conifer forests in the Sierra Nevada. *Ecosphere* Vol.1(5)

California Native Plant Society

Los Angeles / Santa Monica Mountains Chapter
3908 Mandeville Canyon Road
Los Angeles, California 90049

Board of Forestry and Fire Protection
Attn: CalVTP
Room 1506-12
1416 9th Street,
Sacramento, California 95814

RE: Comments on Draft PEIR Proposed Statewide Vegetation Treatment Program (CalVTP draft PEIR),
State Clearing House No. 2019012052

Dear Sirs:

The Los Angeles / Santa Monica Mountains Chapter of the California Native Plant Society (CNPS) has commented on previous drafts of the CalVTP. We are very concerned about the effects of climate change, especially in southern California and in our biodiverse shrublands.

O36-1

The methods of vegetation treatment described in this CalVTP draft PEIR seem more detrimental than beneficial when applied to complex ecosystems such as chaparral and shrublands.

1. Appendix PD-2: Example Burn Plan: Specific Resource Review questions:

a. Throughout this Burn Plan, under Mitigations, the response to questions about the effects of treatments that might affect streams, ponds, wetlands or watersheds is: “There is an existing buffer strip of vegetation between the project site and the water feature (water course or spring, wetland, etc.)”

O36-2

What kind of vegetation? Non-native? Tree? Shrubs? Annuals? Grass? Lichens?

How wide is this buffer strip? Wide enough to stop earth slippage or falling debris like dead wood or rocks?

THIS UNDEFINED REQUIREMENT IS NOT A MITIGATION..

b. Throughout this Burn Plan under Mitigations, questions about removal or destruction of vegetation or vegetative cover causing increased water turbidity or erosion/soil disturbance, or burning in different times of the year cause possible low regeneration rates of native plants, or loss of wildlife habitat, damage to oak woodlands are all to be mitigated by “seeding herbaceous plants” or “seeding large forbs”,seeded with a variety of forbs”, “drill-seeded with herbaceous species”. NOT ONCE DOES A MITIGATION SPECIFY “habitat-appropriate native plants”.

O36-3

THIS IS NOT A MITIGATION FOR DAMAGE TO TREATABLE NATURAL AREAS.

Chaparral, sage scrub and other shrubland habitats in southern California are active year-round. There are always plants germinating, flowering, fruiting/producing nuts. As the result there is an amazing variety of animals, i.e. mammals of all sizes and species, birds both migratory and local, hundreds of insect species and thousands of plant species. Because of our climate, where there is no snow, there is busy life. The use of prescribed burning is not the best treatment for these since it will always damage healthy shrubland habitat.

O36-4

2. Executive Summary

a. Program Objectives (3): Various legislative bills and regulations have been introduced in a rush to save areas in California from a possible future of more unpredictable climate-change wildfires. It seems counter-intuitive for CalFire to increase prescribed burning as a remedy. As usual, the very complexity of California's human history, topography, geology, range of biodiversity and range of microclimates does not make this plan of prescribed burning feasible.

O36-5

b. Program Objectives (5): "Improve ecosystem health in fire-adapted habitats by safely mimicking the effects of a natural fire regime, considering historic fire return intervals, climate change, and land use constraints." How will CalFire do this in a time of climate change that in any one year may completely alter weather patterns that affect the "historic" growth and life patterns of native plants and animals? Watching chaparral, I note a shift in plant growth rates and in which species are adapting better than other species to the climate changing. The native habitat is already evolving, adjusting habitat parameters and each plant species' place in the new habitat. IT WILL NOT IMPROVE ECOSYSTEM HEALTH TO GO BACK. HUMAN LAND USE HAS ALREADY CHANGED FIRE RETURN INTERVALS. THIS OBJECTIVE IS ANOTHER EXCUSE TO BURN. IT DOES NOT APPLY TO SHRUBLAND HABITATS. DOES IT APPLY TO CONIFERS?

O36-6

c. Proposed Vegetation Treatments: Ecological Restoration: This restoration does not have to be "Generally outside of the WUI in areas that have departed from the natural fire regime as a result of fire exclusion--". At least, not in chaparral or sage scrub habitat. These shrublands have a wide range of plants, each with different adaptabilities. All one needs is a botanist and informed nursery staff person to establish a healthy resilient landscape in the WUI. However, prescribed burning will not work in this situation. Either manual treatment or, perhaps, prescribed herbivory would be sufficient.

O36-7

d. Environmental Impacts and Proposed Mitigation Measures

1, Significant and Unavoidable Impacts: Impacts Forecasted to Be Less Than Significant or Beneficial, But Noted as Potentially Significant and Unavoidable Because of Future Uncertainties:

O36-8

Please take Impacts AQ-1, AQ-4, AQ-6, BIO-2 CUL-3, GHG-2, TRAN-3, UTIL-2 and put them back under SIGNIFICANT AND UNAVOIDABLE IMPACTS. You know they are going to happen,

e. Environmentally Superior Alternative: Alternative D seems to be the most beneficial of the suggested alternatives.

O36-9

f. Environmental Impacts and Mitigation Measures: Impact AQ-1: Generate Emissions of Criteria Air Pollutants and Precursors during Treatment Activities that Would Exceed CAAQS or NAAQS and Conflict with Regional Air Quality Plans.

Treatment Activity:

"The vegetative debris produced by mechanical or manual treatments may be processed into several products: electricity, soil additives and amendments, engineered/composite wood, firewood, paper, densified wood and potentially biofuels. This could result in additional haul truck trips to processing facilities...."

O36-10

This statement ignores the fact that there are a number of vegetative debris processors that are in mobile tanks and can be set up at the vegetation treatment site. At least one of these technologies digests wood chips and produces biofuel, without emitting carbon or methane. Check with the Los Angeles County Integrated Waste Management Task Force, Alternative Technologies Subcommittee. Using these technologies will cut down on emissions from operations and delivery of products,

About the maps:

Because of the small scale, it is difficult to define significant areas, especially in Los Angeles County. However It appears that you might have included the Palmdale Landfill (garbage dump) in your treatable landscapes. The landfill lies along the San Andreas Fault. It should not be considered a part of your treatable landscapes.

O36-11

3.6 Biological Resources: Chaparral and Coastal Sage Scrub:

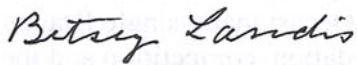
There are some very interesting tables of average fire intervals for various chaparral and coastal sage scrub habitats in Chapter 3. Those tables show the futility of trying to return to those often very long fire intervals. The surviving plant species have been adapting since agricultural land use and widespread development arrived in southern California along with invasive plants, air pollution, and subsequent conversion of their habitats. These plants tie our mountains, valleys and coasts together, nurturing soil organisms, insects of many species (local and migratory), mammals from the tiniest shrew to the mountain lion, birds of many genera from ground dwellers, to birds of prey and many migratory visitors.

O36-12

There are ways to sustain this rich biodiversity without the destructive use of fire.

Thank you for the opportunity to provide comments.

Sincerely,



Betsey Landis
Conservation Committee
Los Angeles / Santa Monica Mountains Chapter
California Native Plant Society

Board of Forestry and Fire Protection
Attn: CalVTP
PO Box 944246
Sacramento, CA 94244-2460

To the California Department of Forestry and Fire Protection:

On behalf of the American Forest Foundation, the leading advocates for America's family forest owners and their woodlands, we support the California Department of Forestry and Fire Protection's proposed California Vegetation Treatment Program and its Program Environmental Impact Report. We believe the program is an effective way to respond to the wildfire crisis, playing a critical role in addressing forest owner challenges. By implementing wildland fire prevention activities, such as removal of hazardous fuels and vegetation treatment we will be able to prevent future disaster.

O37-1

We strongly support the Board of Forestry and Fire Protections efforts on this project and look forward to working together to reduce wildfire risk across California.

Sincerely,



Rita Hite

American Forest Foundation Executive Vice-President