

E. EXECUTIVE SUMMARY

E.1 INTRODUCTION

The California State Board of Forestry and Fire Protection (Board) proposes to initiate the Vegetation Treatment Program (VTP). The VTP is part of a comprehensive fire prevention strategy from the Board (Board, 2010) that is implemented by the Department of Forestry and Fire Protection (CAL FIRE). Under the VTP, the Department of Forestry and Fire Protection (CAL FIRE) will implement strategic vegetation management activities as part of their mission to safeguard the people and protect the property and resources of California from the hazards associated with wildfire. This Program Environmental Impact Report (PEIR) analyzes the potential environmental impacts that may occur from undertaking the VTP, and identifies programmatic level limitations and mitigation measures that will minimize those impacts.

This PEIR has been prepared according to the State CEQA Guidelines (California Code of Regulations (CCR) Section 15168). CEQA allows a lead agency, in this case the Board, to prepare a PEIR to analyze the environmental impacts from a series of actions that can be characterized as one large project and are related to the issuance of general criteria to govern the conduct of a continuing program, or individual activities with similar scope or effects. The 2010 Strategic Fire Plan contains seven goals (see Chapter 1.5.1) that are meant to establish a natural environment and human-made assets that are more resilient to wildfire (Board, 2010). Under the goals of the Strategic Fire Plan and their statutory responsibility to establish policy for wildland resources in the State Responsibility Area (SRA), the Board proposes this statewide program for the utilization of vegetation treatment activities to achieve these goals. Analyzing the environmental effects of the proposed VTP through the use of a PEIR allows the Board to more exhaustively consider the environmental impacts than would be practical or possible in separate project level EIRs and ensures consideration of cumulative impacts that might be missed in a project-by-project analysis.

E.2 PURPOSE AND NEED FOR THE VTP

In a national-scale assessment, California was found to have three times the magnitude of wildfire-related risk for the most highly valued human and ecological resources (moderate to high density housing and municipal watersheds) than the next highest geographic area (Thompson et al., 2011). Risk due to wildfire is most acute in the wildland-urban interface (WUI), where housing losses have increased significantly during

the past three decades (Stephens et al., 2009b). In some forested portions of California, fire suppression has created an accumulation of wildland fuels with resultant increases in fire hazard. Wildfire acreage in California increases with prolonged drought and extreme weather conditions (e.g., Santa Ana winds), and the amount of housing within the highest wildfire hazard severity zone (very high) is expected to grow from 640,000 units to over 1.2 million units by 2050 (Mann, 2014). This combination of manmade and natural factors has led to a situation where wildfire acreage, fire suppression costs,¹ and losses of residential structures have increased dramatically in the past three decades.

The impacts of climate change suggest a continuing and even accelerated risk from wildfire. Climate change scenarios suggest more frequent droughts (Diffenbaugh et al., 2015) and higher fire severity in some portions of the state (Fried et al., 2004). Increasing temperature has implications for vegetation distribution which may further increase future fire extent and fire intensity (Lenihan et al., 2003). Some ecosystems may not be able to adapt fast enough to increasing drought stress, resulting in large scale mortality from insects, fire, or disease (Grant et al., 2013). Increased fire extent, intensity, and severity can affect aquatic habitats (Bisson et al., 2003) and/or water quality (Ice et al., 2004). These future climate scenarios combined with continuing projections of residential growth into the wildland (Mann et al., 2014) suggest that existing wildfire-related problems are poised to become even larger in the near future.

At the APEC Transportation and Energy Ministerial Conference in 2011, Governor Brown stated:

It's time for courage, it's time for creativity and it's time for boldness to tackle climate change...The risk is real, the cost is huge and growing, and therefore taking a sequence of realistic steps just makes sense, and that's what we're going to do in California.

In a memorandum issued September 12, 2017, Secretary of the Interior Ryan Zinke addressed the issue of increased fire activity:

It is well settled that the steady accumulation of vegetation in areas that have historically burned at frequent intervals exacerbates fuel conditions and often leads to larger and higher-intensity fires. These fires are more damaging, more costly, and threaten the safety and security of both the public and firefighters. In recent fire reviews, I have heard this described as "a new normal." However, that does not mean that we should continue to address our challenges in the same ways that we have in the past. (USDOJ, 2017).

¹ CAL FIRE statistics indicate an exponential, more than six-fold increase in emergency fund fire suppression expenditures since 1979 after adjusting for inflation (CAL FIRE Emergency Fund Fire Suppression Expenditures, September 2014).

Although specifically discussing fuel reduction on federal land, Secretary Zinke's larger point applies to an environmental problem of a magnitude that goes beyond jurisdictional boundaries and requires a statewide strategy. The mission of the Board and CAL FIRE is to serve and safeguard the people and protect the property and resources of California (Board, 2010). An overarching goal of vegetation treatments is to restore fire-resilient ecosystems in order to alter fire behavior and reduce harmful effects of wildfire. However, California displays astonishing diversity in plant, animal, and social systems. Without proper design, the statewide planning and implementation of vegetation treatments can potentially come with significant environmental costs. To this end, the VTP PEIR lays out a framework for accomplishing the life and property protection and the ecological integrity goals of the Board and CAL FIRE in a manner that minimizes environmental impacts.

E.3 CONCEPTUAL BASIS OF THE VTP

CAL FIRE will implement the VTP with the intent of lowering the risk of damaging wildfire in the SRA by utilizing environmentally appropriate vegetation treatments. Subsequent activities under the VTP will only be implemented in the SRA where the VTP objectives may best be achieved. These objectives are:

1. Modify wildland fire behavior to help reduce losses to life, property, and natural resources.
2. Increase the opportunities for altering or influencing the size, intensity, shape, and direction of wildfires within the wildland urban interface.
3. Reduce the potential size and total associated suppression costs of individual wildland fires by altering the continuity of wildland fuels.
4. Reduce 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.
5. Provide a consistent, accountable, and transparent process for vegetation treatment monitoring that is responsive to the objectives, priorities, and concerns of landowners, local, state, and federal governments, and other stakeholders.

The first objective is the governing goal of the program, and recognizes the link between fuels management, fire behavior, and fire effects. Modifying fuels influences fire behavior by reducing rate of spread and decreasing fire line intensity (i.e., heat release). This increases firefighter safety and the ability of firefighters to suppress or manage a fire. 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.

Objectives two through four are related to the problem statement expressed in the previous section (E.2), and provide more specific links to values at risk and cost considerations. To attain these objectives at the state-wide scale, the VTP organizes subsequent activities into three general treatment types:

- Wildland-Urban Interface (WUI): treatments will be focused in WUI-designated areas, and generally consist of fuel reduction to prevent the spread of fire between wildlands and structures, or vice versa.
- Fuel Breaks: strategically placed vegetation treatments that actively support fire control activities.
- Ecological Restoration: vegetation treatments will generally occur outside the WUI in areas that have departed from the natural fire regime as a result of fire exclusion. Ecological restoration treatments will focus on restoring ecosystem resiliency by moderating uncharacteristic wildland fuel conditions to reflect historic vegetative composition and structure, including cultural landscapes.

This program focuses activities in strategic areas to support the Board and CAL FIRE's mission to protect life, property, and natural resources by evaluating vegetation formations, expected fire behavior, values at risk, and treatment types to determine the most appropriate activity for that area. Further discussion of the VTP's conceptual basis is contained in Chapter 2.

Objective five promotes a consistent and collaborative process for identifying vegetation treatments that meet the objectives of the VTP while avoiding significant environmental effects. An example of this would include working with private rangeland owners to meet the objectives of fuel hazard reduction while simultaneously improving forage production. This objective leads to the integration of the VTP with broader, multi-jurisdictional and multi-stakeholder fuel reduction efforts. Finally, it recognizes that project planning and implementation is best served through open communication with stakeholders and the public.

E.4 VEGETATION TREATMENT PROGRAM

The VTP allows for the implementation of specific vegetation treatment activities at appropriate locations and scales to meet program objectives for fire prevention, fire protection, and/or ecological restoration. Activities analyzed in and covered under the VTP PEIR include: prescribed fire, manual activities (i.e., hand crew work), mechanical

activities, prescribed herbivory (targeted beneficial grazing), and targeted ground application of herbicides. These activities will be used singularly or in combination depending upon the treatment type and environmental considerations.

Vegetation treatment activities will be implemented primarily on privately owned land within the SRA, and only on a voluntary basis. While CAL FIRE will serve as the CEQA lead agency in most circumstances, VTP subsequent activities can be identified, funded (partially or fully), and implemented by private landowners, Fire Safe Councils, other public agencies, or non-profit groups. In these situations, the implementing entity will typically enter into a contract or agreement with CAL FIRE.

The first step in the implementation process will be for each of CAL FIRE's Units or Contract Counties to identify and include proposed vegetation treatment activities consistent with the VTP during their annual update of the Unit Fire Management Plans (Unit Fire Plans) or Contract County Strategic Fire Plans. The CAL FIRE Unit/Contract County staff will coordinate with stakeholders and agencies to identify vegetation treatment strategies best suited to meet local priorities, funding limitations, and VTP objectives. These strategic plans identify areas for fire prevention activities based on local conditions including values at risk, topography, predominant weather patterns, vegetation characteristics, likelihood of ignition sources, and response times. By incorporating proposed VTP subsequent activities into the Unit Fire Plans, the proposed subsequent activity would be appropriately linked to comprehensively planned fire prevention activities within the Unit/Contract County's jurisdiction.

Once a Unit Fire Plan/Contract County Strategic Fire Plan has identified potential VTP subsequent activities, the CAL FIRE Unit/Contract County staff and the project coordinator will begin the evaluation process by completing the VTP Project Scale Analysis (PSA) together (see Chapter 7). The purpose of the PSA is to determine whether the environmental effects of the proposed activity are addressed in this PEIR and whether the treatment can be implemented as a subsequent activity under this PEIR, or if additional environmental documentation is required. The PSA requires CAL FIRE to consider whether all applicable standard project requirements and mitigation measures identified in the PEIR have been incorporated into the activity. Standard project requirements (SPR) are mandatory elements for every subsequent activity within the VTP and represent a collection of standard operating procedures, Best Management Practices, and known regulatory requirements related to subsequent activity implementation and oversight that help protect the environment. Mitigation measures are prescriptive or procedural-based management practices (e.g., consultation with trustee agencies on resources of concern such as endangered species) that reduce or avoid potential environmental impacts.

Once a PSA and all supporting documentation is complete, the subsequent activity will be evaluated for approval at three levels: local CAL FIRE Unit/Contract County, CAL FIRE Region, and Sacramento State CEQA Coordinator levels. The subsequent activity will be approved under the VTP only if it is consistent with this PEIR and all applicable VTP requirements and mitigation measures have been included. Any applicable requirements and mitigation measures are incorporated into the subsequent activity contract requirements for implementation.

CEQA compliance and implementation will be coordinated through local CAL FIRE Units/Contract Counties. Follow-up effectiveness monitoring and reporting are also required elements of the VTP. A more formal cooperative adaptive management process is a long-term goal of the VTP. Additional details regarding the process for implementing the VTP are found in Chapter 2 and more information regarding monitoring, adaptive management, and program communication is in Appendix I.

E.5 GEOGRAPHIC SCOPE OF THE VTP

Nearly all VTP subsequent activities will occur on privately owned lands. Of the over 101 million acres of land in California, approximately 31 million acres fall within CAL FIRE's 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. However, the VTP is not an appropriate tool for all of the vegetation types in the SRA. The total land area where the tree, grass, or shrub-dominated vegetation formation types are appropriate for a WUI, fuel break, or ecological restoration treatment is approximately 23 million acres, or 71 percent of the SRA. This land is called the "treatable acreage" or "treatable landscape." It should be clear that **not all 23 million acres will be treated under the VTP**. This program anticipates that **on an annual basis 60,000 acres will be treated** via approximately 230 subsequent activities of 260 acres each. This proposed level of activity would treat approximately 0.2 percent of the SRA annually, or two percent of the SRA over a 10-year period.

Approximately 49 percent of the treatable acres are appropriate for the WUI treatment type, with the majority of those acres in the Sierra Nevada and Klamath/North Coast bioregions. Fuel breaks account for 18% of the treatments, making up the smallest proportion of treatments. This is because fuel breaks are narrower and generally located along topographic ridgelines or roads. Ecological restoration accounts for approximately 34 percent of the treatable acres; most of the ecological restoration acreage appears in the Klamath/North Coast, Modoc, and Sierra Nevada bioregions. See Chapters 2.2.2 and 4.1.5 for specific information on the development of treatment types.

The above numbers are the basis for the environmental analysis presented in this PEIR. However, the actual acres treated annually in any portion of California will vary year-to-year based on several factors, such as the availability of cooperating landowners, funding, extended fire seasons, regional or statewide seasonal burning suspensions, crew and equipment availability, unfavorable weather conditions, and access constraints. If the acreage proposed for treatment in a bioregion exceeds 110 percent of the projected yearly average for the bioregion, further subsequent activity level analysis would be required to ensure that significant environmental effects do not occur. This determination will be made by the CAL FIRE Sacramento CEQA Coordinator. Additional details about the scope of the VTP are found in Chapters 2.3, 3.4, and 4.1.

E.6 ALTERNATIVES ANALYZED

The following Program alternatives were developed for analysis:

No Project – This alternative is required by CEQA. If CAL FIRE took no further action, existing vegetation treatment programs, such as the Vegetation Management Program (VMP) and California Forest Improvement Program (CFIP), would continue to operate using their previously approved EIRs and departmental procedures to satisfy CEQA requirements. This alternative applies to an existing landscape that is larger than the landscape in the proposed program, since “No Project” applies to the entire SRA (i.e., approximately 31 million acres). This alternative would continue to treat approximately 30,000 acres annually.

Proposed Program – The proposed VTP limits vegetation treatment efforts to areas within the SRA where assets, both urban and natural, are at greatest risk from wildland fire. Treatment activities would be limited to three general types, which include WUI protection, fuel break installation and maintenance, and enhancing fire resiliency through ecological restoration. The available landscape to treat (approximately 23 million acres) would be smaller than the “No Project” alternative because the scope is limited to areas that qualify for one or more of the specified categories and vegetation types. The proposed program proposes treating 60,000 acres annually.

Alternative A: WUI Only – The WUI Only alternative focuses on vegetation treatments planned specifically to protect assets within the WUI. Vegetation treatments would primarily consist of community and infrastructure protection, establishing safe areas of refuge, and enhancing vegetation clearance proximate to structures. Vegetation management priorities and ecological restoration opportunities outside of the WUI would not be included under this proposed alternative. Wildland fire control success outside the WUI would rely primarily on initial attack and extended attack resources without the strategic benefit of pre-treated fuels or newly constructed/maintained fuel breaks. The

evaluation process, analysis procedures, treatment options, and mitigations would be the same as those for the proposed program. The treatable acreage would be approximately 10 million acres and the projected average annual treatment acreage would be 60,000 acres.

Alternative B: WUI and Fuel Breaks – In addition to vegetation treatment efforts designed specifically to protect values within the WUI, fuel breaks would also be maintained or installed in favorable topographic locations to aid in wildland fire control efforts outside of the WUI. The evaluation process, analysis procedures, treatment options, and mitigations would be the same as those for the proposed program. At 14 million acres, the treatable acreage would be significantly larger than the “WUI Only” Alternative A due to the addition of fuel break-appropriate landscapes; however, it would remain less than the area for the proposed program. This alternative would also treat 60,000 acres annually.

Alternative C: Very High Fire Hazard Severity Zone – CAL FIRE is mandated by Public Resources Code § 4201-4204 and Government Code § 51175-89 to identify fire hazard severity zones statewide. These zones reflect areas of significant fire hazard based on fuels, terrain, weather, and other relevant factors. To reduce the wildland fire threat in high hazard areas, fuel treatments under Alternative C would focus specifically on areas that are classified as a “Very High Fire Hazard Severity Zone.” The evaluation process, analysis procedures, treatment options, and mitigations would be the same as those for the proposed program. This alternative has 11.7 million treatable acres and is projected to treat 60,000 acres annually.

Alternative D: Treatments that Minimize Potential Impacts to Air Quality – Alternative D has limitations on the number of acres that could be treated with prescribed fire to reduce the potential health and environmental impacts from poor air quality. In this alternative, prescribed fire use would be considerably limited; however, some of those acres could be treated with hand or mechanical treatments. Overall, the landscape available for treatment with this alternative is the same as that for the proposed program, but the projected treated acres are fewer at 36,000 acres annually.

The proposed program would meet the objectives established for the VTP (see E.3) to a greater degree than the alternatives and No Project (Status Quo) options. Specific details about each alternative and the environmental impacts associated with each alternative can be found in Chapters 3 Alternatives Analysis, 4 Affected Environment, Effects, and Mitigations, and 5 Cumulative Impacts Analysis.

E.7 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

This PEIR evaluates the full range of potential environmental impacts identified in Appendix G of the CEQA Guidelines (Table ES-1). These impacts are discussed throughout Chapter 4, which identifies the Environmental Setting, Environmental Impacts, and Mitigation Measures for each resource of concern listed in Table ES-1 below. If a proposed subsequent activity would have effects not examined in this PEIR, further environmental documentation would have to be prepared to determine if the subsequent activity should be disqualified from approval under the VTP and if would have to be abandoned, re-designed, or use an alternative CEQA process (e.g., supplemental EIR) to proceed. This approach to limiting environmental impacts will preclude the creation of new significant impacts or considerable contributions to existing environmental problems. The determination of environmental impacts assumes projects will properly implement all standard project requirements.

Table ES-1. The environmental impacts to resources from implementing the proposed program. “NM” indicates no mitigation measures required.

| Resource of Concern | Significant and Unavoidable | Less than Significant with Mitigation Measures | Less than Significant | Significance and Threshold Criteria | Mitigation |
|--|-----------------------------|--|-----------------------|-------------------------------------|----------------|
| Aesthetics and Visual Resources | | | X | 4.2.2.1 | NM |
| Air Quality | | X | | 4.3.2.1 | 4.3.3 |
| Archeological, Cultural & Historic Resources | | X | | 4.4.2.1 | 4.4.3 |
| Biological Resources | | X | | 4.5.2.1 | 4.5.3 |
| Climate Change/Greenhouse Gas | | X | | 4.6.2.1 | 4.6.3 |
| Geology, Hydrology, Minerals and Soils | | X | | 4.7.2.1 | 4.7.3 5.5.6 |
| Hazardous Material, Public Health and Safety | | X | | 4.8.2.1 | 4.8.3 |
| Noise | | X | | 4.9.2.1 | 4.9.3 |
| Population, Employment, Land Use, Housing, & Socio-Economic Well-Being | | | X | 4.10.2.1 | NM |
| Recreation | | | X | 4.11.2.1 | NM |
| Transportation and Traffic | | X | | 4.12.2.1 | 4.12.3 |
| Utilities and Energy | | | X | 4.13.2.1 | NM |
| Water Quality | | X | | 4.14.2.1 | 4.14.3 |

E.8 CUMULATIVE EFFECTS SUMMARY

One mitigation measure was derived in the cumulative effects analysis which sets a limit on potential fuel treatment activities that can occur in a CalWater Planning Watershed over a 10-year timeframe (MM HYD-10). Exceeding the limit defined by mitigation measure HYD-10 will exclude the subsequent activity from coverage under this VTP PEIR. However, supplemental CEQA analysis may be undertaken for the project to proceed. By implementing the SPRs and mitigation measures derived in Chapters 4 and 5, the potential for significant cumulative impacts from the VTP will be less than significant.

E.9 SIGNIFICANT AND UNAVOIDABLE ENVIRONMENTAL IMPACTS

No reasonably foreseeable significant irreversible environmental changes have been identified that would result from implementation of the VTP or the identified alternatives. The VTP is projected to treat 0.2 percent of the SRA per year, or 2 percent of the SRA in a 10-year planning horizon. This relatively small spatial footprint along with a robust suite of implementation requirements and mitigation measures will make irreversible damage from environmental impacts of the VTP unlikely.

E.10 AREAS OF KNOWN CONTROVERSY

Section 15123(b) of the State CEQA Guidelines requires that an EIR identify areas of controversy known to the lead agency, including issues raised by agencies and the public. The following are areas of controversy known to CAL FIRE:

- Air quality impacts from prescribed burning
- Cumulative impacts to chaparral communities from program treatments and wildfires
- Impacts to water quality, biological resources, and human health
- Impacts to geological features and soil erosion
- Inclusion of herbicide applications as a program activity
- Introduction or spread of invasive plants
- Potential for loss of life, property, and resource values due to escaped prescribed fire
- Impact to climate change and greenhouse gases
- Ability to address the ecological and social complexities of the state in a single program

- Impacts to cultural resources

These areas of known controversy are addressed through the implementation of the SPRs, PSRs, and mitigation measures outlined in Chapters 2 and 4.

E.11 SUMMARY

The Board recognizes the necessity for CAL FIRE and its cooperators to implement a vegetation treatments to fulfill its mission to safeguard the people and protect the property and resources of California. The VTP provides a framework for prioritizing, planning, implementing, and monitoring fuel treatments across the SRA. This PEIR discloses to interested parties the scope of the VTP, potential foreseeable environmental impacts from implementing the VTP, and the proposed project limitations and mitigations designed to lessen or avoid environmental impacts. Through project monitoring and participation in adaptive management processes, it is anticipated that the VTP will be able to incorporate emerging science and the changing needs of the State as the program matures.