



Midpeninsula Regional
Open Space District

Memorandum

DATE: May 4, 2020

MEMO TO: MROSD Board of Directors

THROUGH: Ana M. Ruiz, General Manager

FROM: Coty Sifuentes-Winter, Senior Resource Management Specialist

SUBJECT: Wildland Fire Resiliency Program Study Session Follow-up

On April 8, 2020, staff provided to the Board of Directors (Board) an overview on the scope of the proposed Wildland Fire Resiliency Program (Program), which includes the following elements: Vegetation Management Plan (VMP), Prescribed Fire Plan, Wildland Fire Pre-Plan and Resource Advisor Maps, and Monitoring Plan ([R-20-08](#)). Staff received comments, questions, and requests for additional information from the Board and the public at the meeting.

This memorandum provides responses to additional information that was requested by the Board and addresses public comments received at that meeting. In addition, further public comment has been received and is included below. Questions and responses are grouped by subject matter.

SUBJECT: POLICY

Question/Comment P-1: What is meant by changes to the landscape and how are these changes addressed?



Figure 1: An area in Marin County before and after ladder fuel removal.

The clearing and removal of ladder fuels and the creation of various types of fuelbreaks can result in visual changes. The Environmental Impact Report (EIR) will provide before and after photographs of areas that have received different levels of fuel treatment, including the creation of non-shaded fuelbreaks, shaded fuelbreaks, defensible space, and less intensive fuels work in Fuel Reduction Areas for ecosystem health.



Figure 1: A visual simulation of a more involved thinning effort for vegetation management (taken from the UCSF Mount Sutro Reserve Final EIR)

Question/Comment P-2: CAL FIRE is concerned with the “let burn” program, given their previous comments.

The comment appears to be referring to a brief description in Chapter 5: Prescribed Fire Plan, that describes “prescribed natural fire.” The details of such a program or policy are only conceptual at this time and from the discussion in the plan, would only be applicable under limited circumstances. It is not a “let it burn” program. If there are designated natural areas where there is a resource benefit to fire, suppression efforts may actually be aided by allowing fire to burn because it allows firefighters to make tactical decisions, such as lighting backfires or choosing a better location for a dozer line. Limited equipment, aircraft, and crews can be deployed to stop the fire at the best locations to protect public safety as the priority. Such a policy would never dictate suppression tactics but only identify areas that do not require protection from the effects of fire. The details of such a policy would need to be developed further in the detailed Prescribed Burn Plan to be prepared in 2021.

Subject: Natural Resources

Question/Comment NR-1: What is the status of Sudden Oak Death and how does it impact fire risk?

Midpen has partnered with the UC Berkeley Forest Pathology lab for numerous years to conduct Sudden Oak Death (SOD) Blitzes in order to map the extent of SOD infection within Midpen lands and the greater region. Citizen Scientists are trained to identify possible SOD-infected trees and take samples that are then DNA tested for the SOD pathogen. The data provided is then analyzed by Natural Resource staff to determine the scale, residence time, and locations of infestation. Staff provide updates to the Board on the status of the disease on Midpen lands; the last update was in 2016 ([R-16-06](#)). SOD is prevalent on many Midpen preserves and has left numerous standing dead trees; approximately 25 percent of all parcels owned in fee have presence of SOD. In particular, tan oaks have been hard hit.

Research into the effects of SOD on forest fire behavior and risk is continuing to evolve. Studies show various degrees of SOD on fire behavior. Recent studies are showing that diseased, but still alive trees, have a significant decrease in moisture content, increasing risk of hotter fires. In addition, standing dead trees, resulting from more recent SOD infection in a forest, create a larger fire risk through an increased risk of crown fires and ember production. Trees killed by SOD often fall after a limited number of years where they decompose and pose less of a fire hazard. Midpen must weigh habitat needs with risk of fires; standing dead trees are known to provide wildlife with shelter to raise young and raptors with unobstructed vantage points.

Question/Comment NR-2: The current plan focuses on protecting park buildings and boundaries but does not address how and when the remote and difficult areas of the parks will be treated. Ecosystem health and condition are the main factors considered in the establishment and prioritization of new Fuel Reduction Areas (FRA). Although FRAs are not tabulated within the program description, Appendix B includes maps showing stands of oak woodland, Douglas fir, and redwood forest of more than 100 acres where FRAs may be constructed. Midpen is proposing up to 500 acres per year of new FRAs and annual maintenance of an additional 500 acres. The acreage was determined with consideration for potential impacts to wildlife and the capacity of Midpen to oversee the work. The criteria to prioritize the locations of new FRAs follows the Board-adopted Resource Management Policies that include direction to staff to “protect and restore known rare, endangered, special status species and sensitive habitats, as well as seriously degraded or deteriorating areas” and will “give priority to sensitive habitats and consider the relative scarcity of the specific resources involved”.

Question/Comment NR-3: Input about the use of botanists and timed mowing of roadside habitat to address the following: 1) increasing amount of flammable understory material, 2) invasive weed encroachment into wildlands, and 3) degradation of native plant populations.

All vegetation management projects on Midpen lands are either proposed or reviewed by Midpen botanists or by Midpen-approved contracted botanists. Per the Integrated Pest Management Program (IPMP), field sites are visited on a regular basis, prior to all new vegetation management projects and then on a rotation of 1, 3, or 5 years, depending on habitat requirements. During site visits, botanists identify ecologically-important factors and make recommendations for field crew. Recommendations may include buffers for wildlife, rare plants, and bodies of water, as well as timing of treatment. Mowing can be timed after seeds set for native species, prior to seed set of invasive species, or after invasive species have been treated.

Midpen mows hundreds of miles of trails and roads, emergency staging areas, and landing zones on a yearly basis. This effort takes over 1,500 hours and typically starts in April and is usually not completed until November. The window for treatment of many invasive species is defined in a few weeks (e.g. yellow starthistle is approximately a 2-week period around the summer solstice) and in some cases in a matter of days (e.g. goatgrass 4 or 5 days on southern aspects in late May and 7 to 10 days on northern aspects in early to mid-June). Logistically, it is impossible to mow all roads and trails with invasive species during the ideal time, thus Midpen chooses sites where timed mowing can bring about the highest ecological benefits.

Invasive plants can be a concern in fuel reduction areas. All fuel reduction areas are monitored for invasive species. In May of 2019, the Board approved increasing the amount of invasive species work within fuel management areas, with a focus on species that increase fuel loads such as French broom and Tasmanian blue gum eucalyptus (R-19-69).

Roadside fuel reduction projects that are underway or are in the final stages of planning include:

- Bear Creek and Summit Roads in Bear Creek Redwoods;
- Crazy Pete’s and Alpine Road in Coal Creek;
- Heather Heights in Saratoga Gap;
- Highway 17 in Bear Creek Redwoods;
- Page Mill Road in Los Trancos;
- Portola Heights in Long Ridge; and
- Irish Ridge Trail in Purisima Redwoods.

Question/Comment NR-4: Concerns over the use of pesticides for the Program.

Vegetation will be managed manually, mechanically, with prescribed herbivory (using goats, sheep, or other livestock to reduce fuels in a specific area), and to a limited extent, pesticides. Limited chemical control (pesticide) is used in vegetation treatment for stump and spot plant treatment during creation and maintenance of the VMAs. Broadcast spraying is not allowed under the IPMP nor the VMP. Chemical treatment methods used within VMAs include methods approved under the IPMP (including, but not limited to stump spray and/or spot spray).

Pesticides allowed are only those identified in the IPMP EIR and Addendum (Midpen, 2014; Midpen, 2019b), or subsequently approved by the Board at an open public meeting. Specific vegetation management treatments under the Program will be determined by Midpen staff who take into consideration location of treatment, the biology of the species being treated, availability of resources, and/or presence of non-target species. The IPMP notes that typical annual use accounts for 10 percent of labor hours. It should be noted that under the IPMP, 80 percent of current vegetation management treatments are performed through pulling and 7 percent through brush cutting and mowing. The Program will result in a larger increase in the percent of work performed by brush cutting and mowing, but overall the use of chemical treatment methods will comprise a similar or slightly greater percentage as the IPMP.

Pesticide are mainly used to:

- Prevent erosion/protect infrastructure;
- Inhibit re-sprouting species;
- Remove poisonous or hazardous plant species;
- Minimize ground disturbance (cultural resources, secondary invasion, soil contaminates);
- Minimize worker exposure to physical hazards (steep/loose slopes, roadsides, hazardous soils); and
- Decrease human presence in habitats to reduce impacts to wildlife.

Subject: CEQA

Question/Comment CEQA-1: What changes can be made to the Program once the Notice of Preparation (NOP) is released?

The Program document is largely complete, but changes are expected as the team works through the details of the technical analysis, and as issues or concerns arise. NOP requirements are defined in State CEQA Guidelines § 15082. The NOP must provide sufficient information describing the project and the potential environmental effects to enable the responsible agencies to make a meaningful response. A description of the project, including location and probable environmental effects should be disclosed, per the regulation. Midpen's Program includes a much greater level of detail than is required at the NOP stage. Changes and modifications can occur to the Program between the release of the NOP and the circulation of the Draft EIR, as long as the modifications are not substantial. Changes in major components of the Program that could result in new impacts may require release of a new NOP. Refinements to methods, acreages, and background information is allowable and likely. The Program will remain in draft form through release of the Draft EIR and will be finalized with the Final EIR.

Subject: Scope of Work within the Project Description

Question/Comment Scope-1: Concerns over work being focused on a few preserve perimeters; strategically, much more interior work (in the interior of preserves vs. along road boundaries) is needed to be effective.

The VMP includes treating interiors areas through Fuel Reduction Areas or FRAs. The VMP identifies that the FRAs will be at least 100 acres in size and will be identified by Midpen or other professional fire management or vegetation management staff. Chapter 8 identifies that up

to 1,000 acres of FRA treatments would occur each year, or about 40 percent of the VMP work. In addition to the VMP, prescribed fire will be used to address interior areas and to reduce fuels and improve ecosystem health. The Prescribed Fire Plan will be developed in more detail in 2021.

Question/Comment Scope-2: Concern that limiting pile burning to 50 tons of fuel a year on 60,000 acre ownership is not sufficient.

Pile burning estimates were based on existing tonnage per acre treated. Midpen is working to refine that number in collaboration with CAL FIRE based on habitat types and conditions that may be treated or additional data or information available. Increasing the allowable tonnage is desired but may need to be weighed against air quality impacts. Please note that other methods to remove vegetation are included or are being considered in the Program such as mulching on site, composting at Midpen designated sites, and off-hauling to outside facilities.

Question/Comment Scope-3: Is there a difference between “fuel reduction” and “fuel management”?

Fuel reduction is vegetation management technique to reduce the amount of vegetation in an area. This reduction can be accomplished via manual (e.g. hand removal with chainsaws), mechanical (e.g. masticator, chipper), chemical (cut stump application of herbicide to reduce resprouting of vegetation), or cultural methods (e.g. prescribed fire). Fuel management (also known as vegetation management for fire risk reduction) is a broader term that encompasses multiple other aspects of land management activities that reduce fire hazard, including:

- Fuel reduction activities described above;
- Planting of fire-resistant/fire-adapted vegetation;
- Strategic placement of plantings;
- Maintaining adequate watering of landscape within a defensible space zone (Zone 1: lean and green); and
- Restoration of an area impacted by fire-prone invasive species such as eucalyptus, acacia, or French broom.

Question/Comment Scope-4: Can staff provide a description of the types of fuel breaks?

Description of the types of fuelbreaks can be found in Chapter 4 of Attachment 1: Project Description of the Wildland Fire Resiliency Program.

Question/Comment Scope-5: Why are the acreage numbers proposed for fuel reduction so low?

Midpen seeks to expand its ability to create and treat new ecologically-sensitive Vegetation Management Areas (VMA) as resources allow. Midpen recognizes the need to expand its vegetation management work in the short- and long-term due to higher fire risk, the potential for catastrophic fires, and to manage future new open space acquisitions. Midpen strives to balance the needs of human communities with natural resource goals through ecologically sensitive vegetation management.

The proposed Program identifies approximately 25,000 acres (representing 40.5 percent of all lands managed by Midpen) of potential increased FRAs for ecosystem resiliency. The Program would allow creation of up to 500 acres of new FRAs per year and maintenance of an additional 500 acres of FRAs per year. In the past, Midpen has not performed this type of work.

Currently, potential areas for increased fuel reduction for fire management to facilitate public safety could occur within an additional 4,200 acres of Midpen lands (representing 6.8 percent of all lands managed by Midpen). The Program would allow creation of up to 730 acres of new VMAs per year and maintenance of an additional 900 acres per year.

Question/Comment Scope-5: The primary effort was around vegetation removal; controlled burns during wet winter months were not on the list of tactics. [This comment was received after the April 8, 2020 Study Session]

Prescribed burning is addressed at a programmatic level in the Program at this time. Chapter 5 is meant to provide a brief summary of the Prescribed Fire Plan, which is a separate set of actions from the VMP described in Chapter 4. The Prescribed Fire Plan as presented in the Program will not be undertaken until a more detailed plan is prepared in 2021, and additional environmental review under CEQA is completed.

Question/Comment Scope-6: Criteria for prioritization and selection does not include proximity of communities, geographical features (upslope), proximity to roadways, or other possible human ignition to the open space land. [This comment was received after the April 8, 2020 Study Session]

Midpen has the goal of protecting the natural resources on its land and facilitating improved fire suppression capabilities on Midpen lands, which supports community-wide fire agency fire suppression efforts. The primary need for vegetation management is to reduce unnaturally high fuel loads and secondarily to manage vegetation near ignition sources (e.g., wildland-urban interface [WUI], roads, structures), thus reducing the intensity and harmful impacts of fires. Although fuel reduction adjacent to a private home is not a criterion in itself, strategic regional fuelbreaks and cooperative efforts with neighboring property owners and fire agencies accommodate this work. As an example, Midpen partnered with Woodside Fire Protection District and neighboring property owners to complete grant-funded fuel reduction at Teague Hill Open Space Preserve.

The VMP describes treatments to enhance ecosystem resiliency (FRA), and vegetation management work that facilitates fire management, reduces fire ignitions, and minimizes the intensity of wildland fires to reduce the damage to ecological functions, which also serves to enhance public safety. FRAs also enhance public safety when created near the WUI, adjacent to existing fuelbreaks, and/or in areas where fuel loading is particularly problematic.

When prioritizing FRAs, the criteria include high fire risk areas, increased tree mortality, as well as areas identified by Midpen vegetation management staff. Staff consider multiple factors when identifying areas including, but not limited to:

- Aspect (south-face or north-facing slopes);
- Slope;
- Roadway density; and
- Prevalence of fire-resistant tree species that are unsuitable for burning to promote fire resistant plant growth.

When prioritizing other vegetation management areas (e.g. enhance fire management), the criteria include high fire risk areas and ignition sources as well as:

- Strategic regional fuelbreaks and cooperative efforts with neighboring property owners (neighboring property owners concerns, as stated by the community around Thornewood, can be accommodated in this criterion);
- State or local fire agency-designated Midpen evacuation routes;
- Emergency access roads;
- Areas that enhance and facilitate fire suppression activities and ingress/egress safety for fire responding agencies, their personnel, and fire suppression equipment; and
- Adjacent to or near existing or planned fuel treatment areas as identified by fire agencies.

Please see the section Method of Prioritizing the Establishment of New VMAs in Chapter 4 of the Project Description for the complete list of criteria.

Question/Comment Scope-6: No mention of use of grazing goats in the documents [This comment was received after the April 8, 2020 Study Session]

Under the Vegetation Management Toolbox (Chapter 4.7.1), the Project Description states that “vegetation will be managed primarily manually, mechanically, with prescribed herbivory (using goats, sheep, or other livestock to reduce fuels in a specific area), and to a significantly limited extent, pesticides.” Under Table 4.7, VMA Treatment Methods and Estimated Maximum Annual Application, Midpen proposes up to 100 additional acres per year may undergo prescribed herbivory.

Subject: Implementation & Budget

Question/Comment Implementation-1: Confused by discussion that permits from fire agencies may not be necessary and that the Air Board permit would be necessary in addition to a Smoke Management Plan.

The plan addresses the potential permits that may be needed for prescribed burns in Section 5.5, Planning Process. This section has been revised to clarify the process as follows:

- Notify the Bay Area Air Quality Management District (BAAQMD) of the proposed prescribed burn by submitting the Prescribed Burning Smoke Management Plan (Form Rx-1) form at least 30 days prior to burning.
- Develop burn plan in conjunction with CAL FIRE and local fire agency.
- Ensure both the smoke management plan and burn permit are issued and approved.
- Ensure burn is conducted on a permissive burn day as determined by BAAQMD.

Question/Comment Implementation-2: More of the Program should be under the CAL FIRE VTP to streamline permitting.

Not all areas within Midpen lands are covered by the CAL FIRE VTP and EIR. To create a more streamlined and consistent program, Midpen is pursuing the preparation of a Program EIR that can address all types of vegetation management across all Midpen lands and can therefore include conditions of approval appropriate for the actions and resources, and that are consistent across all units. If the vegetation treatment project is wholly “within the scope” of the CalVTP PEIR, as documented in a Project Specific Analysis, Midpen may proceed with implementation under the CalVTP after project approval by CAL FIRE.

In addition, Midpen’s mission and Resource Management Policies are more focused on the protection of the ecological environment, and Midpen wishes to emphasize and implement additional protective measures for the flora and fauna entrusted to us by the public as part of fuel management activities, as outlined in the Ecological Sensitive Vegetation Management document presented at the April 8, 2020 Study Session with the Board.

Question/Comment Implementation-3: Why is Midpen not applying to take advantage of grant opportunities?

Midpen is interested in pursuing grant opportunities with other agencies. The development and approval of the Program will facilitate the application for grant funds. Woodside Fire Protection District recently forwarded a California Forest Improvement Program (CFIP) grant opportunity, requesting that Midpen apply. CFIP is a reimbursement program administered through CAL FIRE. An eligibility criterion for CFIP reimbursement is that the landowner must own at least 20 acres of forestland but not more than 5,000 acres of forestland in California. Midpen is not eligible because we exceed this maximum acreage requirement.

CAL FIRE's Forest Health Grant Program requires a minimum of 1,000 acres in size and preference is given to projects that have environmental compliance (i.e. CEQA) completed before the project application is submitted. The proposed Program will meet the CEQA compliance requirements and Midpen will apply for grants to further its mission and Program goals.

Question/Comment Implementation-4: Make fire resiliency a higher priority and provide a reasonable timeline to address all of the park habitat, not just grassland and land adjacent to private property.

The amount of vegetation management work planned and completed each year will be dependent on annual staff capacity, funding, and other resource availability, and will need to be balanced with other Midpen priorities that further the mission, annual Strategic Goals & Objectives, and Vision Plan. As Midpen continues to grow, the location and prioritization criteria will be applied to new lands. Midpen staff, with input from surrounding fire agencies, will annually prioritize areas for treatment and bring the anticipated budgets to the Board for review and approval as part of the annual capital improvement and action plan development process.

Please note that the proposed Program does address all of Midpen's lands under management and potential new lands, including approximately 25,000 acres of forested lands. In addition, land adjacent to private property is not included in the location and prioritization criteria of VMAs. Rather, Midpen works with private citizens to obtain a permit to work on Midpen lands. Per state law, defensible space is the responsibility of the property owner.

Question/Comment Implementation-5: How is the District addressing current needs?

Each year, Midpen commits extensive staff time and resources on various land management activities to protect natural resources and facilitate public safety in the event of a wildland fire. These activities include maintaining hundreds of miles of fuelbreaks and fire roads within preserves that facilitate fire agency response and suppression activities, fulfilling defensible space clearance requirements for Midpen-owned structures, and implementing vegetation treatments to protect public open space lands and sensitive habitats.

Midpen focuses its vegetation management fuel reduction work on Midpen-owned fire roads, fuel breaks, escape routes, and infrastructure within the open space preserves and other Midpen-managed lands. To assist neighbors in creating 100-foot defensible space clearance around neighboring private structures, Midpen maintains a free and easy-to-use permit system for homeowners to receive permission to perform required vegetation clearance on Midpen lands. In addition, Midpen continues to work with and partner on fuel reduction work proposed on Midpen lands that is initiated and performed by fire departments and fire safe councils.

Midpen's IPMP allows Midpen to perform up to 450 acres annually of non-grazing vegetation management to reduce fuels. The Board approved a transfer of 225 acres to the Fuel Management Category from other categories in July 2019 (R-19-90).

Approximately 1,800 person-hours are annually set aside to maintain existing fuelbreaks as well as 5,000 person-hours for trail and road brushing (in part to reduce fire risk) within the IPMP. Existing vegetation management work includes, but is not limited to:

- 55 acres of defensible space around Midpen-owned, occupied buildings;
- 51 acres of disc lines;
- 47 landing zones; and
- 265 miles of roads and trails.

Midpen also grants utility company access for completing cyclical fuel management and maintenance of their electrical transmission and distribution lines, and poles, to reduce accidental ignitions.

Subject: Cameras

Question/Comment Cameras -1: Can staff provide more information on cameras that can be used for fire related work?

In 2018, a collaborative effort between San Jose State University - Fire Weather Research Lab, Midpen, and CAL FIRE, a Remote Automatic Weather Station (RAWS) site was installed on Loma Prieta Ridge near Mount Umunhum in Sierra Azul Open Space Preserve. The station allows for real time temperature, wind speed, and relative humidity data for the area. This information is used by the National Weather Service to predict Red-Flag days and spot forecasts for wildland fire events (prescribed, natural, or human caused).

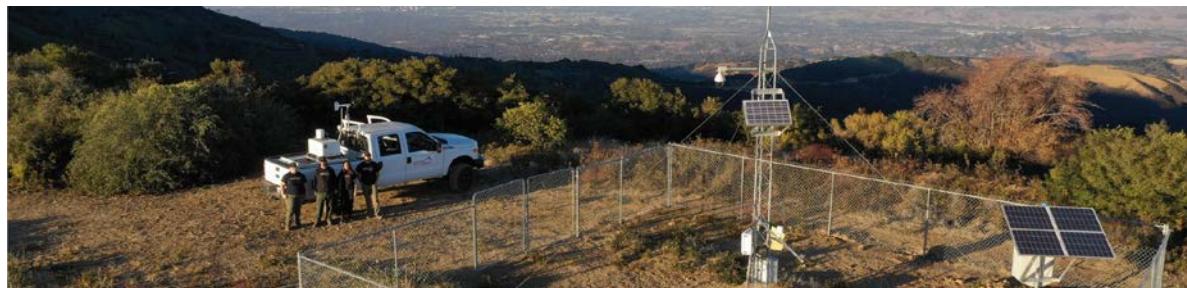


Figure 2: RAWS site Loma Prieta, courtesy SJSU Fire Weather Research Lab Website



Figure 3: Forest Watch Online, Mt Um Camera viewing Mount Umunhum Road and the Santa Clara Valley, courtesy Forest Watch Online

In conjunction with this effort, Santa Clara County Fire Safe installed a remote live video camera at the site to allow live viewing of the surrounding area for conditions and potential smoke or wildfire. This camera offers almost a 360-degree view of the surrounding area south to Loma Prieta and north to Mount Umunhum and surrounding areas. This camera is one of several located in the area, with two on Loma Prieta and two on Mount Hamilton. These cameras are monitored by CAL FIRE in Morgan Hill and others that have access to the Forest Watch Online

site. Midpen has a log in for Midpen staff so they can view the cameras, although they are not continuously monitored.

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