

Department of Fire and Emergency Services

**Agenda
For the Regular Meeting of the
Disaster and Fire Safety Commission**

DATE: Wednesday, August 7, 2019
TIME: 7:00 PM
PLACE: Fire Department Training Facility - 997 Cedar Street

Preliminary Matters

Call to Order.

Approval of the Agenda

Public Comment on Non-Agenda Matters

1. Fire Department and Office of Emergency Services Staff Report

Consent Items

2. Approval of Draft Minutes of Meeting of June 26, 2019*

Action Items

3. Pacific Gas & Electric (PG&E) Public Safety Power Shutoff (PSPS)*
4. Memo on Coordination of Vegetation Management*
5. Recommendation for City Council Action on Ensuring Fire Equipment Access*

Discussion Items

6. Public Outreach on Emergency Preparedness
7. Wildfire Priority Issues: Parking and Prevention*
8. Future Agenda Items

Adjournment

Berkeley Fire/OES 2100 Martin Luther King, Jr. Way, Berkeley, CA 94704
Tel. 510.981-3473 TDD: 510 981-5799
E-mail: fire@ci.berkeley.ca.us

(*Material attached for Commissioners for this month's meeting)

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TTY: 1-510-981-6347



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Disaster & Fire Safety Commission
Regular Meeting
Wednesday, June 26, 2019
997 Cedar Street, Berkeley, CA 94710

Present: Paul Degenkolb, Gradiva Couzin, Shirley Dean, Ruth Grimes, Toby Simmons, Annie Bailey, Toni Stein, Jose Luis Bedolla

Absent: Bob Flasher (Excused)

Staff: Khin Chin, Keith May

Public: Sarah Jones, Alina Constantinescu, Chris Cullander

Preliminary Matters

Call to Order

G. Couzin called meeting to order at 7:00 pm

Approval of the Agenda

Approved by Acclimation

Public Comment on Non-Agenda Items

1. Fire Department and Office of Emergency Services Staff Report

T. Simmons arrived at 7:04pm

The Emergency Services Coordinator position interviews will be held on July 23 and 25.

Council approved \$230,000 funding for a vegetation management program. The Fire Department will backfill a Captain position to bring in staff to develop the program and pursue grant funding.

CERT Academy held June 7-9 was well attended and successfully executed.

The City's General Plan Safety Element was updated with the Local Hazard Mitigation plan updates at the June 11 meeting.

Consent Items

2. Approval of Draft Minutes of May 22, 2019*

Motion approve minutes as revised: S. Dean

Second: P. Degenkolb

Vote: 7 Ayes: Degenkolb, Simmons, Couzin, Grimes, Dean, Stein, Bailey; 0 Noes; 0

Absent: Flasher; 1 Abstain: Bedolla

Action Items

3. Recommendation to City Council on the Measure GG Tax Rate Adjustment*

Motion to write a Memo to City Council on the Yearly Adjustments of Measure GG Tax Rate as amended: G. Couzin

Second: Flasher

Vote: 8 Ayes: Degenkolb, Flasher, Simmons, Couzin, Grimes, Dean, Stein, Bailey; 0 Noes; 0 Absent; 0 Abstain

4. Commission Workplan*

Motion to approve the submitted workplan with amendments: S. Dean

Second: Flasher

Vote: 8 Ayes: Degenkolb, Flasher, Simmons, Couzin, Grimes, Dean, Stein, Bailey; 0 Noes; 0 Absent; 0 Abstain

Discussion Items

5. City Evacuation Workshops
6. Cal Fire Fuel Reduction Priorities Report*
7. Update from City Council Vote on Outdoor Public Warning System
8. Local (Berkeley) Composting of Vegetative Fuel Sources to Mitigate Fire Hazard*
9. Recommendation Regarding Fire Prevention and Fire Hardening of Structures

10. Future Agenda Items

Adjournment

Motion approve minutes as revised: P. Degenkolb

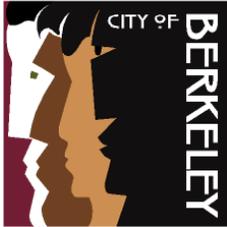
Second: R. Grimes

Vote: 8 Ayes: Degenkolb, Simmons, Couzin, Grimes, Dean, Stein, Bailey, Bedolla; 0

Noes; 0 Absent: Flasher; 1 Abstain:

Adjourned at 9:06pm

DRAFT



Susan Wengraf
Councilmember District 6

CONSENT CALENDAR
July 16, 2019

To: Honorable Mayor and Members of the City Council
From: Councilmember Wengraf, Mayor Arreguin and Councilmember Harrison
Subject: Presentation by PG&E to City Council

RECOMMENDATION

That the City Council receive a presentation from representatives of Pacific Gas & Electric (PG&E) concerning their Community Wildfire Safety Program and specifically the Public Safety Power Shutoff (PSPS) element of that program.

FINANCIAL IMPLICATIONS

Minimal

BACKGROUND

The City Council needs to have a better understanding of the potential impacts of PG&E's PSPS program on Berkeley. My understanding is that PG&E's PSPS plans include the potential for cutting off power to both distribution and transmission lines after evaluating conditions of extreme fire danger including: red flag warnings, low humidity levels, conditions of dry fuel and forecasted sustained winds generally above 25 miles per hour. PG&E plans to provide notice prior to power shut-offs, if possible. They have indicated that any PG&E customer may be affected by these shut-offs and that customers should prepare for outages that could last longer than 48 hours.

A lengthy period without electricity could significantly impact not only vulnerable members of the community who rely on power for medical reasons, but also homebound seniors, families with children if schools are unable to operate, medical facilities, and public transportation, among others. From an infrastructure perspective, if battery back-up and generator capabilities are exhausted, a power shut off could impact street lights, traffic lights, sewer pumping stations and possibly the water supply. Private facilities such as grocery stores and restaurants could face food storage issues, and other private businesses could be impacted.

In addition, it is important for City Council to understand PG&E's outreach efforts about this program to Berkeley residents and Berkeley's business community so that we will have a sense of the information available to our constituents.

ENVIRONMENTAL SUSTAINABILITY

Support of this item is completely consistent with the City of Berkeley's environmental policy goals.

CONTACT PERSON

Councilmember Wengraf

Council District 6

510-981-7160



**Important Customer Message:
Prepare for possible power
outages and help us reach
you. Please visit
pge.com/mywildfirealerts to
update your contact
information today.**

RE: Important Message: Take Action Today to Prepare for Possible Public Safety Power Outages

Dear Valued Customer:

Given the growing threat of extreme weather, we want all of our customers to be prepared for potential power outages. If extreme fire danger conditions threaten a portion of the electric system serving your community, it may be necessary for us to turn off electricity in the interest of public safety. This is called a Public Safety Power Shutoff.

What you need to know about Public Safety Power Shutoff

We want all our customers to understand why it may be necessary for us to shut off electric power during times of extreme wildfire risk.

- Before any Public Safety Power Shutoff, we carefully review a combination of criteria such as predictions of strong winds and very low humidity levels, along with critically dry vegetation and on-the-ground observations from field crews.
- Because the energy system relies on power lines working together to provide electricity across cities, counties and regions, your power may be shut off, even if you do not live or work in an area experiencing high winds or other extreme weather conditions. This is done to ensure the safety of all communities and customers.
- If we need to turn off your power, we will attempt to contact you in advance by phone, text and email, and provide updates through social media, local news, radio and the pge.com website.
- We expect to be able to restore power to most of our customers within 24 to 48 hours after the extreme wildfire risk ends. We urge our customers to prepare for longer outages lasting 2 to 5 days in case equipment needs to be repaired or other actions are needed to ensure public safety.

**Attend a Wildfire
Safety Open House**

To learn more about how to stay safe and about Public Safety Power Shutoffs, including details on upcoming **regional open houses and informational webinars**, please visit pge.com/wildfiresafety.

How to better prepare

We know how much our customers rely on electric service and want to work together to help you prepare for potential power outages related to extreme weather or wildfire threats. Here are some important steps you can take today:

- **Sign up for alerts by visiting pge.com/mywildfirealerts or call 1-866-743-6589** during normal business hours to update your contact information. We will use this information to alert you through automated calls, texts and emails, when and where possible, prior to a Public Safety Power Shutoff.
- **Plan for medical needs** like medications that require refrigeration or devices that need power.
- **Identify backup charging methods** for phones and keep hard copies of emergency numbers.
- **Build or restock your emergency kit** with flashlights, fresh batteries, first aid supplies and cash.
- **Know how to manually open** your garage door.

For more information on our wildfire safety efforts and Public Safety Power Shutoffs, including details on upcoming **open houses and informational webinars in your region**, please visit pge.com/wildfiresafety.

Sincerely,

PG&E Community Wildfire Safety Team

Dada la creciente amenaza de clima extremo, queremos que todos nuestros clientes estén preparados para posibles apagones. Si las condiciones extremas de peligro de incendio amenazan una parte del sistema eléctrico que sirve a su comunidad, puede ser necesario que desconectemos la electricidad en interés de la seguridad pública. Esto se denomina Public Safety Power Shutoff (Apagado de Energía por Seguridad Pública). Inscríbese para recibir alertas visitando pge.com/psps-es o llame al 1-866-743-6589 durante el horario laboral normal para actualizar su información de contacto. Utilizaremos esta información para alertarle a través de llamadas, textos y correos electrónicos automatizados, cuando y donde sea posible, antes de un Public Safety Power Shutoff. Para obtener más información sobre nuestros esfuerzos de seguridad contra incendios forestales y Public Safety Power Shutoff, incluyendo los detalles de las **próximas jornadas de puertas abiertas y seminarios informativos en línea en su región**, por favor visite pge.com/psps-es.

隨著極端氣候的威脅日益增加，我們希望幫助所有用戶預備有機會發生的停電事故。如果極端火災危險指數會危及部分在您社區提供電力的系統，為了公眾安全，我們可能有需要中斷電力服務，這稱為公共安全斷電計劃（Public Safety Power Shutoff）。如果您希望提早接獲有關安排的通知，請前往 pge.com/psps-zh 或於辦公時間內致電 1-866-743-6589 更新您的聯絡方法。我們會透過您提供的聯絡方法，使用自動留言電話、短訊及電郵，盡可能及早通知您有關公共安全斷電計劃的安排。如欲了解更多關於我們在山火安全上的工作及公共安全斷電計劃，包括將會在您所屬社區舉行的**資訊開放日及網絡研討會**，請瀏覽 pge.com/psps-zh

Trước mỗi đe dọa ngày càng gia tăng của thời tiết khắc nghiệt, chúng tôi muốn tất cả các khách hàng của mình được chuẩn bị cho vấn đề mất điện có thể xảy ra.

Nếu các điều kiện hỏa hoạn cực kỳ nguy hiểm đe dọa một phần hệ thống điện đang phục vụ trong cộng đồng của bạn, chúng tôi có thể cần phải tắt điện vì lý do an toàn công cộng. Điều này được gọi là Tắt điện vì An toàn Công cộng. Ghi danh để nhận được các báo động bằng cách gọi số 1-866-743-6589 trong giờ làm việc bình thường để cập nhật các chi tiết liên lạc của bạn. Chúng tôi sẽ sử dụng thông tin này để thông báo cho bạn bằng cách gọi, text và email tự động, bất cứ lúc nào và nơi nào có thể, trước khi **Tắt Điện vì An Toàn Công cộng**. Để biết thêm thông tin về các nỗ lực bảo vệ an toàn của chúng tôi từ các vụ cháy rừng và thông báo **Tắt điện vì An Toàn Công cộng**, bao gồm các chi tiết về các buổi hội thảo trực tiếp hay trên mạng trong khu vực của bạn để thông báo tin tức, vui lòng gọi 1-866-743-6589.



Working Together To Protect Our Communities From Wildfires

Given the continued and growing threat of extreme weather and wildfires, and as an additional precautionary measure following the 2017 and 2018 wildfires, we are expanding and enhancing our Community Wildfire Safety Program to further reduce wildfire risks and help keep our customers and the communities we serve safe. This includes expanding our Public Safety Power Shutoff program beginning with the 2019 wildfire season to include all electric lines that pass through high fire-threat areas – both distribution and transmission.

We know how much our customers rely on electric service and that there are safety risks on both sides. We will only proactively turn off lines as a last resort in the interest of safety to help reduce the likelihood of an ignition when extreme fire danger conditions are forecasted. While customers in high fire-threat areas are more likely to be affected, any of PG&E's more than 5 million electric customers could have their power shut off if their community relies upon a line that passes through a high fire-threat area.

Public Safety Power Shutoff Criteria

Our Wildfire Safety Operations Center (WSOC) monitors fire danger conditions across our service area and evaluates whether to turn off electric power lines in the interest of safety.

While no single factor will drive a Public Safety Power Shutoff, some factors include:



A RED FLAG WARNING
declared by the National Weather Service



LOW HUMIDITY LEVELS
generally 20% and below



FORECASTED SUSTAINED WINDS GENERALLY ABOVE 25 MPH AND WIND GUSTS IN EXCESS OF APPROXIMATELY 45 MPH, depending on location and site-specific conditions such as temperature, terrain and local climate



CONDITION OF DRY FUEL
on the ground and live vegetation (moisture content)



ON-THE-GROUND, REAL-TIME OBSERVATIONS
from PG&E's WSOC and field observations from PG&E crews

Potentially Impacted Areas

- The most likely electric lines to be considered for shutting off for safety will be those that pass through areas that have been designated by the California Public Utilities Commission (CPUC) as at elevated (Tier 2) or extreme (Tier 3) risk for wildfire. This includes both distribution and transmission lines.
- The specific area and number of affected customers will depend on forecasted weather conditions and which circuits PG&E needs to turn off for public safety.
- Although a customer may not live or work in a high fire-threat area, their power may also be shut off if their community relies upon a line that passes through an area experiencing extreme fire danger conditions.
- This means that any customer who receives electric service from PG&E should be prepared for a possible public safety power outage.



PSPS Event Notifications

Extreme weather threats can change quickly. When and where possible, we will provide customers with advance notice prior to turning off the power. We will also provide updates until power is restored.

TIMING OF NOTIFICATIONS (when possible)

- **~48 HOURS** before power is turned off
- **~24 HOURS** before power is turned off
- **JUST BEFORE** power is turned off
- **DURING THE PUBLIC SAFETY OUTAGE**
- **ONCE POWER HAS BEEN RESTORED**



HOW WE'LL NOTIFY CUSTOMERS

We will attempt to reach customers through **calls, texts and emails** using the contact information we have on file. We will also use **pge.com** and **social media** channels, and we will keep **local news** and **radio outlets** informed and updated.

Working With Our Customers To Prepare

We are continuing to reach out to our customers and communities about wildfire safety and steps they can take to prepare their homes, families and businesses.

- **Update your contact info** by visiting pge.com/mywildfirealerts today to make sure we have your current contact information.
- **Identify backup charging methods** for phones and keep hard copies of emergency numbers.
- **Plan for any medical needs** like medications that need to be refrigerated or devices that require power.
- **Build or restock your emergency kit** with flashlights, fresh batteries, first aid supplies and cash.

Learn More about PG&E's Community Wildfire Safety Program.



Call us at
1-866-743-6589



Email wildfire_safety@pge.com



Visit pge.com/wildfiresafety

THE POWER OF BEING PREPARED

PUBLIC SAFETY POWER SHUTOFF

Visit [PREPAREFORPOWERDOWN.COM](https://www.prepareforpowerdown.com) today to learn more about the power of being prepared.

THE THREATS OF WILDFIRE AND EXTREME WEATHER IN CALIFORNIA ARE REAL.

As a result, California's three largest energy companies, at the direction of the California Public Utilities Commission (CPUC), are coordinating to prepare all Californians for the threat of wildfires and power outages during times of extreme weather. To help protect customers and communities during extreme weather events, electric power may be shut off for public safety in an effort to prevent a wildfire. This is called a **Public Safety Power Shutoff**.

Shutting Off Power for Safety

As a safety precaution, San Diego Gas & Electric (SDG&E), Southern California Edison (SCE) and Pacific Gas and Electric (PG&E) monitor local fire danger and extreme weather conditions across California and evaluate whether to turn off electric power. The decision and action to turn off power is made by each individual energy company and is based on a combination of factors. **Factors include, but are not limited to:**



HIGH WINDS
(including Red Flag warnings)



LOW HUMIDITY



DRY VEGETATION
that could serve as fuel



FIRE THREAT
to electric infrastructure



ON-THE-GROUND OBSERVATIONS



PUBLIC SAFETY RISK

What You Can Expect

If a Public Safety Power Shutoff is needed due to extreme conditions, you can expect:

- **Early Warning Notification** – Your energy company will aim to send customer alerts before shutting off power.
- **Ongoing Updates** – Your energy company will provide ongoing updates through social media, local news outlets and their website.
- **Safety Inspections** – After extreme weather has passed, your energy company will inspect the lines in affected areas before power is safely restored.
- **Power Restoration** – Power outages could last multiple days depending on the severity of the weather and other factors. It is important that you and your family have an emergency preparedness plan in place.

SEE THE OTHER SIDE FOR SAFETY TIPS 

[PREPAREFORPOWERDOWN.COM](https://www.prepareforpowerdown.com) provides a variety of resources, including tips for preparing for extreme weather, wildfires and Public Safety Power Shutoffs. An emergency preparedness checklist and additional resources are available on the reverse side of this fact sheet.

WORKING WITH CALIFORNIANS TO PREPARE

While Public Safety Power Shutoff events are more likely to occur in high fire-risk areas, all Californians could be impacted by emergency events and need to be prepared with a plan. Customers should also update their contact information with their energy company so they can receive notifications. Below are specific steps you and your family can take to be ready, should there be an extended power outage that lasts multiple days.

STAY SAFE. TAKE ACTION.

CREATE YOUR EMERGENCY PLAN TODAY BY FOLLOWING THE TIPS LISTED BELOW:

- **Update your contact information** with your local energy company
- **Identify backup charging methods** for phones and keep hard copies of emergency numbers
- **Plan for any medical needs** like medications that need to be refrigerated or devices that require power
- **Plan for the needs of pets and livestock**
- **Build or restock your emergency kit** with flashlights, fresh batteries, first aid supplies and cash
- **Designate an emergency meeting location**
- **Know how to manually open your garage door**
- **Ensure any backup generators are ready to safely operate**
- **Identify the unique needs of your family and loved ones in the area for your emergency plan**

Additional information on creating an emergency plan is also available at prepareforpowerdown.com.

LEARN MORE FROM YOUR LOCAL ENERGY COMPANY



sdge.com/wildfire-safety



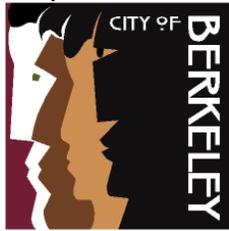
sce.com/PSPS



pge.com/wildfiresafety

Additional Preparedness Resources:

- ready.gov – Disaster preparedness information from the U.S. Department of Homeland Security
- readyforwildfire.org – CAL FIRE's wildfire preparedness website
- cpuc.ca.gov/wildfiresinfo – Information on the CPUC's wildfire safety efforts
- caloes.ca.gov – California Governor's Office of Emergency Services website
- firesafecouncil.org – California Fire Safe Council website
- noaa.gov – National Oceanic and Atmospheric Administration website



Disaster and Fire Safety Commission

Date: August {DATE} 2019
To: Honorable Mayor and Members of the City Council
From: Disaster and Fire Safety Commission
Submitted by: Gradiva Couzin, Chair, Disaster and Fire Safety Commission
Subject: Outdoor Public Warning Siren System is Made More Crucial by PG&E
Planned Power Outages

PG&E's plan to proactively shut off power supplies during fire danger conditions has been made public in recent weeks. We would like the City to be aware of the serious impacts of extended power outages on emergency preparedness, emergency alerting, and public safety in Berkeley. This memo specifically addresses the impact on emergency alerting.

PG&E's planned power outages could affect any location in Berkeley both inside and outside the Hills Fire Zones, and could extend for multiple days¹. These outages could impair the safety of residents, especially the most vulnerable residents among us, in many ways including the following:

- Emergency alerts that rely on electrical power, including almost all forms of alerting used by the City today, may not be functional during the highest fire risk times
- Communications by phone would be impaired, making 9-1-1 and other calls for assistance less available
- Individuals who rely on power for assistive technology, medical devices, or to refrigerate medicine will need to relocate or find backup power
- A nighttime evacuation would be more challenging and dangerous without power and streetlights

The most effective way to mitigate the loss of power in our emergency alert systems is to install a public warning siren system with backup power as soon as possible. This

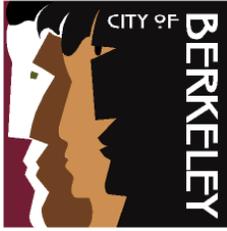
¹ See more information about PG&E Shut-offs here:
https://www.pge.com/en_US/safety/emergency-preparedness/natural-disaster/wildfires/public-safety-power-shutoff-faq.page

would ensure that at least one major public alerting system is functional during an extended power outage.

The Disaster and Fire Safety Commission on 3/27/2019 unanimously supported a recommendation for Berkeley to immediately begin the process of installing an outdoor public warning system. The Mayor's budget proposal approved by Council on 6/25/2019 did not include funding for a siren system, but did suggest that *consideration be made in the November budget for \$1.1 million toward a siren system.*

In response to this new power outage plan from PG&E, the Commission would like to encourage Council to take funding for emergency alerting sirens and the public outreach that goes along with it into ***serious consideration at the very soonest opportunity.***

We also believe that other public outreach and support will be necessary sooner than November to address the full array of health and safety impacts of these power outages on Berkeley's most vulnerable populations. This Commission will follow up with any further recommended actions that relate to Disaster and Fire Safety.



Disaster and Fire Safety Commission

Date: August {DATE} 2019

To: Honorable Mayor and Members of the City Council

From: Disaster and Fire Safety Commission

Submitted by: Gradiva Couzin, Chair, Disaster and Fire Safety Commission

Subject: Immediate Coordination of City Departments for Vegetation Management on Wildfire Evacuation Routes and Foot Paths

Berkeley is at a continued and increasing risk for wildfire, most likely a wind-driven fire starting in the Hills along the City's eastern border. The immediate danger of wildfire in Berkeley calls for an immediate coordination of City vegetation management activities in support of wildfire evacuation.

Although Berkeley's Wildfire Evacuation Plan is still in draft form, it contains enough information to guide the City's vegetation management choices at this time.

In the coming months, City staff from the Parks and Public Works departments will be trimming trees and shrubs on public property. This Commission has not been able to receive confirmation that the vegetation management priorities of these departments are currently being coordinated with the Fire Department in order to support wildfire evacuation.

Public Works and Parks staff should coordinate tree trimming and other vegetation management activities to prioritize these activities on likely evacuation routes from the Hills Fire Zones:

- Pruning flammable trees, brush, weeds or grass along evacuation routes, for example, bushes close to the roadway on Grizzly Peak Blvd. and Marin Ave.
- Keeping roadways, walking paths and stairs clear of vegetation to provide a safe and clear evacuation path from wildfires
- Evaluating foot paths for lighting and signage to improve evacuation on foot
- Creating defensible spaces in parks or other clearings that are potential Community Temporary Refuge Areas
- Trimming branches that hang over roadways or could bring down objects onto roadways impeding a wildfire evacuation

July 29, 2019

To: Chairperson Couzin and Commissioners Bailey, Bedolla, Degenkolb, Flasher, Grimes, Simmons and Stein
Deputy Chief May
Khin Chin
From: Shirley Dean

I am requesting that an item titled Wildfire Priority Issues: Parking and Prevention be placed on the August 7, 2019 agenda of the Disaster and Fire Safety Commission (DFSC) for Discussion and possible Action.

A recent television program, *60 Minutes*, regarding climate change focused on how The Netherlands has handled the problem of flooding over centuries and the difference between what is being done in the United States today. The conclusion was that this country places more focus on clean-up after the disaster, while countries like The Netherlands places more focus on prevention and managing the risks, i.e. living with the disaster that inevitably will come and lessening its impact on the affected people and land. No matter what the nature of the disaster is, that's a powerful message, and one that is applicable to our City's vulnerability from wildfires.

That is not to say that recovery isn't important, because it is, but it is to say that stronger prevention measures is an investment that must be urgently and rigorously pursued. In respect to that concept, I believe the DFSC must assume an active role in advocating for the City to make that investment and to do it now. It is not something that can be put off to obtain a never-ending stream of discussion, or obtaining more data – experts are in full agreement that we have already entered a critical time period of higher temperatures, greater winds and lower humidity when the fuel load has been significantly expanded due to significant rainfall that followed a long drought and that the 'Big One' on the Hayward Fault is long overdue.

The following is a list of issues that I suggest need to become recommendations for action for the City Council to undertake as soon as possible. This list is not to be considered to be complete or to reflect any kind of priority. Obviously, they all can't be done at once. The list is presented to stimulate discussion and I am asking Commission members to consider the list and add to it as we discuss this now and in the future.

1. The immediate implementation of fire equipment access into all areas of the City.
2. The enactment of standards for private property that create defensible space around homes in identified high fire risk areas.
3. The enactment of standards for public property, i.e., street trees and open spaces that will not contribute to the rapid advance of wildfire.
4. The enactment of standards to harden private and public structures.
5. The development of a communication program that will engage all residents in understanding and complying with those standards.
6. The establishment of an enforcement mechanism, including a method to pay for that mechanism, to ensure compliance on private and public property.

7. The creation of incentives, including but not limited to low-to-no interest loans to encourage and assist in the payment of vegetation removal and hardening of residential structures.
8. The establishment of an environmentally sound program for the proper disposal of vegetation.
9. The establishment of a technical panel of experts to advise the City along the same model as the successful Seismic Technical Panel once did.

Recommendation Regarding the Order of Discussion regarding this Item:

A. Begin with Commission Recommendation that the City Council Take Action Ensuring Fire Equipment Access:

At the August 7, 2019 DFSC meeting, the Commission should recommend to the City Council that without further delay the time has come for the City to take action to ensure fire equipment access in all areas of the City. This action should begin with notifying property owners in the most fire vulnerable areas first that street parking will be restricted in XX days and stating clearly the reasons why this is necessary. This notice should be accompanied by City action to erect signs, install posts or whatever indicators are deemed to be appropriate around existing water hydrants and to install pavement markers which identify existing water hydrants when mutual aid responders are called upon. This approach should be continued throughout all areas of the City.

People are being asked to sign up for evacuation drills – that is a good suggestion, but if fire equipment access is not assured, how will those drills be affected? The evacuation drills that are currently scheduled can be used to start the information process that the Commission will be making such a recommendation to the Council about parking restrictions. This issue has been discussed for a *very* long time, and lots of data has been obtained about how to proceed. The Council is in recess during the month of August and will be returning at the beginning of the critical month of September. This issue should not further be delayed.

B. Presentation of a Report from Staff:

The Commission should hear a report on what the City is planning to do with the new \$233,000 budget allocation for vegetation management.

C. Commission Discussion of Private and Public Defensible Space Standards

The Commission should undertake a discussion of the standards that are being considered/distributed in the City of Mill Valley, East Bay Regional Park District and the City of Orinda or other appropriate jurisdictions. To enable that discussion, I have attached information from each of these jurisdictions.

This discussion should include a brainstorming session regarding early informing and engaging the public in the outcome, and the inclusion of an ancillary program around hardening of structures and what that means.

Central to this brainstorming is the concept of establishing incentives that will encourage property owners to engage in vegetation management. Suggestions to be considered are low to no interest loans, and voluntary and neighborhood driven actions.

As difficult as it may be, the Commission must consider the issue of what to do with the large amounts of vegetation that will have to be disposed of in a safe and appropriate way. This discussion is timely as the City is currently considering re-designing of the Transfer Station. Information is needed to determine how vegetation management debris can be incorporated into current planning efforts.

D. Commission Discussion of an Enforcement Mechanism and Funding

On June 23, 1992 the City Council adopted Resolution 56,538-N.S. which established a “Private and Public Property Vegetation Management Program.” The cost of the program was estimated to be \$550,000. A search of Records Online did not produce a copy of that resolution which would provide more details. However, the following is what I know from my own records:

City action in 1992 was a response to the 1991 Oakland/Berkeley Hills fire. On June 16, 1992 the Council took the first steps to establish an assessment zone to pay for the enforcement of the fuel management program. A \$50 per year levy was assessed on 8,300 properties in high-risk fire areas in the Berkeley hills. The assessment was to be in place for 5 years and would be used to hire three inspectors and a clerk in the Fire Department to inspect properties, supervise clearance of hazardous vegetation and enforce fire codes. The additional responsibilities were to pay for “patrols to look for fires during particularly hazardous conditions, officers to cite and order towing of vehicles blocking fire lanes, neighborhood seminars in fire presentation and support for an emergency response training program for residents.” As a part of this, the Council also approved a “Fire Assessment Commission.” Again, while knowing the resolution numbers (56.513-N.S. and 56,515-N.S.) that were approved, city records are not available and I do not recall that a Commission ever met. However, that should not deter us from discussing the re-institution of an assessment district to pay for additional inspectors. There is a greater resident awareness regarding wildfires today than in the year, approximately in 1997, when this fire assessment district expired.

Additionally, while this suggestion is not directly related to wildfires, we should consider discussing in general how to increase overall Fire Department resources available for disaster response. In an April 12, 2019 letter to the University of California regarding their increase in enrollment. the City indicated that responding to calls for service in the high-rise buildings currently being constructed in our City requires twice the staff on fire engines and trucks because of the numbers of people involved. It seems possible that an annual fire assessment on buildings housing over a certain number of people might be in order to pay for an overall increase in resources necessary for disaster response.

E. Discussion of a City-wide Notice to all Property Owners and Residents

In dealing with any responses before or after a disaster, it is essential to have built a base of understanding about the types of risk this City faces, and the program that is being put in place to respond to such occurrences. Communication is all important in crafting

responses that will save lives and property as well as smoothing, as much as possible, the difficulties of recovery. Such communication should include not only property owners but also renters, workers, and visitors. It is my understanding that currently, the only notification given is when property located within the Alquist-Priolo Earthquake Zone is purchased. I have not been able to ascertain if notification is given to property owners who purchase property in USGS designated liquefaction or landslide areas. No notice seems to be given to renters, or to property owners in designated high fire risk zones. A program of regular, continuing factual notice to all regarding alerts, life-saving measures, etc. is important and should be considered.

F. Commission Discussion of the Establishing of an Emergency Technical Advisory Panel

I am also requesting that the Commission consider the establishment of an Emergency Technical Advisory Panel similar to the Seismic Technical Advisory Panel (STAP) of several years ago. The STAP provided a persuasive example of how to structure an effective program to stimulate and maintain policy initiative in a complex technological domain. In creating, directing and overseeing policy initiatives in the area of seismic safety improvement for the City, it resulted in bringing in more than \$15 million in additional FEMA funding as well as recognition by the Earthquake Engineering Research Institute.

A Disaster Prevention and Response Panel might have three or four distinguished experts from the private or public sector who are willing to contribute on a voluntary basis their expertise to review and put forward programs and policies around preventing and responding to wildfires and earthquakes. They might come from UC Berkeley's School of Public Policy or be active in the field of Economics or Forestry Management. Their charter might be as follows:

- a. To compile an inventory, assessment, and ranking of fire safety investment opportunities for the City. Investment opportunities to be considered would be such matters as information systems, policy initiatives, industry best practices, as well as capital programs. Assessment and ranking should be based on total life cycle cost-effectiveness. Results would be reported to the Council on a quarterly basis in a brief summary report.
- b. To provide peer review and oversight of all city investment in fire hazard reduction programs including a comparative evaluation of same on operational criteria.
- c. To solicit, review, critique, and recommend fire hazard reduction investments from all relevant City departments. In particular, the Panel is to rank recommended fire hazard reduction programs (both proposed and extant) on the basis of projected returns to the City and to report the ranking to the Council with recommendations as part of its quarterly report. N.B. The Council explicitly directs that all City investment in fire hazard reduction programs from whatever source shall be reviewed and approved by the Panel.
- d. To stimulate innovation in fire hazard reduction efforts in all operational departments, e.g. Public Works, Information Systems, Purchasing, Permitting of the City through cost-effective investment and technology transfer from all sources, public and private. While the establishment of such a Technical Panel is not as urgent as the implementation of fire equipment access into all areas, it is something which should

begin because of its importance in implementing a long-term investment plan in disaster prevention.

It shouldn't be expected that the Commission will complete all of the items included in this Item. I suggest that realistically the Commission might act on A (fire equipment access), hear B (staff report) and discuss C (vegetation management standards). However, other parts of this item are offered today in an effort to underscore the need to move ahead with all due deliberation and to stimulate discussion about the issues.

I am further asking staff to distribute this Item in advance of the usual times in order to give Commission Members sufficient time to consider the attachments as follows:

1. City of Mill Valley, Staff Report and Vegetation Management Ordinance
2. City of Orinda, Reducing Your Home's Wildfire Risk
3. East Bay Regional Park District, Protect Your Home-10 Things to Do

Thank you for your consideration of these issues.



STAFF REPORT

TO: Mayor and City Council
FROM: Fire Chief Tom Welch
SUBJECT: Consideration of an Ordinance to Amend Title 15 of the City of Mill Valley Municipal Code
DATE: June 17th, 2019

Approved for Forwarding:


James C. McCann, City Manager

1 **Issue:**

2
3 Consideration of an Ordinance amending Title 15 of the Mill Valley Municipal Code relative to
4 Hazardous Fuel Reduction (vegetation management).

5
6 **Recommendation:**

7
8 Introduce the Ordinance, waiving further reading.

9
10 By May 1, 2020 the ordinance will:

- 11 ○ Regulate plantings within the first 3' of applicable residential or commercial structures.
- 12 ○ Cause the removal all pyrophytic combustible vegetation to include Junipers, Bamboo,
- 13 Acacia (genus Acacia) and Italian Cypress (genus Cupressus), from:
 - 14 ○ within 10 feet from property lines and driveways;
 - 15 ○ within 30 feet of residential or commercial structures; and
 - 16 ○ 30 feet up to 150 feet from residential or commercial structures when topographic
 - 17 or combustible vegetative types necessitate removal, as determined by the Fire
 - 18 Code Official.

19
20 **Background:**

21
22 Following the 2017 Sonoma/Napa conflagrations, which have now been eclipsed by the mega-
23 fires in Butte, Lake and Shasta Counties, we have been actively evaluating/implementing

Item 8

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Amend Title 15 of the Mill Valley Municipal Code
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24 programs and processes to ensure our lowest overall community risk possible. Our evaluation
25 has concluded that many City of Mill Valley processes are in alignment with industry best
26 practices as well as identified several gap areas needing attention. The result has been the
27 development of six areas for improvement endorsed by the City Council on February 5th, 2018
28 titled *City of Mill Valley Vegetation Management: An Improved Approach (Attachment 3)*.

29
30 **Initiative 1 – Building Codes, Standards, and Structural Ignitability:** Improve building
31 codes and standards for the built environment.

32
33 On April 16th, 2018, the City of Mill Valley Adopted Ordinance 1300, which regulates
34 ignition resistive construction and serves to harden our housing stock.

35
36 **Initiative 2 – Hazardous Fuel Reduction:** Requirements for fuels within:

- 37 ○ 3’ along the foundation of residential and commercial buildings.
- 38 ○ within 30’ to 150’ of residential or commercial buildings and within 10’ along
39 property lines. This includes Junipers (genus Juniperus), Bamboo, Acacia,
40 and Italian Cypress.

41
42 Under consideration by City Council.

43
44 **Initiative 3 – Access and Evacuation Concepts:** Reduction of hazardous fuels along
45 primary and secondary evacuation routes to facilitate a safe egress. Access projects at
46 Marion/Hazel, Hazel/Rose, and Lee/Quarry to enhance emergency response and egress
47 are being designed.

48
49 The City Council doubled the funding necessary and substantially reduced hazardous
50 fuels along key access and evacuation routes.

51
52 **Initiative 4 – Public Education:** Community Education by way of community meetings,
53 mailings, classes, and events such as the Mill Valley Campout. In progress. Tremendous
54 outreach and education through several vehicles has occurred.

55
56 **Initiative 5 – Communications:** Enhance communications through modernization of the
57 emergency siren notification infrastructure with the Long Range Acoustical Device
58 (LRAD). System has been purchased and is scheduled for installation late June 2019.

59
60 **Initiative 6 – Staff Training:** Currently: Staff training specific to working in the
61 Emergency Operations Center (EOC) occurs approximately two times a year. The
62 Initiative seeks to enhance training opportunities for staff. In progress

63
64 **Proposed Enhanced Vegetation Management Ordinance:**

65
66 On September 6th, 2018, the City Council held a public hearing to review staff’s proposal to
67 address the Council adopted Initiative #2 (Hazardous Fuels Reduction). The City Council
68 endorsed the proposal, but correctly directed that additional (and substantial) outreach and

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69 socialization of requirements and rationale be provided to the community to ensure community
 70 awareness of the proposal and full community input to the Council. To this end, our
 71 communications plan was developed by the City Manager’s Office and the Fire Department to
 72 ensure that all residents had ample opportunity to participate in a community discussion and
 73 shape this important initiative over the last six months. A breakdown of the elements of the
 74 communication plan are captured in the table below:
 75

<p>Communication Plan goals:</p> <ul style="list-style-type: none"> • To inform Mill Valley residents of the new proposal, education events and activities • To establish a clear communication process • To Facilitate two-way communication 	<p>Target Audiences:</p> <ul style="list-style-type: none"> • Residents and property owners • Marin Master Gardeners • Firewise Neighborhood leaders • Local Media - Marin IJ, Marinscope • Association of Marin Realtors • Landscape Architects • Local garden/landscaping merchants • County Supervisors & County Fire • Chamber of Commerce • Community Emergency Response Team • Emergency Preparedness Commission • Neighborhood Associations & Home Owner Associations
<p>Message Focus:</p> <ul style="list-style-type: none"> • Reinforce the importance and benefits • Emphasize the public meetings and community input • Highlight the funding sources • Reinforce the project goals • Describe the stages and processes • Recognizes that change is difficult • Emphasize science • Emphasize that staff will do its best to remove impediments and provide excellent customer service. • There are multiple ways to stay informed, and we will provide venues to ask questions or share concerns. 	<p>Communications Plan Strategies:</p> <ul style="list-style-type: none"> • Multi-platform approach to communicating with media, residents, and stakeholders. • Face-to-face communications to share and reinforce messages with residents. • Dedicated email blasts, text messages, social media, and website posts. • Use video and photos on social media and website. • Numerous community outreach and in-person events.
<p>Vehicles of Communication:</p> <ul style="list-style-type: none"> • Mailings/Postcards/Letters • Info Sheet • City of Mill Valley Facebook Page • City of Mill Valley Twitter Page 	

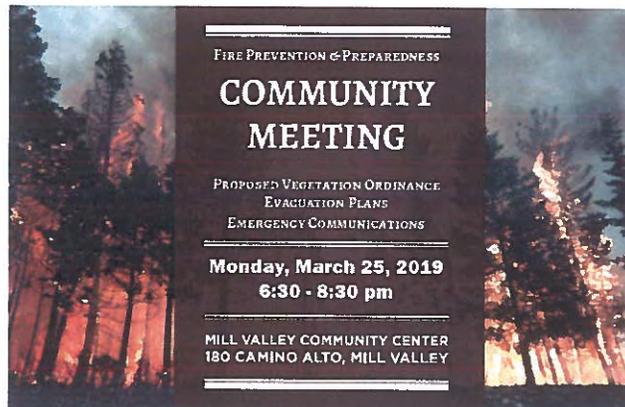
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- MVPD Twitter Page
- City of Mill Valley Nextdoor Account
- MVConnect
- YouTube
- City of Mill Valley Website
- Press Releases/News Items
- Targeted email messages
- City Council Meetings
- Community Meetings
- Local Media

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Prior to the initial First Reading of the ordinance last September, the City staff’s outreach included:

- Six geographically specific community meetings:
 - Community Center x 2
Invited 2500 households
 - Edna McGuire School
Invited 1500 households
 - Park School
Invited 900 households
 - Old Mill School
Invited 600 households
 - Outdoor Art Club
Invited 567 households



- The Mill Valley Fire Department, along with the Emergency Preparedness Commission, have been invited to and attend eight community/neighborhood meetings. These informational meetings largely covered the same information provided during the above listed geographical meeting. Specifically, the sessions covered the proposed vegetation programs, among other preparedness topics. The locations visited include:

- Marsh Dr. Neighborhood x 2
- Manzanita Pl. Neighborhood
- Tamalpais Dr. Neighborhood
- Marlin Ave. Neighborhood
- Myrtle Ave. Neighborhood
- Ryan St. Neighborhood
- Magee Ave. Neighborhood
- Mill Valley Rotary

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Thus far, our feedback has been supportive for making our neighborhoods safe through proper vegetation management in and around the homes and commercial buildings.



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Following the first reading of the ordinance in September 2018, we have also attended or hosted:

- **Community Meeting:** On Monday, March 25th, 2019, the Mill Valley City Council and Fire Officials invited by postcard the entire community and presented to an audience of over 350 community members the proposed Vegetation Management Ordinance.



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- **Neighborhood & Homeowners Association Leaders Meeting:** On Tuesday, April 2, 2019, Fire personnel met with neighborhood leaders to review the proposed vegetation ordinance. Attended by 30 neighborhood leaders to bring information back to their members.
- **Marin Community Wildfire Forum:** On May 4, 2019, Fire personnel participated in a County-wide community presentation and panel discussion on wildfire preparedness. Several hundred Marin residents participated.
- **The Camp Fire Documentary Benefit Screening:** On Tuesday, May 14, 2019, Fire staff participated in a panel discussion regarding changing fire conditions in relation to recent wildfires in California. Attended by 280 community members.
- **Living with Fire Seminar:** On May 5th, 2019, the Mill Valley Fire Department in conjunction with FIREsafe Marin, hosted a Living with Fire Seminar. Fire personnel reviewed the City of Mill Valley’s existing hazards and discussed the new proposed vegetation regulations. This workshop, intended primarily for residents, homeowners, and regular visitors to the City of Mill Valley included:
 - Fire is a natural part of Marin’s environment
 - We created the “PROBLEM” by building where fires occur
 - Contributors: Fire Suppression, building in the WUI, vegetation changes, climate change

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- 141 ○ Review of the City of Mill Valley *Fire Prevention Initiatives*
- 142 ○ Summary of the City of Mill Valley *Vegetation Ordinance*
- 143
- 144 • **Community workshop:** On June Monday, June 10th, 2019, the Mill Valley Fire
- 145 Department invited the entire community by a trifold pamphlet, other outreach and
- 146 presented a community workshop that reviewed all elements of the proposed vegetation
- 147 ordinance.
- 148
- 149 • Shelter Ridge HOA
- 150 • Sutton Manor Firewise Community Meeting
- 151 • Mill Valley Meadows HOA
- 152 • Marsh Neighborhood Meeting
- 153

Outreach	Impact
March 25 Community Meeting Postcard	Mailed to 8455 residences
Annual Evacuation Drill Postcard	Mailed to 700 residences
Trifold Mailer – inviting residents to the workshop and City Council Meeting	Mailed to 8455 residences
Info Sheet	Distributed at many of the meetings listed above
City of Mill Valley Facebook posts	Average 700 engagements per post
City of Mill Valley Twitter posts	Average 790 engagements per post
City of Mill Valley Nextdoor MVConnect	Average 1,900 views per post. 17,000 subscribers. Average 4,635 opens per eNewsletter.
YouTube	Vegetation Management videos have received an average of 36 views
City of Mill Valley Website	Vegetation Ordinance Pages: <ul style="list-style-type: none"> - Basic Info Page: 671 sessions or interactions - Frequently Asked Questions: 275 sessions or interactions - 3/25 Community Meeting Summary: 459 sessions or interactions
3/25 Community Meeting Video	6 community members have viewed the video
Press Releases/News Items	Approximately 8 press releases posted and distributed regarding the vegetation ordinance, wildfire, and emergency preparedness topics.
Targeted email messages	Sent several emails to our list of 44 organized Homeowners and Neighborhood Association Leaders for distribution to their members

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Local media:

Marin IJ:

- "Mill Valley Fire Chief Uses Lessons from Firestorm in New Prevention Plan" February 8, 2018
- "Forum Set on Fire Prevention Plan" March 15, 2019
- "Mill Valley Wildfire Prevention Plan Would Require Broad Tree, Plant Removal" March 26, 2019
- "Mill Valley Beefs Up Wildfire Defenses" April 8, 2019
- "Mill Valley Residents Fight to Save Bamboo Amid City Concerns About Fire Safety" April 6, 2019
- "City Sets Workshop on Fire Safety Rules" May 28, 2019

KPIX CBS SF Bay Area:

- "'War Of The Roses' In Mill Valley Sparks Heated Debate" September 6, 2018

Enjoy Mill Valley:

- "City of Mill Valley Hosts Fire Prevention & Preparedness Community Meeting at Community Center" March 14, 2019

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155 **Discussion:**

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157 We are experiencing changing weather conditions. Our changing weather conditions are causing
158 changing fire conditions. The current fire conditions throughout our state and region are
159 worsening. **We need to change too.**

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161 The proposed ordinance enhances the survivability of buildings (residential and commercial) by
162 altering the conditions on private property. Providing for three feet of hardscape at the
163 foundation as well as the removal of pyrophytic plantings from within 30' of buildings and 10'
164 along property lines will greatly enhance safety and survivability.

165

166 The proposed ordinance focuses on properties within the Wildland Urban Interface (WUI).
167 According to the National Wildfire Coordinating Group, the WUI is the zone of transition
168 between unoccupied land and human development. It is the area or zone where structures and
169 other human development meet or intermingle with undeveloped wildland or vegetative fuels.
170 Approximately 99 million Americans are living in 44 million structures within the Wildland
171 Urban Interface. Within the City of Mill Valley, there are approximately 5,000 residential
172 structures within the identified WUI area see attachment 1.

173

174 Historically, wildland fire conflagration is not new to our region. One of the most significant
175 predictors of particularly destructive fires is the history of fire in that area. The City of Mill
176 Valley, along with Marin County, has its own modern history dating back to the Great Mill
177 Valley Fire (1929) and Marin County's Mount Vision Fire (1995). The problem of wildfire
178 persists, not because there are few fire safety guidelines, but because instructions are sometimes

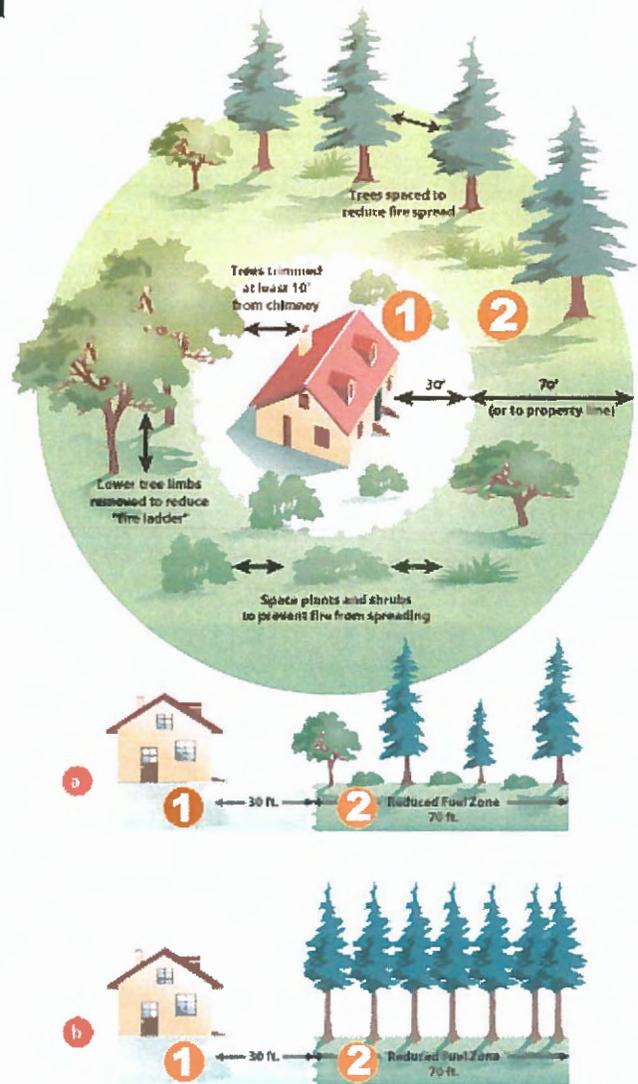
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179 not fully implemented or interpreted
180 differently. Given the recognized heightened
181 threat of wildfire and the community's
182 concern, moving to a mandatory reduction in
183 hazardous fire fuels is prudent, responsible
184 and widely supported by the community.

185
186 **Wildfire Spread:**

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188 To understand the best way to make a WUI
189 home defensible, you must first understand
190 how a wildland fire propagates. Wildland
191 fires move through the WUI by three
192 primary methods:
193

- 194 • Direct flame contact – Direct flame
195 impingement refers to the transfer of
196 heat by direct flame exposure. Direct
197 contact with the fire flames will heat
198 the combustibility of building
199 materials of the home. Depending on
200 the exposure (time/intensity) of the
201 flame, materials can ignite or break
202 windows.
203
- 204 • Radiant heat- By creating defensible
205 space around homes, we can
206 significantly reduce the heat. Radiant
207 heat decreases with the square of the distance. A house with 20-foot clearance from 20-foot flames will receive one-quarter of the radiant heat of a home with a 10-foot clearance. A home with 100 feet of clearance from forest or shrubs will usually have minimal impact from heat or flame. Although still at risk from ignition by embers, a home with sufficient defensible space can have minimal risk to the people in the house.
208
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- 213 • Embers - According to recent research, embers are the most prolific cause of home
214 ignition at a rate of two out of every three homes destroyed. Embers are glowing or
215 burning pieces of vegetation or construction debris that are lofted during the wildfire.
216 Embers can move up to a mile ahead of a firestorm and may fall on the vegetation or
217 planting bed mulch near your home: on dry leaves, needles or twigs on the roof on the
218 roof and then subsequently fall or travel within 3 feet of home foundation plantings (or
219 under the deck) with subsequent ignition of vegetation or debris that could then ignite and
220 burn down the home. The concentration of embers that land on the roof and fall off
221 makes the removal of all flammable materials within 3 feet of the house critical.
222
223



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224

225 **Prevention Efforts:**

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227 To reduce the chances of wildland fire losses, there are two essential factors:

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1. The WUI home requires a wise selection of building materials and designs that will help the house resist the wildfire. Chapter 7A of the California Building Code offers good direction on appropriate building materials and methods. The City Council has adopted these in conjunction with the action last year to implement Initiative #1.
2. The WUI home must have adequate defensible space, based on the careful selection, placement, and maintenance of vegetation near a structure. The proposed ordinance will enhance our current vegetation management regulations and practices.

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It is possible for homes in the WUI to experience an extreme wildfire without suffering significant loss. Property owners can reduce the flammability of their property by modifying fuel conditions, and by using ignition resistive building construction design and materials. These modifications can significantly change outcomes of a wildfire by removing flammable materials immediately adjacent (within 3-5 feet) to residences, and by decreasing the flammability of the residences themselves (for example by choice in roofing and deck materials).



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The City of Mill Valley has rightly placed our focus on creating defensible space around homes in the wildland urban interface. Currently, defensible space is formed through the modification/treatments of fuels in and around structures by zones.

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- **Zone 1 (Lean, Clean, and Green Zone)** - is the area of maximum modification and treatment. It consists of an area of 30 feet around buildings in which flammable vegetation is limited. The 30 feet is measured from the outside edge of the home's eaves and any attached structures, such as decks.
- **Zone 2 (Fuel Reduction Zone)** - is an area of fuel reduction. The size of Zone 2 depends on the slope of the ground where the building is built. Typically, the defensible space should extend at least 30 to 150 feet from buildings. Within this zone, the continuity and

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259 arrangement of vegetations are modified. Stressed, diseased, dead or dying trees and
260 shrubs are removed. Healthy trees and shrubs are thinned and trimmed. Property owners
261 should clear or substantially thin vegetation within 10' of the roadway, driveway and
262 property line.
263

- 264 • **Zone 3-** is an area of managed native vegetation and is of no particular size. It extends
265 from the edge of Zone 2 to the property boundaries.
266

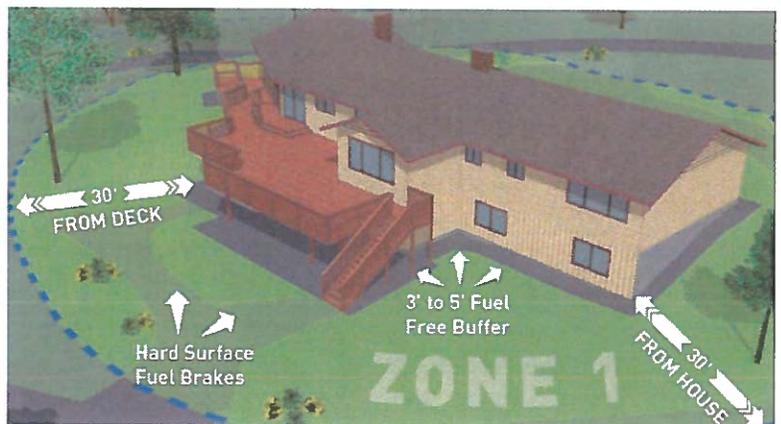
267 The City of Mill Valley Fire Department has conducted vegetation inspections every
268 spring/summer for over three decades regarding the above zone concepts. Fire personnel conduct
269 inspections to ensure property owners create defensible space around their homes and provide
270 for safe access and egress pathways to roadways. To a degree, defensible space assumes
271 firefighters will serve to defend the structure should a wildland fire breakout. The most recent
272 California fires have demonstrated a level of insufficient resources to protect and defend all
273 threatened structures during a conflagration. The most recent conflagration threatening Shasta
274 and Lake County has firefighters from a majority of the western states in attendance as well as
275 various international partners such as Australia and New Zealand. Our defensible space
276 messaging has focused on giving our firefighters a chance to protect/defend residential and
277 commercial property; however, this does not reflect the reality associated with mega-fires.
278

279 Given the shift in the fire environment towards more violent and volatile conflagrations, we need
280 to modify our mindset towards developing survivable space vs. defensible space. Survivable
281 space is the modification of landscape design, fuels, and building materials that would make a
282 home ignition caused by wildfire less likely and occur without direct firefighter intervention. Our
283 recent Building Code (Initiative #1) changes add value to this goal.
284

285 **Prevention Enhancements:**

286
287 The proposed amendments to the
288 Municipal Code will enable the creation
289 of survivable properties during a
290 wildland conflagration by establishing
291 requirements in these zones:

- 292
293 • **Zone 1A (Structural Home**
294 **Ignition Zone)** – Create
295 hardscape (gravel, concrete,
296 pavers or bare ground) or
297 irrigated succulent plantings
298 within the first 3' surrounding
299 the residential or commercial foundations/structures.
300



- 301 • **Zone 1 (Lean Clean and Green Zone)** – From 3' – 30' (up to 150' based on
302 topographical features). Manage plant materials to eliminate or substantially reduce the
303 pathway for fire spread to the residential or commercial structure. Remove Juniper,

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304 Bamboo, Acacia, and Italian Cypress within the first 30' of the structure and 10' along
305 the property line/driveway.

306
307 • **Zone 2 (Fuel Reduction Zone)** – From 150' to the property line the goal is to diminish
308 heavy fuel loading by removing dead standing/fallen trees, surface fuels (logs,
309 accumulation of dead materials) and prune to remove a laddering effect of fuels.

310
311 Fire service experts recognize the importance of planting alternative, “fire safe” vegetation
312 within the first 30' of structures (or Zone 1) to reduce fire spread while also retaining the
313 aesthetic qualities of our neighborhoods. The FIREsafe Marin website
314 (<https://www.firesafemarin.org/plants/fire-resistant>) contains the most contemporary listing of
315 fire-resistant plantings recommended within the first 30 feet of the structure.

316
317 **Implementation:**

318
319 How do we accomplish **survivable space** in the WUI environment?

320
321 **Education:** Education is key towards achieving a survivable and adaptive fire
322 community. Given our community, we anticipate that approximately 80% of the WUI
323 parcels will comply when educated on the issues, methods, and practices for improving
324 the survivability of their home. Education needs to include:

- 325
- 326 • Neighborhood hazard assessment visits
 - 327 • Demonstration properties throughout neighborhoods
 - 328 • Pop-up neighborhood meetings by staff and volunteers
 - 329 • Handouts and mailings, and short videos
 - 330 • Workshops and seminars such as the “Fire in Marin” class

331
332 **Compliance:** Inspections are necessary to outline the residential expectations within the
333 community, neighborhood, and homeowner. This program includes:

- 334
- 335 • Establishment of expectations and time frames by the Mill Valley City Council.
 - 336 • Enforcement inspections of each parcel through our current formalized process outlined in the Mill Valley Municipal Code.
 - 337 • Consistent and timely enforcement and abatement of non-compliant properties will lead to citations, fines, property abatement and liens.

338
339
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341 Education, inspection, and compliance will be significant and necessary parts of this proposal.
342 Our firefighters have handled our annual vegetation inspection and follow-up, however, the
343 changes proposed will require substantially more effort. We will provide staff and contractor
344 resource needs through budget requests for the 2019/20 fiscal year to address:

- 345
- 346 ○ Education and outreach
 - 347 ○ Inspectors
 - 348 ○ Enforcement

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June 17th, 2019

349 Residential Grant Program:

350

351 The concept of providing grants to offset the costs associated with the ordinance has been widely
352 socialized to and accepted by the public. The Novato Fire Protection District has offered a
353 similar grant program for many years with excellent support from the community and efficient
354 operation by their staff.

355

356 There are three main elements in offering a grant program that includes funding, eligibility, and
357 the overall grant processes. Should Council support the creation of a grant program, staff will
358 develop program elements and policies for future Council consideration. Initial thoughts
359 include:

360

- Funding – For the first year of the program, we have initially identified \$50,000 of Municipal Services Tax dollars. Grants would be reimbursement matching with a maximum of \$1,000 per property (we will determine if adjustment is necessary as we progress).

361

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- Eligibility – All property owners and homeowners’ associations are eligible to apply for vegetation management grants that align the grantee’s property with the proposed ordinance.

365

366

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- Process –

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- Grant applications will open for 30 days between April 1st and May 1st annually. Applicants will require a site visit and review of the scope of work to be considered complete.

369

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- Grant review is contingent on aligning the property with the vegetation ordinance.

372

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- Grant distribution will occur on June 15th and continue as funding allows.

374

375

376 Environmental Approach:

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378 Trepidations exist that vegetation removal will endanger habitat and cause other environmental
379 concerns. Although the ordinance calls for the removal of hazardous vegetation, it enables
380 replacement plantings of a fire safe variety. Education of the general public and landscape
381 contractors is viewed as a necessary step in balancing the needs for fire safety and environmental
382 concerns. We have and continue speak with the environmental community about how to
383 approach community education.

384

385 Generally speaking, the ordinance does not call for the large-scale removal of trees (except
386 Acacia within 30’ of residential and commercial buildings). Instead, the ordinance calls for the
387 maintenance of trees by pruning the crowns of trees at least 10’ up from the ground and cleaning
388 fallen/dead debris below. Fire Prevention Initiatives do call for the aggressive removal of 3 to 5
389 very large Eucalyptus trees annually from City property which substantially reduces fire load in
390 the area which has been an ongoing focus of the Mill Valley Vegetation Management Program
391 (of the 374 Eucalyptus identified in 1988, only 18 remain to be removed).

392

393

City Council Staff Report
Amend Title 15 of the Mill Valley Municipal Code
June 17th, 2019

City of Mill Valley Fire Department – Current Inspection Practices:

Following the six-month of community education/outreach effort, we will start the inspection/compliance process. This process will follow our current practices outlined in the Mill Valley Municipal Code – Title 8 and Title 15.

- The first inspection occurs
 - Typically, the occupant (or property owner) is provided with findings and recommendations and has 14 days to comply
- The second inspection occurs on or shortly after 14 days
 - Typically, the occupant is provided with an additional seven days to comply
- The third inspection occurs after seven days.
 - Enforcement and abatement process begins. The property owner is provided 72 hours to comply before citations and financial penalties.
- Abatement can occur at the cost to the municipality with a cost recovery lien placed on the parcel.

Conclusion:

The City of Mill Valley is in the midst of a sea change as it relates to the creation of **survivable space** versus **defensible space**. The recent mega-fires have demonstrated, at least in the early hours, a level of resource shortages that necessitate this move to strengthen our community preparedness and resiliency. Our residents have expressed their strong desire for greater fire safety and support for the enhancement of our vegetation management regulation. Although we cannot mitigate all of the risks for Mill Valley residents, we can take productive steps to dramatically improve the odds that our community survives.

Consider amending the Mill Valley Municipal Code as it relates to vegetation management (Attachment 2).

Within six months of approval by the City Council we intend to:

- Conduct a website and neighborhood educational campaign.
- Vegetation management home mailings
- Door to door community visits with information about disaster preparedness and vegetation management.
- Develop inspection and compliance enforcement program with necessary staff resources, policies, and protocols.
- Starting on May 1st, 2020: Conduct approximately 5,000 individual parcel inspections and start the compliance process as necessary.
 - Require the establishment of a structure ignition zone clean-up 3 feet.
 - Require the removal of Bamboo, Acacia, Juniper, and Italian Cypress from within 30' of the residential buildings.
- Establish a vegetation management grant program.
- Create an approved master contractor list with established pricing.

City Council Staff Report
Amend Title 15 of the Mill Valley Municipal Code
June 17th, 2019

438 This proposal is in alignment with City Council stated Core Values:

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450 Further, this proposal is in alignment with City Council's Key Issues and Priority Projects:

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455

- Emergency preparedness with a focus on fire, flood, and earthquake.
- Fire Safety – Preparedness and Prevention
- Community engagement

456 **Fiscal Impacts:**

457

458 Funds to provide the educational programs are provided through the Municipal Services Tax.

459 We are actively seeking grants and community partnerships to fund opportunities that assist

460 members of the community who do not possess the resources to complete the necessary work.

461

462 For the 2019-20 budget the Fire Department will be requesting funding to support the vegetation

463 ordinance project to include:

464

465 Increases in funding to support a robust education outreach and compliance program for
466 Initiative(s) 2 & 4.

467 o Inspection services

468 o Code enforcement

469 o Legal abatement services

470 o While the full scope has not been determined, we estimate costs including the grant
471 program to range from \$130,000 to \$200,000 annually. Legal expenses are uncertain at

472 this time and will relate to abatement efforts if necessary.

473

474 **Attachments:**

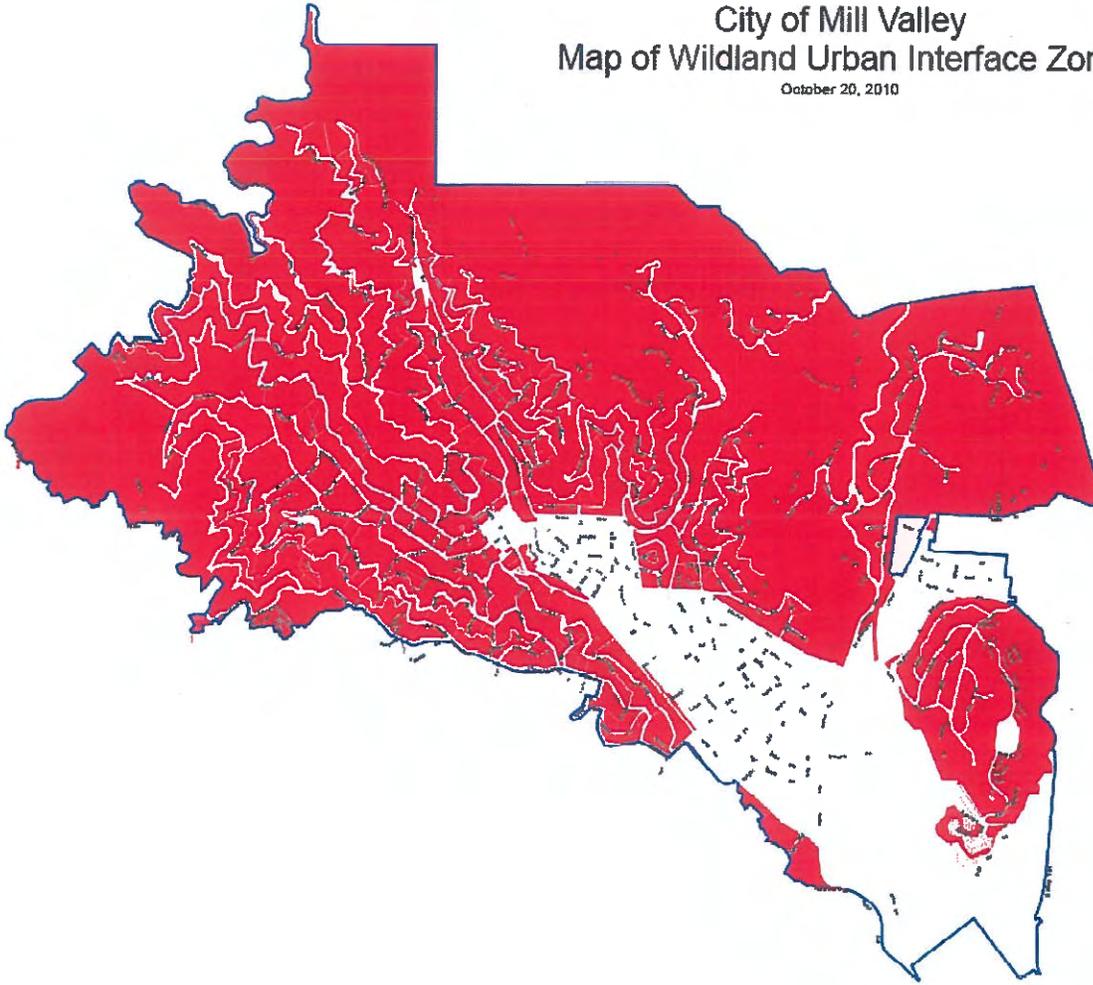
475 1. City of Mill Valley adopted WUI map.

476 2. Draft Ordinance

477 3. February 5, 2018 Staff Report on Fire Preparedness and Prevention Overview and
478 Recommendations

479

City of Mill Valley
Map of Wildland Urban Interface Zone
October 20, 2010



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ORDINANCE NO. 2019-__

**AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF MILL VALLEY
AMENDING CHAPTER 15.04 OF THE MILL VALLEY MUNICIPAL CODE TO
MODIFY SECTION 4907 OF THE CALIFORNIA FIRE CODE**

WHEREAS, on November 7, 2016, the City Council of the City of Mill Valley adopted by reference the current 2016 California Fire Code of Regulations Title 24, Part 9, as modified by Ordinance No. 1286; and

WHEREAS, the 2017 and 2018 conflagration in Sonoma, Napa, Shasta and Butte has caused many communities, including Mill Valley, to conduct internal reviews and identify areas where additional attention is needed to enhance fire safety; and

WHEREAS, the City Council wishes to amend Section 4907 of California Fire Code (CFC) to address defensible space of residential and commercial buildings located within the Wildland Urban Interface Fire Area; and

WHEREAS, pursuant to Sections 17958.5, 17958.7, and 18941.5 of the California Health and Safety Code, the City Council finds that the modifications to the 2016 CFC contained herein are reasonably necessary because of local climatic, geological, or topographical conditions, as described more specifically in Section 1 below.

NOW, THEREFORE, the City Council of the City of Mill Valley does hereby ordain as follows:

SECTION 1. Section 15.04.010 of Chapter 15.04 of the Mill Valley Municipal Code is hereby deleted and replaced to read as follows:

15.04.010 Justification.

The City Council recognizes that the City of Mill Valley has within its borders and along its boundaries, significant areas of grass, brush and heavily forested lands. These hazardous conditions present an exceptional and continuing fire danger to the residents of the community due to the difficulty of the terrain and topography of the area, much of it consisting of boxed canyons with steep, brush-covered slopes; narrow winding streets used by residents of the area and the Fire Department for ingress and egress, steep hills which hinder Fire Department response time; older and inadequate water systems in certain areas of the community; and the location of buildings and structures with relation to these dangerous areas.

The City Council also recognizes that a great number of structures located within the City of Mill Valley were built in the late 1800's and early 1900's, thus lacking the built-in protection of modern construction. Many of the residential structures had been built on steep slopes with boxed canyons and large percentages are located in areas of heavy natural growth. Many structures (new and old) are constructed of highly combustible material, which offer little resistance to fire and could contribute to the spread of fire.

50 The City Council also recognizes the fact that the community has been plagued many times
 51 in the late 1800's and early 1900's by brush and forest fires, which not only threaten destruction, but
 52 on a number of occasions devastated large portions of the town. The desire of the community to
 53 preserve natural vegetation has resulted in the encroachment of brush and grass on fire roads, trails,
 54 breaks and streets within the City, thus rendering such separations ineffective against the spread of
 55 fires. Natural growth, which is highly flammable during the summer and fall months, encroaches
 56 upon many properties, thus posing a potential fire threat to many structures and creating a substantial
 57 hindrance to the control of such fires.

58
 59 The City Council also recognizes that the geological features create an increased risk from
 60 flooding, hillside runoff and debris flows due to a combination of factors including periodic heavy
 61 winter rainfalls and tidal fluctuations. Low lying areas can also subject to liquefaction following an
 62 earthquake.

63
 64 The City Council also recognizes that, seismically, the City sits between two active
 65 earthquake faults (San Andreas and Hayward) and numerous potentially active faults. Fire following
 66 an earthquake has the potential of causing greater loss of life and damage than the earthquake itself.
 67 Should a significant seismic event occur, public safety resources would have to be prioritized to
 68 mitigate the greatest threat and may not be available for every structural fire. In such event, individual
 69 structures should be equipped to help in mitigating the risk of damage.

70
 71 Finally, the City Council recognizes that, in the event that the Fire Department is called to
 72 respond to a fire emergency in any of these areas, its response time to an emergency is increased by
 73 reason of the difficulties herein stated. In recognition thereof and acting pursuant to California
 74 Health and Safety Code Section 17958.5 and 17958.7, the City Council finds that the fire protection
 75 requirements of this ordinance as such requirements modify state required regulations adopted
 76 pursuant to the California Health and Safety Code Section 17922 are hereby reasonably necessary
 77 because of local climatic, geological and topographical conditions.

78
 79 The following table represents findings of fact relative to climate, topography, or geology,
 80 for each addition, deletion or amendment to the 2016 California Fire Code:
 81

Chapter	Climate	Topography	Geological
1 – Administration			
• 102.5	X	X	
• 102.7.3	X	X	
• 104.1.1	X	X	
• 104.12	X	X	
• 104.13	X	X	
• 105.6.49	X	X	
• 105.7.19	X	X	
• 109.3.5	X	X	
2 – Definitions			
• 202 (C)		X	
• 202 (F)		X	
• 202 (M)	X		
• 202 (P)		X	

• 202 (S)		X	
• 202 (T)		X	
3- General Requirements			
• 320	X	X	
• 320.2	X	X	
• 320.3	X	X	
• 320.4	X	X	
4- Emergency Planning and Procedures			
• 401.1.1	X	X	X
• 401.3.2.1	X	X	X
• 402.1	X	X	X
• 403.1.1	X	X	X
• 403.10.1.4	X	X	X
5 – Fire Service Features			
• 501.5	X	X	X
• 502.1	X	X	X
• 503.1.4	X	X	X
• 503.1.5	X	X	X
• 503.2.6.1	X	X	X
• 503.4	X	X	X
• 503.4.2	X	X	X
• 503.6.1	X	X	X
• 503.6.2	X	X	X
• 506.1	X	X	X
• 507.5.1	X	X	X
• 507.5.1.2	X	X	X
• 507.5.7	X	X	X
6 – Building Services and Systems			
• 605.11	X	X	X
• 605.11.3	X	X	X
• 605.11.4	X	X	X
• 605.11.5	X	X	X
9 – Fire Protection Systems			
• 901.7	X	X	
• 903.2	X	X	
• 903.3	X	X	
• 904.12	X	X	
• 906.11	X	X	
• 907.2.11	X	X	
• 907.8.5.1	X	X	
11 – Construction Requirements for Existing Buildings			

• 1103.1	X		
• 1103.2	X		
• 1103.3	X		
• 1104	X		
• 1105	X		
31 – Tents and Other Membrane Structures			
• 3101.1			
49 – Requirements for WUI Areas			
• 4906.2	X	X	X
• 4907.1	X	X	X
• 4907.2	X	X	X

82
83 **SECTION 2.** The paragraphs within Section 15.04.120 of the Mill Valley Municipal Code adding
84 a new Section 4907.2 to Chapter 49 of the CFC, and which begin with “Section 4907.2 is hereby
85 added...” and end with “EXCEPTION 2: When approved by...”, are hereby amended to read as
86 follows:

87
88 “Section 4907.2 is hereby added to Chapter 49 and shall read as follows:
89

90 Section 4907.2 Fire Hazard Reduction. Commencing on the effective date of this Section
91 unless stated otherwise, any person who owns, leases, controls or maintains any building
92 or structure, and/or lands within specific Wildland Urban Interface areas of the jurisdiction
93 of the City of Mill Valley shall comply with the following:

- 94 1. Cut and remove all pyrophytic combustible vegetation. Commencing May 1,
95 2020, pyrophytic combustible shall include all Junipers (genus Juniperus), all
96 species of Bamboo (clumping or running), Acacia (genus Acacia) and Italian
97 Cypress (genus Cupressus), from:
- 98 a. within 10 feet from property lines and driveways;
 - 99 b. within 30 feet of residential or commercial structures; and
 - 100 c. 30 feet up to 150 feet from residential or commercial structures when
101 topographic or combustible vegetative types necessitate removal, as
102 determined by the Fire Code Official.
 - 103 d. Exceptions:
 - 104 i. When approved by the Fire Chief or his/her designee, single
105 specimens of trees, ornamental shrubbery or similar plants used as
106 ground covers need not be removed, provided that they do not form
107 a means of rapidly transmitting fire from the native growth to any
108 structure.
 - 109 ii. When approved by the Fire Chief or his/her designee, grass and
110 other vegetation located more than 30 feet (9144 mm) from
111 buildings or structures less than 18 inches (457 mm) in height
112 above the ground need not be removed where necessary to stabilize
113 soil and prevent erosion.
- 114 2. Commencing May 1, 2020, clear and create hardscape (gravel, concrete, brick,
115 pavers or bare ground) within the first 3 feet surrounding any residential or
116 commercial structure.

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- a. Exceptions:
 - i. Succulents, which are defined as drought resistant plants with water storing properties, may be planted within the first 3 feet surrounding any residential or commercial structure.
 - ii. When approved by the Fire Chief or his/her designee, single specimens of trees, ornamental shrubbery or similar plants used as ground covers need not be removed, provided that they do not form a means of rapidly transmitting fire from the native growth to any structure.
- 3. Remove piles of accumulated dead vegetation on the property.
- 4. Cut and remove tree limbs that overhang wood decks and roofs.
- 5. Remove that portion of any tree which extends within 10 feet of any chimney or stovepipe.
- 6. Clean any leaves and needles from roof and gutters.
- 7. Raise the crowns of all trees by cutting and removing growth less than 3-inches in diameter, from the ground up to a maximum height of 10 feet, provided that no crown shall be raised to a point so as to remove branches from more than the lower one-third of the tree's total height.
- 8. Vegetation clearance requirements for new construction and substantial remodels in Wildland-Urban Interface Areas shall be in accordance with the 2006 International Wildland-Urban Interface Code, as amended by the City of Mill Valley."

SECTION 3. Severability. If any section, subsection, sentence, clause, phrase or portion of this ordinance is for any reason held to be invalid or unconstitutional by the decision of any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this ordinance. The City Council of the City of Mill Valley hereby declares that it would have adopted this ordinance and each section, subsection, clause, phrase, or portion thereof irrespective of the fact that any one or more sections, subsections, clauses, phrases, or portions thereof may be declared invalid or unconstitutional and, to that end, the provisions hereof are hereby declared severable.

SECTION 4. CEQA. The City Council of the City of Mill Valley finds that the adoption of this ordinance is exempt from the California Environmental Quality Act pursuant to Section 15061(b)(3) of Title 14 of the California Code of Regulations because it has no potential for causing a significant effect on the environment.

SECTION 5. Effective Date and Publication. This ordinance shall become effective thirty (30) days after its adoption. The City Clerk shall certify to the adoption of this Ordinance and shall cause the same to be published or posted in the manner prescribed by law.

SECTION 6. The City Clerk is hereby directed to cause a copy of this ordinance to be filed with the California Building Standards Commission as required by Health and Safety Code Section 17958.7.

INTRODUCED at a regular meeting of the City Council of the City of Mill Valley on the ____ day of _____ 2019, and

165 **PASSED AND ADOPTED** at a regular meeting of the City Council of the City of Mill Valley
166 on this ____ day of _____ 2019, by the following vote:

167

168 AYES:

169 NOES:

170 ABSENT:

171

172

173

Jim Wickham, Mayor

174 Attest:

175

176

177 Kelsey Rogers, City Clerk/Administrative Assistant

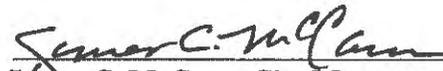
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STAFF REPORT

TO: Mayor and City Council
FROM: Fire Chief Tom Welch
SUBJECT: Fire Preparedness and Prevention Overview and Recommendations
DATE: February 5, 2018

Approved for Forwarding:


James C. McCann, City Manager

- 1 **Issue:**
2
3 Comprehensive review of wildfire community preparedness, prevention and
4 recommendations based on recent destructive fires.
5
6 **Recommendation:**
7
8 Receive report, discuss and provide direction as appropriate.
9
10 **Background:**
11 This report outlines several of the risks associated with our community, specifically those
12 areas located within the wildland urban interface (WUI). The City of Mill Valley has
13 under-taken a number steps to mitigate the wildfire risks within our community and there
14 are additional practical actions recommended in this report. In short, these actions focus
15 on improving the survivability of residential structures due to wildfire, enhance access
16 and egress as well outlining educational campaigns underway and proposed throughout
17 the neighborhoods. Although we are not requesting action on any one of the
18 recommendations listed below tonight, we do desire feedback and direction as several of
19 the concepts are complex and will require additional outreach, program and budget
20 development.

**City Council Staff Report
City of Mill Valley Vegetation Management Program: An Improved Approach
February 5, 2018**

21 The fire environment is changing
22 for California and Mill Valley. Our
23 fire seasons are longer, more intense
24 and increasingly more destructive
25 than ever before. We are susceptible
26 to fires year-round, but fires that
27 occur in fall are especially
28 dangerous. The effects of hot, dry
29 temperatures during the summer
30 worsen in later months due to hot
31 dry winds from the Sacramento
32 Valley. Known as North Winds or
33 Diablo Winds in Northern
34 California, these powerful warm winds cause fires to spread faster and be sustained for
35 longer time periods. The frequency of these wind events coupled with unpredictable
36 winters lend themselves to the fact that our environment is changing. The California fire
37 seasons are deadlier too. Eight of the 10 deadliest fires burned during the Fall season. The
38 wine country fires in October were the deadliest in state history.
39



For the last century, the City of Mill Valley has been involved in vegetation management by way of clearing fire roads for emergency access into the watershed areas or clearing of city properties. For the last 22 years, we have maintained a very aggressive approach to vegetation management, fire

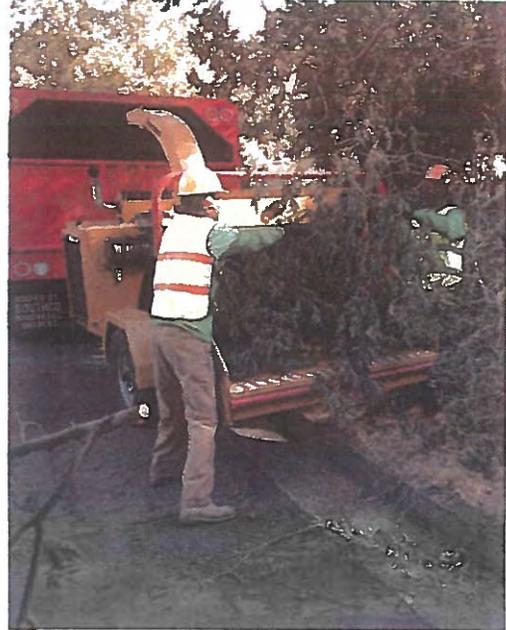
51 preparedness/prevention and continue to be a leader within the region. Our assertive
52 approach was spawned from the devastation witnessed in the Oakland Hills Fire (1991)
53 and then improved upon by studying the effects of the Mount Vision Fire (1995) in West
54 Marin County. The most recent fire season (Tubbs, Nuns and Thomas Fires in Sonoma,
55 Napa and Ventura/Santa Barbara Counties) has demonstrated in spectacular fashion our
56 need to evaluate and adjust current programs and policies as well as develop new ones
57 geared towards reducing risk and improving survivability.
58

59 To understand the proposed changes, it is essential to understand the history of our efforts
60 and our journey to get there. In 1996, the Mill Valley Fire Department's Vegetation
61 Management Program began as a result of the Mt. Vision Fire, Oakland Hills Fire and the
62 subsequent Perry Report. The Perry Report (1984) was science-based approach
63 commissioned by the Mill Valley City Council focusing on the wildland fire problem
64 within the community. The report made several recommendations to include:

- 65 • Build homes smartly within the wildland urban interface;
- 66 • Establish fuels management programs in fire prone areas;

City Council Staff Report
City of Mill Valley Vegetation Management Program: An Improved Approach
February 5, 2018

- 67 • Require vegetation management plans for new construction;
- 68 • Identify funding for future programs;
- 69 • Develop a plan to improve visibility of
- 70 address numbers;
- 71 • Purchase and maintain a wildland fire
- 72 engine;
- 73 • Develop an information sheet(s) that
- 74 focusses on vegetation management
- 75 techniques;
- 76 • Evaluate and develop policies for
- 77 roadside parking;
- 78 • Contract for a fire suppression
- 79 helicopter;
- 80 • Conduct roadside vegetation
- 81 maintenance;
- 82 • Conduct Incident Command Systems
- 83 Training for the FD;
- 84 • Conduct informational campaign with
- 85 local TV and news print;
- 86 • Purchase 2 portable weather stations;
- 87



88 The City moved quickly to implement many of the items in the Perry Report and to
 89 identify other hazards that existed in Mill Valley. A prioritized list was created, and the
 90 City established a modest budget (approximately \$73,000) for vegetation management
 91 projects. As a result, the following projects began and were later made possible through
 92 the creation of the Municipal Services Tax:
 93



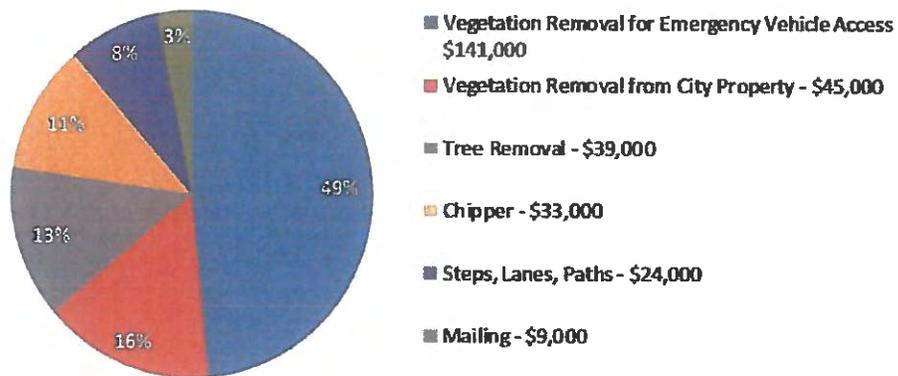
- 94 • Purchase of a new Type III wildland fire engine;
- Removal of encroaching vegetation on paved roads;
- Removal of Oak trees suffering from Sudden Oak Death;
- Removal of Bay, Acacia, Pine and other non-native highly flammable trees on public lands;
- Creation of fuel breaks/buffer zones along the ridges in Mill Valley creating an essential “ring
- 107 around Mill Valley”;
- 108 • Creation and maintenance of Steps, Lanes and Paths;
- 109 • Neighborhood chipper programs;
- 110 • Creation of public education material such as newsletters.
- 111

City Council Staff Report
City of Mill Valley Vegetation Management Program: An Improved Approach
February 5, 2018

112 In 1997 (and later reaffirmed in 2016), the City successfully passed a Municipal Service
 113 Tax (MST) and a Community Facilities District (CFD) was formed. This allowed a
 114 funding mechanism for operating expenses to be incurred by the City for ongoing
 115 municipal service activities including, but not limited to: improve the condition of City
 116 streets and storm drains, reduce fire hazards, and shorten emergency response times.

117
 118 With the passing of this Municipal Service Tax, the funding for Mill Valley’s Vegetation
 119 Management Program increased from a onetime budget allocation of \$73,000.00 to
 120 \$150,000.00. The City subsequently increased the budget to \$300,000.00 through a
 121 resident approval of a subsequent and more substantial parcel tax measure. This increase
 122 has allowed for a substantially larger number of projects that greatly benefit the City,
 123 while following guidelines set forth in Resolution 16-39.
 124

Annual Funding for Vegetation Management



125 Since 1996, the City of Mill Valley’s Vegetation Management Program has maintained
 126 all original vegetation projects as well as expanded into other projects that enhance
 127 community safety. Vegetation management examples include:

- 128
- 129 • Large neighborhood chipper projects;
 - 130 • Wide area fuel breaks in Open Space preserves that surround Mill Valley;
 - 131 • Fire resistive demonstration garden;
 - 132 • Defensible space DVD played throughout the year at the Sequoia Theater;
 - 133 • Strategic removal of Eucalyptus trees. The Eucalyptus is then recycled and
 134 milled for treads on Steps, Lanes and Paths projects;
 - 135 • Strategic removal of Pines, Acacia, Bay and other non-native trees on public
 136 lands;
 - 137 • Vegetation reduction along the fire roads surrounding Mill Valley;
 - 138 • Creation and installation of fire road signage for mutual aid resources, hikers and
 139 mountain bikers on all fire roads surrounding Mill Valley;
 - 140 • Development and delivery of public educational materials, poster boards,
 141 newsletters and informational pieces;

City Council Staff Report
City of Mill Valley Vegetation Management Program: An Improved Approach
February 5, 2018

- 142 • Vegetation removed during monthly paved road fuel reduction projects;
- 143 • Hazard Assessment Program designed to assist residents who are threatened with
- 144 fire insurance cancellations. Approximately half of all insurance cancellations
- 145 have been reversed;
- 146 • Partnerships in fire fuel reduction with external stakeholders such as Cal Trans,
- 147 PG&E, Marin County Open Space, Marin Municipal Water District, Marin
- 148 County Fire Department and Union Pacific Railroad;
- 149 • Clearing of City owned property
- 150 • Delivery of regular and frequent National Fire Protection Association's Hazard
- 151 Recognition in the Wildland Urban Interface class for residents;
- 152 • Developed a defensible space internet based mobile phone application allowing
- 153 residents to determine defensible space zones on their property;
- 154 • Creation of five (5) nationally recognized Firewise Communities with more in the
- 155 works;
- 156 • Construction of a mid-slope fuel break on Fern Canyon, Corte Madera and
- 157 Blithedale ridges among other locations;
- 158 • Partnerships with Home Owner Associations to create Firewise Communities;
- 159 • Vegetation management of steps, Lanes and Paths (SLP) throughout the
- 160 community. All improved SLP's are cleared twice a year so as to enable swift
- 161 evacuation by foot;
- 162

163 As of 1996, the Vegetation Management Program has removed approximately 6700 tons
164 of flammable vegetation from Mill Valley. Mill Valley is extremely fortunate to have the
165 Municipal Service Tax and is improving our condition through fuels management
166 annually. Without this regular funding source, the programs listed above would not be
167 possible in a regular and sustained manner.

168
169 As noted above, the City of Mill Valley focused on the regional disasters, developed
170 plans to reduce risk, implemented programs and have maintained said programs. The
171 City of Mill Valley is now evaluating and adapting to changing conditions. We are now
172 developing new plans and implementing new programs.

173
174 **Discussion:**

175
176 The City of Mill Valley should be proud of its accomplishments. Our fire department is
177 an Insurance Services Office (ISO) Property Protection Class 1 fire department. We have
178 received awards from the California Emergency Services Association for our work in
179 community evacuation planning and drills. We are leading the way in developing and
180 organizing our Community Emergency Response Teams as well as providing
181 preparedness education to our community. With the above noted items, we want to go
182 farther, increase our safety while maintaining the character of our community. The City
183 of Mill Valley is a progressive leader in prevention and preparedness and will continue to
184 lead the way.

185

City Council Staff Report
City of Mill Valley Vegetation Management Program: An Improved Approach
February 5, 2018

186 On October 8, 2017 the Tubbs Fire started just outside of Calistoga, CA (Napa County).
187 Under oppressive Red Flag wind conditions, the fire burned 36,807 acres through Mark-
188 West Springs Canyon and into Santa Rosa City proper destroying 6,957 structures and
189 killing 22 citizens. During the same time period, Marin County was under Red Flag
190 conditions due to winds and low humidity. All of the elements for a catastrophic incident
191 were present in Marin County short of an ignition source.



192
193 On October 31, 2017, the Mill Valley Emergency Preparedness Commission visited the
194 Tubbs and Nuns Fires with a focus on:
195 1. Lessons learned
196 2. Community preparedness and community outreach
197 3. Prevention and mitigation



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211 On November 15, 2017, the Mill Valley City Council toured the Tubbs and Nuns Fires
212 with a focus on:

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- 213 1. Policy and programs
214 2. Emergency response and evacuation
215 3. Community risk reduction/mitigation
216 4. Recovery

217 Immediately following the visits, the City of Mill
218 Valley hosted a Special Meeting that was well
219 attended by the community. The focus of the
220 meeting centered on lessons learned from the
221 Sonoma/Napa Fire Siege, a re-affirmation of
222 strategies such as defensible space to protect
223 residential structures as well as general preparedness items.
224

225 During the winter of 2016, the City of Mill Valley was a participating agency in the
226 development of the Marin County Community Wildfire Protection Plan (CWPP). The
227 Marin County CWPP is a plan to help reduce wildfire hazards through a hazard and risk
228 assessment, and forward leaning collaboration among diverse stakeholders. A science-
229 based hazard and risk assessment tool, the CWPP used state of the art, high resolution
230 topography and fuels information as well as historical weather data to identify and assess
231 areas of concern throughout the county. In development, prioritization of areas occurred
232 where wildfire threat is greatest. Hazard mitigation strategies were analyzed to address
233 specific issues in the areas of greatest concern. The CWPP's collaborative and integrated
234 approach to hazard mitigation includes the following strategies:

- 235 ● Pre-fire planning.
236 ● Public education and outreach
237 to promote and implement fire adapted community practices.
238 ● Vegetation management and fuel reduction at the county and community levels.
239 ● Reducing structure ignitability
240 by promoting and enforcing
241 building codes,
242 ordinances, and statutes.
243 ● Provides a framework for future
244 collaboration that can be used to
245 identify,
246 prioritize, implement, and
247 monitor hazard reduction activities
248 throughout the
249 county.
250 ● CWPPs provide access to
251 Federal and State grant funds.
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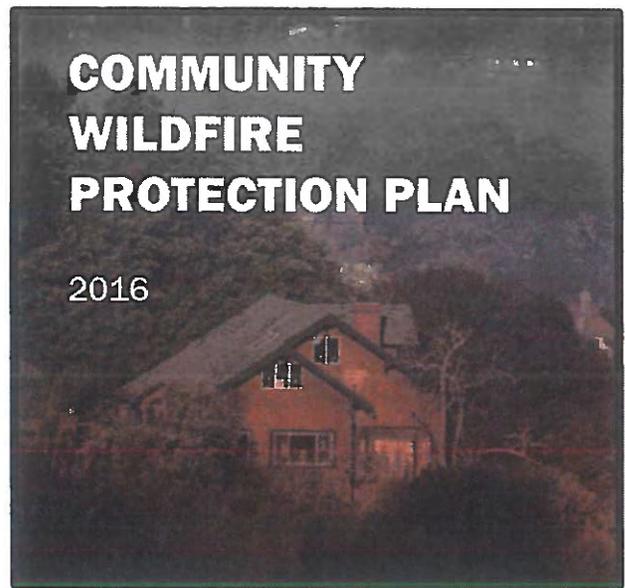
253 Various elements of the CWPP add to the
254 scientific horsepower necessary for
255 bringing the proposed recommendations
256 forward. See Attachment 3 to review in
257 detail the components of the CWPP.
258

SPECIAL MEETING

**IS MILL VALLEY
READY?**

LESSONS LEARNED FROM THE SONOMA & NAPA FIRES

THURSDAY, NOVEMBER 16 7:00PM - 8:30PM



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Recommendations:

The recommendations below are being advanced due to our changing wildfire environment and is based on lessons learned from the catastrophic Sonoma/Napa County fires. They are presented to both passively and actively improve the odds of survival for residential structures during a wildland fire, reduce/mitigate risks associated with community evacuation as well as provide education for the public and staff. Several of the recommendations are in concept and will require additional planning, budgeting and implementation.

Recommendation 1 – Building Codes, Standards and Structural ignitability:

Currently: In the Wildland Urban Interface (WUI) areas, home owners can change their external siding, windows and outside elements such as decks without improving the ignition resistance of the changes. Currently, new construction in the WUI is required to comply with modern ignition resistive construction. The above listed items are not exhaustive nor complete, but they represent the obvious ones based on our knowledge of vulnerabilities and the lessons recently learned.



Recommendation: Change the Municipal Code to require upgrades of areas under construction in the built environment. For instance, the home owner changes windows out on their home, the City would require that the newly installed windows are

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compliant with WUI construction standards. The same is true for siding. If the homeowner is changing out the siding, the City would require that all new siding would be compliant with WUI construction standards. The ignition resistive improvements would be limited to the homeowner's areas of work.

Outcome: A process that improves the ignition resistive featured of already built homes within the WUI areas. This code update passively improves the ignition resistance and WUI compliance of built homes. Depending on the scope of the project, we estimate a 10% - 20% increase in construction costs associated with this recommendation.

Timeline: Staff would start the process necessary ordinance changes starting March/April 2018.

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305 Recommendation 2 – Hazardous Fuel Reduction:

306

307 **Currently:** The Mill Valley Fire
308 Department conducts vegetation
309 inspections on over 5000 parcels
310 covering 1800 acres within the WUI
311 area. Our inspections center on the
312 proper maintenance of existing trees,
313 shrubs, grasses among several other
314 items in an effort to reduce fire hazards,
315 increase access and enhance evacuation
316 efforts. Our current program does not
317 call for the regulation of pyrophytic
318 plantings/species such as bamboo,
319 acacia, cypress and juniper. Nor does our current regulation prohibit residents from
320 planting of these varieties at or near their homes.



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322

The City of Mill Valley provides budgets to enable the removal of Eucalyptus trees on public lands. The Department of Public works has identified, categorized and prioritized the removal of this particularly invasive and pyrophytic tree (see Attachment 1). Our removal program has focused on strategically removing trees in a prioritized way.

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The City is already an aggressive supporter of wide area and ridge top fuel breaks with our adjacent land managers (Marin Municipal Water District, Marin County Open Space and Parks). Continued support of the judicious use of Integrated Pest Management (IPM) techniques, including the use of herbicides are necessary to reduce the progression of pyrophytic French Broom on Mount Tamalpais is recommended.

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Recommendation: Change the City of Mill Valley’s Municipal Code to regulate plantings within 5’ of a residential structure in addition to the eradication of all Bamboo, Acacia, Cypress and Juniper species from within 15’ of a residential structure located within the WUI area.

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- Develop a program to facilitate this recommendation
- o Timeline
 - o Outreach strategy
 - o Budget
 - o Staffing



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Establish a goal of removing 3-5 Eucalyptus per year from public properties.

Outcome: A substantial reduction of pyrophytic plantings directly adjacent to homes within the WUI improves the survivability of homes. This is accomplished by substantially reducing the most receptive fuel beds available to receive embers and propagate fire adjacent to the residences.

Timeline: Staff would start the process of necessary ordinance changes by March 2018. Staff would also develop program/budgets associated with the goals established in the recommendations.

Recommendation 3 – Evacuation Concepts:

Currently: The City of Mill Valley manages vegetation at the edge of pavement on all primary and secondary evacuation roads. This is accomplished by way of funds provided through the MST.

Access and egress routes such as found on Cascade Ave and W. Blithedale have large clusters of trees that delay emergency response due to the need to negotiate tree obstacles. The trees are growing larger every year, thus creating more challenges.

The age and design of current infrastructure creates challenges for modern day fire engines. The City Council supports the redesign of problem areas to improve response times. Recently, we completed such an improvement project at the intersection of Marion and Monte Vista with several more in design and development to include:

- Marion/Hazel
- Hazel/Rose



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- Lee St./Quarry Rd

Recommendation: Expand/widen vegetation removal to include the entire City right of way along evacuation routes. Tree crown spacing would be increased to further disrupt the continuity of the canopy thus diminishing the opportunity for sustained crown fires. The recommendations would come to fruition by managing vegetation removal prescriptions along selected corridors key to access and evacuation.

Accelerate the design and construction of fire access and evacuation route enhancement projects with a goal to complete one project a year as funding/logistics allows. Evaluate and develop a community supported plan to mitigate trees that hinder access/egress on Cascade, W. Blithedale and other critical routes. This would be done in a manner that balances community desires while ensuring and retaining emergency access/egress.

Fire and Police departments throughout Marin County and within the City have substantial plans/frameworks to conduct community evacuations during an emergency. The City of Mill Valley has practiced these concepts for the last 12 years by hosting neighborhood evacuation drills. It is a recommendation that the Fire/Police department consolidate all community outreach materials into one comprehensive community wildfire evacuation informational pamphlet.



Outcome: Improved emergency response times and more effective evacuation routes will result by creating larger vegetation buffers on critical routes, thus enhancing our infrastructure capacity during an emergency response or evacuation.

Timeline: With budget adjustments, enhanced clearing of vegetation and widening of crown spacing on selected street segments can begin promptly. Budget adjustments and additional program details would come back to the City Council April of 2018 to allow for work to occur prior to the 2018 wildfire season.

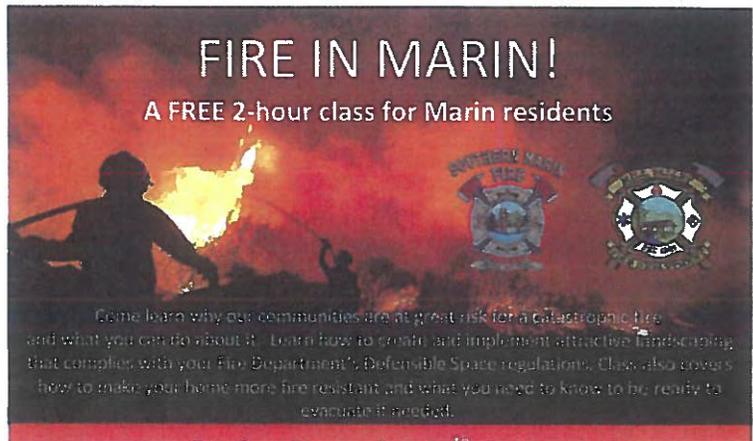
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443 Recommendation 4 - Public Education:

444 **Currently:** The Mill Valley Fire Department conducts educational
445 opportunities by way of several sources, mediums and platforms. We
446 have contemporary educational content located on the City's website. The
447 Mill Valley Fire Department has developed several videos that focus on
448 vegetation management and evacuation concepts for all residents. We
449 provide various mailings and have developed a smart phone application
450 that illustrates the processes home owners can undertake to improve their
451 homes survivability. Finally, we offer/support several classes for residents
452 throughout the year to include the *Fire in Marin Class*, the National Fire
453 Protection Association's *Hazard Recognition in the Wildland Urban*
454 *Interface class* and *Get Ready*.

455
456 **Recommendation:** Mill Valley Fire and Police Department would jointly
457 consolidate all educational materials associated with evacuation and
458 vegetation management into one City of Mill Valley Evacuation
459 information pamphlet. Separately, the Mill Valley Fire Department will
460 continue to support the classes currently offered. We will develop new
461 programs that focus on structural ignitability and residential survivability.

462
463 Continue with
464 the plan of not
465 hosting a
466 neighborhood
467 evacuation drill
468 for 2018 in lieu
469 of our effort to
470 work directly
471 with
472 neighborhoods
473 on preparedness,
474 prevention,
475 evacuation and
476 home survival.



477 This program will be a great first step towards neighborhood organizing,
478 neighbors-helping-neighbors and evacuation concepts.

479
480 **Outcome:** Enhanced understanding of risks associated with wildfire
481 throughout the community. Improved clarity surrounding the
482 responsibilities of the home owner and that of the City.

483
484 **Timeline:** Completion of the Evacuation informational pamphlet draft
485 will be presented to City Council early summer for a 2018 fire season roll-
486 out to the community. Neighborhood planning meetings are underway
487 with a goal to complete all neighborhoods by April 2018.

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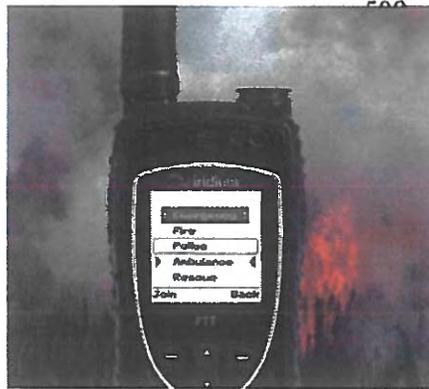
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489 Recommendation 5 – Communications:

490 **Currently:** The City of Mill Valley has a number of methods available to
491 reach the affected community in an emergency. These methods include:
492 Alert Marin, reverse 911, Wireless Emergency Alerts (WEA)
493 neighborhood sirens, Facebook, Nixle, Twitter, email and City News web
494 postings. We use the appropriate methods to notify residents of an actual
495 emergency or provide information about an escalating situation such as
496 Red Flag Warnings. During the Tubbs/Nuns fires a gap was identified due
497 to the destruction of infrastructure such as cellular towers causing
498 communication delays. The Mill Valley EOC does have a limited
499 capability/supply of satellite phones with no satellite phones currently in
500 the hands of our Battalion Chiefs, Police Sergeants or key administrative
501 staff.

502
503 **Recommendation:** Provide satellite capable phones to field supervisors,
504 chief officers and key response staff. Evaluate opportunities for voice
505 command amplifiers to replace generic sirens in the canyons such as the
506 Long Range Acoustic Devices (LRAD). The LRAD devices can act as
507 sirens and have the capability of being modifiable and addressable.

508



509 The City of Mill Valley needs to
continue our comprehensive
promotion of Alert Marin, Twitter
and Nixle communication tools.

Outcome: The outcome is an
enhancement of our internal and
external suite of tools necessary to
reach all segments of our population
prior to, during and immediately
following an emergency.

521 **Timeline:** Enhancements to communications such as Alert Marin, Nixle,
522 Twitter and Facebook are largely underway. Additional research and
523 development is required to understand the application of the LRAD
524 system within our community. We will have a better understanding of the
525 feasibility by budget time 2018.

526

527 Recommendation 6 – Staff Training.

528 **Currently:** Staff training specific to working in the Emergency
529 Operations Center (EOC) occurs approximately 2 times a year. Limited
530 specialized training is attended throughout the year such as training
531 specific to the Plans Section Chief or Logistics, both functions found
532 within the EOC.

533

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534 **Recommendation:** Provide, assign and encourage key staff to attend
 535 specific training to their assigned areas within the EOC.
 536

537 **Outcome:** An enhanced knowledge and understanding relative to the
 538 operations of the EOC.
 539

540 **Timeline:** Budget development begins immediately to support EOC
 541 educational opportunities. A full program and budget will be ready for
 542 evaluation during the budget process 2018.
 543

544 In concept, the above listed recommendations have been reviewed by the Emergency
 545 Preparedness Commission. Additionally, the concepts have been reviewed and are
 546 supported by the Mill Valley Police Department, Building/Planning Department and the
 547 Department of Public Works.
 548

549 **CONCLUSION:**

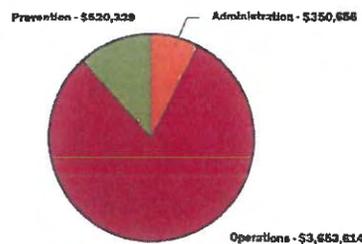
550 Immediately, following the Oakland fire and Mt. Vision fires, the City of Mill Valley
 551 took aggressive action to limit the risks to our community from the threat of wildfire.
 552 These actions were grounded in scientific evaluation and continue to be maintained to
 553 this day. Today, due to the lessons learned from the 2017 fire season, we are providing a
 554 number of recommendations that are again grounded in the science of the Marin County
 555 Community Wildfire Protection Plan. The above recommendations are in alignment with
 556 the Mill Valley Master plan as well as several of the City Council’s core values:

- 557 • The health and safety of residents;
- 558 • A healthy natural environment with emphasis on conservation, open space,
 559 climate protection and sustainability;
- 560 • Operational excellence;

561 **Fiscal Impact:**

562 The fiscal impacts of each recommendation require a more in-depth evaluation and will
 563 be brought back to Council as each recommendation is selected and moves forward.
 564 Some of the items will have little fiscal impact on the City and can be covered in the
 565 maintenance and operations budget. It is anticipated that several of the recommendations
 566 will require position changes within the Fire and Public Works budgets. Those will
 567 specifically be brought back to you based on the times identified in the recommendations
 568 or during budget development.
 569
 570

MILL VALLEY FIRE DEPARTMENT



By the Numbers:

FY 2016/2017 **\$4,852,917**
 FY 2017/2018 **\$5,006,498**
 Revenue **\$93,938/\$116,000**
 Number of Full Time Employees: **23**

Reducing your Home's Wildfire Risk

HOME:

1. Use metal vent screens with 1/8" mesh.
2. Keep wooden fencing and patio decks away from the house. Leave a gap or install flashing so fire will not spread from fencing or decks to the house.
3. Chimneys should be inspected and cleaned by professionals. A recommendation is to have your fireplace and chimney cleaned every two years if it used often.
4. **MAKE SURE THERE ARE WORKING SMOKE DETECTORS IN YOUR HOME.**
5. Have fire extinguishers and know how to use them.
6. Sweep your walkways, patios and decks regularly to remove leaves, needles and other combustible materials that may gather against your house.
7. Remove vegetative debris (leaves, pine needles, twigs) from your gutters and roof.
8. Remove combustible materials from under your deck.
9. Caulk any openings along the top or bottom of wall siding or around windows where gaps could allow embers to enter your home.
10. Store your deck furniture, children's toys and other combustible items inside if a wildfire threatens.

GARDEN:

1. Remove woody, fire prone vegetation, especially within the 0-5 foot "no fire" zone around your structure. Ivy, juniper, rosemary and other mature plants tend to have new growth on top of woody stems. Replace with stone mulch and drought tolerant plants that are easy to maintain at 6" high or less.
2. While there are no "fire-proof" plants, choose drought tolerant native plants that are low to the ground and have a low sap or resin content.
3. Choose fire retardant plant species that resist ignition such as rockrose, ice plant and aloe. Fire-resistant shrubs include hedging roses, bush honeysuckles, currant, cotoneaster, sumac and shrub apples.
4. Group plants by water needs. Create "islands" of plants with space in between.
5. Replace bare, weedy or unsightly patches near your home with ground cover, rock gardens, vegetable gardens and fire resistant mulches.
6. Mulch can help retain water, but be careful about the type of mulch. Mulch can be a fire hazard when it dries out. Rake it back by at least a foot from the side of your house and from combustible fencing. Consider using non-combustible mulch such as stones or gravel.
7. Remove fallen pine needles and leaves near structures to avoid fire embers igniting them. Do not allow leaves or mulch to exceed a depth of 3 inches within 30 feet of your house.
8. Create a separation between trees and shrubs – at least 10 feet on flat ground, greater on steep slope – to eliminate a "ladder" of fuels that can spread flames to tree crowns or structures.
9. Move flammable material such as stacked wood at least 30 feet from your home or other structure.
10. For both drought and wildfire prevention, remember that less is better and easier to maintain.

WEED ABATEMENT:

1. Properties need to be maintained throughout the year. You may need to provide additional abatement throughout the season.
2. Cut as soon as practical, once annual grasses have died and turned brown (typically May or early June). Mow before 10:00 a.m. with wind speed < 5 MPH.
3. Never mow during Fire Weather Watches or Red Flag Warnings.

HOW TO PREPARE YOUR HOME FOR WILDFIRES

WILDFIRE RISK REDUCTION STEPS THAT CAN MAKE YOUR HOME SAFER DURING A WILDFIRE



VEGETATION MANAGEMENT

1. HOME IGNITION ZONES

Limiting the amount of flammable vegetation, choosing fire-resistant building materials and construction techniques, along with periodic exterior maintenance in the three home ignition zones - increases the chances your home will survive a wildfire when exposed to embers and/or a surface fire. The zones include the **Immediate Zone**: 0 to 5 feet around the house; **Intermediate Zone**: 5 to 30 feet; and the **Extended Zone**: 30 to 100 feet.

2. LANDSCAPING AND MAINTENANCE

To reduce ember ignitions and fire spread, trim branches that overhang the home, porch and deck and prune branches of large trees up to (depending on their height) 6 to 10 feet from the ground. Remove plants containing resins, oils and waxes and ensure mulches in the **Immediate Zone** (0 to 5 feet around the house) are non-combustible options like crushed stone and gravel. Maintain vegetation annually.

FIRE RESISTIVE CONSTRUCTION

3. ROOFING AND VENTS

Class A fire-rated roofing products offer the best protection. Examples include: Composite shingles, metal, concrete and clay tiles. Inspect shingles or roof tiles and replace or repair those that are loose or missing to prevent ember penetration. Box-in eaves, but provide ventilation to prevent condensation and mildew. Roof and attic vents should be screened to prevent ember entry.

4. DECKS AND PORCHES

Never store flammable materials underneath decks or porches. Remove dead vegetation and debris from under decks/porches and between deck board joints.

5. SIDING AND WINDOWS

Embers can collect in small nooks and crannies and ignite combustible materials; radiant heat from flames can crack windows. Use fire-resistant siding such as brick, fiber-cement, plaster or stucco and dual-pane tempered glass windows.

6. EMERGENCY RESPONDER ACCESS

Ensure your home and neighborhood has legible and clearly marked street names and numbers. Driveways should be at least 12 feet wide with a vertical clearance of 15 feet, for emergency vehicle access.

BE PREPARED

Develop, discuss and practice an emergency action plan with everyone in your home. Include details for pets, large animals and livestock. Know two ways out of your neighborhood and have a pre-designated meeting place. Always evacuate if you feel it's unsafe to stay - don't wait to receive an emergency notification if you feel threatened from the fire.

Conduct an annual insurance policy check-up to adjust for local building costs, codes and new renovations. Create/update a home inventory to help settle claims faster.



OTHER CONSIDERATIONS

- Store firewood away from the home
- Mow the lawn regularly
- Prune low-hanging tree branches
- Landscape with fire-resistant plants
- Create small fuel breaks with hardscaping features

TALK TO YOUR LOCAL FORESTRY AGENCY OR FIRE DEPARTMENT TO LEARN MORE ABOUT THE SPECIFIC WILDFIRE RISK WHERE YOU LIVE.



FIREWISE USA™
RESIDENTS REDUCING WILDFIRE RISKS

VISIT FIREWISE.ORG FOR MORE DETAILS

Protect Your Home — Ten Things To Do Now

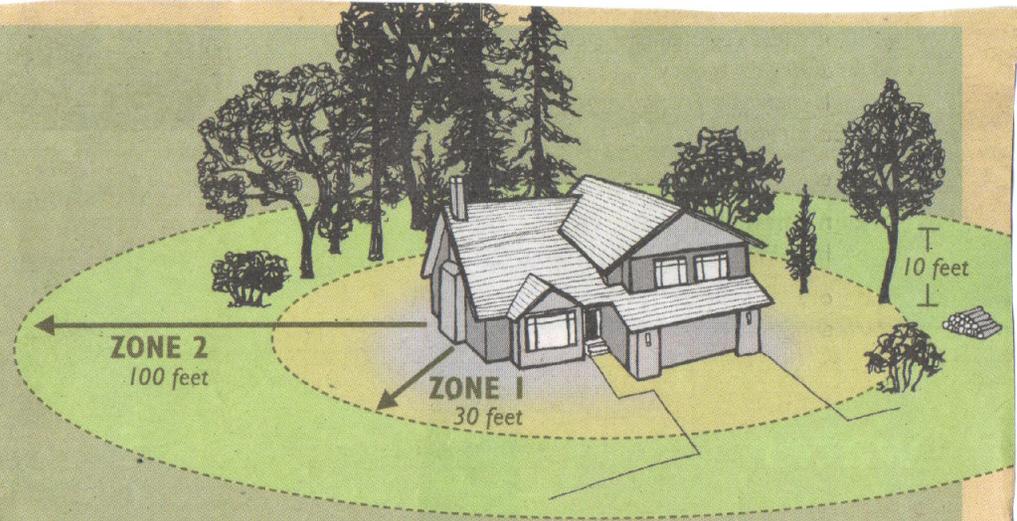
When tackling your own property, it's helpful to divide it into two zones. Here's what to do in 10 easy steps:

ZONE 1 — 30 Feet of Lean, Clean and Green

1. Remove all dead plants, grass, weeds, and overgrown brush.
2. Clear away leaves, needles, and debris from roofs and rain gutters.
3. Keep tree branches 10 feet away from chimney, roof, and other trees.
4. Move firewood and fuel tanks 30 feet away from house.
5. Remove all items from under deck. Do not use this space for storage.
6. Fire harden your home. Install fine wire mesh over roof, eave, and foundation vents.

ZONE 2 — 30 to 100 Feet of Reduced Fuel

7. Mow grass to a maximum of 4 inches. Mow before 10 a.m. and never on a hot, windy, or red-flag day.
8. Create vertical spacing between grass, shrubs, and trees. Trim trees 10 feet from the ground and 6 feet from other plants. Large trees do not need to be removed if the plants beneath them are removed. This eliminates the vertical fire ladder.
9. Create horizontal spacing between trees and shrubs.
10. Plant fire-resistant native plants.



Prepare to Evacuate — 3 Top Tips

Be prepared for the worst. Make a plan today for gathering family members, pets, and valuables in case an approaching wildfire requires evacuation. When an emergency happens, follow these three tips:

- Obey all evacuation orders. Learn different evacuation routes by vehicle or on foot.
- Do not wait to be told to evacuate. If you feel threatened, leave.
- Do not block the roads for fire engines and emergency personnel.

More Resources

Visit your local fire department's website for more information on defensible space requirements and evacuation procedures. The California Department of Forestry and Fire Protection, also known as CAL FIRE, has more tips on wildfire preparedness and an evacuation checklist at www.readyforwildfire.com.