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April 13, 2020

Ms. Marcie Edwards
Chair, Wildfire Safety Advisory Board
Members, Wildfire Safety Advisory Board

Cc: CPUC R.18-10-007 service list

Transmittal via email: wildfiresafetyadvisoryboard@cpuc.ca.gov and R.18-10-007 service list

RE: MUSSEY GRADE ROAD ALLIANCE COMMENTS REGARDING THE WSAB DRAFT RECOMMENDATIONS ON THE 2020 UTILITY WILDFIRE MITIGATION PLANS

Dear Ms. Edwards and Members of the Wildfire Safety Advisory Board:

I am writing to you on behalf of the Mussey Grade Road Alliance (MGRA or Alliance) in response to the notice posted on the Wildfire Safety Advisory Board (WSAB or Board) website, permitting the public to submit written comments regarding the WSAB's Draft Board Recommendations on the 2020 Utility Wildfire Mitigation Plans (WMPs) by April 13, 2020.

The Mussey Grade Road Alliance is a grass-roots citizen-based organization located on the wildland-urban interface in Ramona, California, established in 1999. MGRA has a deep commitment to the issue of wildfire safety in California. The Mussey Grade Road area was devastated in the 2003 Cedar Fire, losing two thirds of the homes within the fire perimeter. The Alliance became involved in California Public Utility Commission (CPUC) wildfire issues in 2006, opposing the SDG&E application for the Sunrise Powerlink transmission line on the basis of potential fire ignitions. During our intervention, we were again surrounded by fire, this time the 2007 Witch Fire, ignited by SDG&E equipment. MGRA's efforts to make a difference at the Commission with regard to wildfire safety were aided by our expert (and board member) Dr. Joseph

W. Mitchell, who, as a result of these experiences has published several academic articles in the areas of wildfire structure protection and utility-caused wildfire risk.¹

In our fourteen year history of interventions at the CPUC, the Alliance has been involved in numerous proceedings related to wildfire safety. A number of these are relevant to the 2020 WMPs and specifically to some of those that the Board has raised in its Draft Recommendations.

First and foremost, it was MGRA who proposed in 2009, as part of a CPUC rulemaking, that utilities develop fire plans that would allow them to react to the contingency of extreme winds in their service areas. We were opposed by every IOU and communications company during a years-long effort, with only LA County as an ally. Nevertheless, the Alliance prevailed, and the Commission adopted our proposal requiring utilities to develop fire prevention plans.² While utilities complied with the new requirement, the plans did not undergo substantive technical review by the Commission. The legislature made an attempt in 2016 (SB 1082, Hill) to require more substantive review of utility fire plans, but this law was not implemented by the Commission.³ It took the power line fire disasters of 2017 and 2018 to prompt government action and the passing of SB 901 and AB 1054. While these bills and the laws they enacted had a number of significant flaws they called for comprehensive fire plans and for their formal expert review.

Another initiative that was undertaken by MGRA in 2009 was to require utilities to submit fire ignition data to the CPUC, which up to that time only SDG&E had been collecting for its own use. Again, we were opposed by all utilities but prevailed, and as a result the current WMPs provide several years of ignition data. Other metrics are now available for analysis as well, a point which the WSAB noted in its Recommendations. Additional successful MGRA initiatives dating back to 2009 include:

¹Mitchell, J.W., 2006. Wind-enabled ember dousing. *Fire Safety Journal* 41, 444–458.

<https://doi.org/10.1016/j.firesaf.2006.04.002>

Mitchell, J.W., 2009. Power lines and catastrophic wildland fire in southern California, in: *Proceedings of the 11th International Conference on Fire and Materials*. Citeseer, pp. 225–238.

Mitchell, J.W., 2013. Power line failures and catastrophic wildfires under extreme weather conditions. *Engineering Failure Analysis*, Special issue on ICEFA V- Part 1 35, 726–735.

<https://doi.org/10.1016/j.engfailanal.2013.07.006>

² D.12-01-032; pp. 45-55; A-26.

³ “State utility regulators delayed implementing 2016 law aimed at preventing wildfires”; Jeff McDonald; *San Diego Union Tribune*; December 10, 2018. <https://www.sandiegouniontribune.com/news/watchdog/sd-me-powerline-wildfires-utility-mitigation-plans-20181210-story.html> ; Downloaded 12/30/18.

- A proposal for a statewide utility fire-threat map, which was developed by CALFIRE and the Commission and released in 2017. The map is the origin of the High Fire Threat Districts (HFTDs) referred to in the 2020 WMPs and in the WSAB recommendations.
- Successful opposition to SDG&E’s 2009 proposal to expand its trim radius to 25 feet. This aggressive vegetation management is an issue once more in the 2020 WMP, about which the WSAB raises concerns in its recommendations.
- The inclusion of a cost/benefit analysis in the consideration of power shutoff thresholds, again another question that the Board also raises in its recommendation that risk-spend efficiencies be properly calculated for “PSPS” wildfire mitigation.

MGRA remains actively involved in utility wildfire safety issues, and participated in the 2019 and 2020 WMP reviews, as well as the ongoing utility power shutoff proceedings. Citations to some of our previous activities can be found in our 2020 WMP Comments.⁴

Regarding the Board’s Recommendations, we note that they are very brief considering the massive amount of information and data provided by the IOUs in the 2020 WMPs and accompanying data requests. This is not surprising given the very short period of time for review provided by statutory law regarding the WMPs. Inadequate review time is an issue that the Alliance and other intervenors have raised repeatedly at both the CPUC and California government levels. Such a brief review period has the effect (either intentional or unintentional) of giving wide latitude to the IOUs in charting their wildfire mitigation strategies, even though history has repeatedly shown us that robust regulation is needed. Our recommendation to the Board, then, is the same as that which we made to the Wildfire Safety Division (WSD): Review of the 2020 WMPs and the data accompanying them should not stop with plan approval. This year’s WMPs should be reviewed contemporaneously with implementation, with an eye to improvements to be made in future years. Plan approval must not be a “Get out of Jail Free” card issued periodically to IOUs with a bureaucratic imprimatur and a minimum of oversight.

As with so many life and death issues, the sense of urgency – nay emergency – required to save lives and improve the safety of electrical provision in California can unintentionally become a

⁴ MGRA’s 2020 WMP comments can be found on the Wildfire Safety Division website: <ftp://ftp.cpuc.ca.gov/WMP/PublicComments/Mussey%20Grade%20Comments%202020%20WMP.pdf>

bureaucratic exercise with even the words used to describe and fix the problem unintentionally masking the human suffering and destruction of the natural world that occurs when things go very wrong. California is an engine of economic prosperity, technological advances, creative initiatives and the largest state population in an absolutely gorgeous natural environment. Yet California, known for all of this, is even more widely known for catastrophic, destructive, and killing fires ignited by utility equipment. These two visions of California are at odds with each other. Either we are a state of innovation, leading the nation, or we are a state of disasters that in our most recent history are man-made. If we do not get this problem solved, one of the state's greatest challenges, we will not be ready for an even more uncertain future, which includes increasing frequency of catastrophic fires due to climate change.⁵ We must get ahead of this problem so we can deal with the doubling of fall fire-threat days, which will only be amplified in the future absent a major national shift to deal with global climate issues.

The Board will find comments by the Alliance expert, Dr. Joseph Mitchell, in the remainder of this document. Generally, Dr. Mitchell finds no fundamental issues with the Board's Recommendations (aside from their brevity), but there are some important considerations that need to be taken into account for some of the Recommendations, and improvements are suggested. Also, we would ask the Board to address one glaring gap: that a post-mortem review process needs to be put into place to address structural and technical problems in the WSD templates and in the Capability Maturity Model (CMM). In the MGRA WMP comments, our expert noted a number of inconsistencies and errors due to poor or simply incorrect definitions and requirements, resulting in some reporting and metrics that are at the best useless and at the worst misleading and potentially dangerous.

We thank the Board for their efforts to improve California wildfire safety and urge them to incorporate MGRA's suggestions into their Recommendations.

⁵ See for instance: Goss, M., Swain, D.L., Abatzoglou, J.T., Sarhadi, A., Kolden, C., Williams, A.P., Duffenbaugh, N.S., 2020. Climate change is increasing the risk of extreme autumn wildfire conditions across California. *Environ. Res. Lett.*, Accepted Manuscript March 26, 2020; <https://doi.org/10.1088/1748-9326/ab83a7>

Respectfully submitted this 13th day of April, 2020,

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COMMENTS REGARDING THE WSAB DRAFT RECOMMENDATIONS ON THE 2020 WILDFIRE MITIGATION PLANS ON BEHALF OF THE MUSSEY GRADE ROAD ALLIANCE

The Mussey Grade Road Alliances' (MGRA or Alliance) comments on the Wildfire Safety Advisory Board's (WSAB or Board) recommendations on the 2020 wildfire mitigation plans (WMPs) are authored by MGRA's expert witness Joseph W. Mitchell, Ph.D.⁶

INTRODUCTION

Due to the sheer volume and complexity of the 2020 Wildfire Mitigation Plans provided by the IOUs, particularly combined with their data request responses and accompanying data, and the extremely short review period, it is difficult for any reviewer to provide input that fully scrutinizes these plans. All intervenors had to pick their topics, and even then, analysis was often not at a desirable depth. Our own WMP Comments stretched to 75 pages, with another 100 pages of utility responses to MGRA data requests.⁷ Even so, we don't consider it an adequate review.

The Wildfire Safety Advisory Board has had to "pick its battles" as well, and has selected a number of topics for review, and has provided high-level comments on them. The range of topics chosen is apparently matched with the expertise of board members and are generally well-informed. However, they lack depth and actual analysis of the significant quantity of data provided by the utilities in their WMPs and data request responses. Analysis of specific data related to specific, limited topics was presented in the MGRA Comments, and those of some other intervenors, but this raises the question of who is supposed to analyze the rest, and when. Having the Board provide an opinion on this topic would be useful.

We generally support the Board's set of recommendations with some caveats to be raised in these comments, and corrections suggested. The comments begin with general comments regarding overarching issues that should be addressed in the Board's recommendation. These are followed by comments on specific topics where applicable.

⁶ M-bar Technologies and Consulting, LLC; <http://www.mbartek.com>; Email: jwmitchell@mbartek.com. Dr. Mitchell is also a board member of the Mussey Grade Road Alliance.

⁷ <ftp://ftp.cpuc.ca.gov/WMP/PublicComments/Mussey%20Grade%20Comments%202020%20WMP.pdf>

GENERAL COMMENTS

A Review of the WMP Templates and CMM is Necessary

The WMP templates and accompanying Capability Maturity Model (CMM) questions were served the service list for CPUC proceeding R.18-10-007 on December 16, 2019.⁸ Parties were allowed to file comments on these templates by January 7, 2020. In addition to this short deadline over a holiday season, a 15 page limit was imposed on comments. Importantly, these comments were not used to revise the WMP templates or CMM, and IOUs were instructed to file their WMPs according to the original template and CMM questionnaire by February 7, 2020. The Commission is still reviewing party comments on the templates and plans to issue a ruling or decision regarding them.⁹

The templates and CMM questionnaire also need to be reviewed in light of their actual effectiveness in achieving the desired result in the IOU WMP/CMM submissions. Party comments were provided prior to the actual implementation, and in the light of the actual usage there are many comments that may be outdated, while others have been reified, and other gaps and problems have evinced themselves.

While the templates and CMM were an excellent start, and far superior to anything implemented previously in the history of utility fire prevention and mitigation plans, their broad scope and rapid deployment without adequate review has left many gaps, inconsistencies, and in some cases actual errors. A number of these were raised in the MGRA WMP comments, including:

- The “fire hazard” metric chosen (Red Flag Warning / mile – days) lacks correlation with utility leading indicators such as outages, wires down, and ignitions. (MRGA Comments, pp. 8-13)

⁸ R.18-10-007; ADMINISTRATIVE LAW JUDGE’S RULING ON WILDFIRE MITIGATION PLAN TEMPLATES AND RELATED MATERIAL AND ALLOWING COMMENT; December 16, 2019.

⁹ D.20-03-004; pp. 6-7: “The parties commented on the material on January 7, 2020. Those comments suggest several changes to the 2020 WMP Templates. Further, AB 1054 added Public Utilities Code Section 326.2, providing that the new Wildfire Safety Advisory Board (WSAB) established in Section 326.1 shall ‘Develop and make recommendations to the Wildfire Safety Division related to wildfire safety and mitigation performance metrics.’ Due to this new provision, there may be decisions updating the WMP Templates for 2021 in both this proceeding and in WSD’s review of the Wildfire Safety Advisory Board’s proposals. We expect at least one decision on the 2021 WMP Templates in this proceeding.”

- Incorrectly defined metrics, such as that for 95%/99% extreme wind speeds, leading to absurd and potentially dangerous results. (pp. 13-16)
- CMM questions with incorrectly scoped choices, leading to non-informative answers, such as that regarding GO 95 compliance. (pp. 65-72)
- CMM questions that can lead to maturity scores anti-correlated with actual safety maturity, such as customer complaint scores. (pp. 72-74)
- CMM questions that demonstrate a lack of familiarity with the subject domain, such as in regard to meteorology. (pp. 5-6)

It should be noted that utilities have also raised similar issues with definitions and CMM questions,¹⁰ and SDG&E also requests a review.¹¹ However, utilities are under regulatory obligations, and have provided some required metrics even when they are uninformative or yield useless results.

It is critically important that these issues be addressed as soon as possible, since many metrics will only have their value demonstrated after they've been collected over an extended period. If there are incorrect or biased metrics being collected now, these will continue to compromise our ability to improve utility safety for years going forward.

MGRA would therefore suggest that the WSAB request that WSD or the Commission initiate a review process for the templates and the CMM questionnaire. It would be optimal if the WSAB could be actively involved in this process. Stakeholder input is best incorporated using the Commission framework, since this guarantees due process for all stakeholders. A comment/reply format is recommended, since that allows a greater level of scrutiny than comments or workshops alone. A process that has worked well in Commission fire safety proceedings such as R.08-11-005 and R.15-05-006 incorporates workshops and comment/reply cycles. An example would be:

- WSD releases a list of draft revisions
- Stakeholders provide comments on the revisions and suggest additional revisions.

¹⁰ See for example SCE WMP; p. 7.

¹¹ San Diego Gas & Electric Company Interpretive Guide to 2020 Wildfire Mitigation Maturity Model Utility Survey; p. 2.

- Moderated workshops are held to address specific issues. (Panel workshops are not recommended for this purpose, since they don't allow all stakeholders to raise issues). Workshops can incorporate "voting" to inform regulators as to positions of stakeholders.
- A workshop report is released.
- Stakeholders comment on the workshop report.
- Stakeholders reply to the comments of other stakeholders.
- The regulator (WSD/Commission) issues its final set of revisions incorporating or addressing stakeholder suggestions as it deems appropriate.

While this process is somewhat time-consuming, it ensures that changes are fully and carefully reviewed. A curtailed method might be appropriate when there is great time urgency, such as the statutory deadlines set last year, but at some point these plans will need to be perfected and this process needs to start as soon as possible so as to not extend gaps, errors, and inefficiencies into the future.

MGRA COMMENT ON SPECIFIC RECOMMENDATIONS

3. SHARING DEVELOPING SCIENCE AND SITUATIONAL AWARENESS DATA

MGRA fully supports the Board's recommendations supporting public access to utility modelling data, and the concept of a statewide data and code repository.

Comments:

"As weather modeling capabilities increase, the data collected, and any new discoveries should be reported to the CPUC and shared with the scientific community."

The utilities did release some weather modelling and measurement data in their WMPs, data request responses, and accompanying GIS data. WSAB members should be aware that MGRA compared utility weather models over shared geographic ranges and found that the utility models differ substantially in their predictions. (MGRA Comments, pp. 50-65).

"For the developing wildfire science, there could be a state-wide, centralized data and situational awareness center..."

It is not clear from WSAB’s recommendation who should create and manage this repository. Should it be WSD, the UC system, or the Commission? Since WSAB serves at the direction of the governor and legislature, its recommendation should be couched in actionable language that would allow state functionaries to create appropriate directives or draft any required legislation.

“A commitment to work on integrating the data from each of the utilities’ proprietary technology into one central repository will increase the state’s ability to map common areas and anomalies unique to specific HFTDs.”

Incorporating the disparate utility data and metrics into a common reporting format will require collaboration between utilities and stakeholders to determine required fields, formats, and schema. Some of these activities are currently being undertaken as part of the Commission’s S-MAP proceeding, as per Commission Decision D.19-04-020. WSAB should recommend that the Commission and WSD unify their data reporting processes to create a unified process for data and model reporting. This will ensure that researchers will be able to directly compare utility data housed in a common repository.

“Submission of a postmortem and lessons learned to the CPUC describing the model results that inform and trigger PSPS events so that a deeper assessment of infrastructure damage and high wind events can be developed.”

MGRA fully supports this recommendation. In the proceeding R.18-12-005 MGRA has been urging the capturing of both wind data, both modelled and measured, so that it can be applied to infrastructure damage data from PSPS events. MGRA notes that in the PSPS data provided in WMP data requests, many utilities have provided geolocation data for their infrastructure damage.

4. FUTURE PROOFING UTILITY PILOTS AND ALIGNING PILOTS WITH CLIMATE GOALS

MGRA strongly supports the Board’s recommendation that WSD or the Commission require and review pilot implementation plans for new technologies.

MGRA suggests that WSD might also be requested to foster utility collaboration on identical or similar pilots so as to accelerate development and reduce development and evaluation costs.

5. FUEL MANAGEMENT, REMOVAL OF AT-RISK SPECIES, AND SCIENTIFIC REVIEW

MGRA supports the Board’s recommendation that WSD evaluate whether vegetation management programs undergo additional scientific review.

However, the recommendation and observations as presented regarding vegetation management do not provide adequate differentiation between utility tree trimming programs, which apply radial or “to the sky” trim requirements, and fuel treatment programs that treat lower lying ground vegetation along the utility right-of-way. Shrubland treatments, for instance, would fall into the latter category because most shrubland species have little to no contact potential for power lines. Utilities treat these as very different programs and they have different ecological effects. The WSAB may want to consider splitting this recommendation into two separate recommendations, one for each program, to eliminate any potential confusion on this point.

“Whether the fuel treatment programs that go beyond the 12-foot radial requirements follow best practices...” The WSAB should be aware that MGRA has been questioning the technical justification for SDG&E’s proposed 25 foot trim radius since 2009. As a result of MGRA data requests during the 2020 WMP process, SDG&E has finally released a publicly accessible set of vegetation outage data. Some of this data is analyzed in the MGRA comments (pp. 29-38), which find that the safety value of trimming healthy oak trees out to 25 feet is not supported by the data.

6. ANALYZING NEAR MISSES

“The information that could be collected for each incident or near miss that occurs during a PSPS event includes:

- weather conditions such as estimated wind speed;*
- damage found; and*
- cause of the damage while the line was de-energized.”*

MGRA strongly supports collection of this data, and we have been recommending the same in our comments on utility PSPS reports. As noted in the previous section, some of the requested data was supplied in utility GIS files provided in response to WSD data requests. The only missing component currently is wind speed, and it may be possible to cross-reference that from archived mesonet data.

9. ANALYZING FIRE MAPS TO EXCLUDE LINES FROM PSPS EVENTS

As noted in the introduction, MGRA were the initial proponents for the development of the utility-specific fire threat maps that designate the high fire threat districts, and we participated in the nine-year-long map development process. MGRA supports the Board's recommendation that utility infrastructure be analyzed with respect to the HFTD maps and urban area maps to determine whether further circuits might be excluded from PSPS. Presentations by utilities at the February WMP workshops and in their WMPs gives the impression that this analysis is active and ongoing, and that utilities are trying to apply measures that will lead to smaller PSPS footprints.

The WSAB may wish to offer more specific guidance to the WSD, including any identified circuits and urban areas that should be examined in detail.

10. RISK SPEND EFFICIENCY AND COSTS OF PSPS EVENTS

“The Wildfire Safety Division should consider whether the utilities factor into their risk spend efficiency calculations the risk and cost to customers that results from a PSPS event in addition to consideration of PSPS event wildfire risk reduction.”

MGRA has been involved in power shutoff proceedings since SDG&E's first application in 2008. We successfully advocated for the adoption of a cost/benefit analysis to determine whether shutoff was appropriate. D. 09-09-030 stated that: “The agreed-upon fire prevention program must be based on a cost-benefit analysis that demonstrates (1) the program will result in a net reduction in wildfire ignitions, and (2) the benefits of the program outweigh any costs, burdens, or risks the program imposes on customers and communities.” (p. 2) However, there was a loophole in this decision (which we supported), that would allow utilities to de-energize if they had reason to believe that their equipment was in immanent danger of igniting a fire. This exception became the

rule, and the rule was codified for all utilities in ESRB-8. Since then, “emergencies” have become commonplace, and PSPS is becoming the go-to strategy for utility wildfire prevention.

The inclusion of risk and risk/spend efficiency analysis in wildfire prevention planning re-introduces the opportunity to return de-energization to its proper place in the utility toolbox, by identifying exactly what that proper place is. In order to do this correctly, the “costs” of shutoff, in added risk of both fire and other harm, the increased vulnerability of populations under fire threat without means of communication, lighting or traffic signals, and the harm of shutoff itself to vulnerable populations needs to be quantified. The WSAB recognizes this fact in its recommendation.

However, the utilities most certainly don’t make this determination now, and almost certainly cannot be expected to do it properly. We know this because we (and other intervenors) have asked utilities this question and they have confirmed that customer harm (which they refer to as “secondary”) is not included in their risk or RSE analyses. (MGRA Comments, pp. 42-44)

The Board recommendation states that: *“These costs and risks should be factored in the utility analysis. The utilities should consider whether the risks to customers outweigh the risk reduction of initiating a PSPS event.”*

While we fully agree with this goal, the utilities cannot be expected to initiate this analysis and drive the process. The reason is that the utilities face a substantial moral hazard issue and should not be put in the position of making this determination. Economist Paul Krugman has defined moral hazard as “any situation in which one person makes the decision about how much risk to take, while someone else bears the cost if things go badly.”¹² Utility regulatory, criminal, and civil liabilities for PSPS are as yet undefined,¹³ and potentially limited in scope if they exist, whereas utility regulatory, criminal, and civil liabilities for wildfire are well-known and potentially catastrophic. Furthermore, if a utility were to fully explore and identify possible customer harm

¹² Krugman, Paul (2009). *The Return of Depression Economics and the Crisis of 2008*. W.W. Norton Company Limited. ISBN 978-0-393-07101-6. any situation in which one person makes the decision about how much risk to take, while someone else bears the cost if things go badly.

¹³ ESRB-8; p. 5: “At this time, we are not adding additional requirements and, while we recognize that this issue along with financial liability are important ongoing discussions, this resolution is not the venue for that discussion.”

arising from shutoff, it is entirely possible that it could be held liable for harm that its own analysis had discovered. Utilities have a strong disincentive to do such an analysis properly.

The Commission has warned utilities that: “Under no circumstances may the utilities employ de-energization solely as a means of reducing their own liability risk from utility-infrastructure wildfire ignitions...” (D.19-05-042, p. 68) However, no admonition can undo the obvious inherent bias that would lead utilities to minimize their estimate of customer harm from shutoff.

If the utilities cannot be trusted to drive this analysis, then either the WSD or the Commission needs to. Currently the Commission is driving the de-energization proceeding, but we do not know if this will be true in the future.

We therefore suggest that the Board change its recommendation in the following manner:

The Wildfire Safety Division and the Commission should ~~consider whether~~ **ensure that** the utilities factor into their risk spend efficiency calculations the risk and cost to customers that results from a PSPS event in addition to consideration of PSPS event wildfire risk reduction **by initiating and driving a process for determining all risks and costs associated with PSPS.**

Clean:

The Wildfire Safety Division and the Commission should ensure that the utilities factor into their risk spend efficiency calculations the risk and cost to customers that results from a PSPS event in addition to consideration of PSPS event wildfire risk reduction by initiating and driving a process for determining all risks and costs associated with PSPS.