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UCSF's response letter describes replacement cost of structures, which implies worst-case scenario physical damage. Considering some structures may be more resistant to fire than others, it is likely that some structures affected by a wildfire in the Sutro Forest would not require complete replacement. UCSF must provide a more moderate and reasonable estimate of loss to building stock that considers the fire resistance of structures.

The vulnerability analysis would be more realistic if it addressed firefighting capabilities to battle a wildfire in the Sutro Forest. Firefighting capabilities may also affect the vulnerability of the built environment (for instance, structures within Sutro Forest) to a wildfire in the Sutro Forest.

3. Clarify How the Proposed Mitigation will Reduce the Wildfire Risk

Assuming that UCSF has been able to establish a clear need for the proposed projects, the efficacy of the mitigation strategy it proposes must be clarified. UCSF must provide a clear and concise analysis and description of how the proposed projects would reduce the wildfire hazard in the Sutro Forest to the identified vulnerable built environment. This analysis must account for the fact that large parts of the Sutro Forest would be unchanged after the implementation of the proposed projects.

In the July 21, 2009, letter, FEMA requested that UCSF describe the specific hazard conditions after completion of the proposed work and the resultant hazard over the life of the proposed projects. FEMA has not been provided information from UCSF that clearly addresses this request. To repeat FEMA's initial request, UCSF must provide information of the probable change in wildfire hazard throughout Sutro Forest after the proposed projects have been implemented and the probable change in wildfire hazard throughout Sutro Forest throughout the useful life of the proposed projects. This analysis must be based on accepted scientific methodology and must be presented to FEMA in a manner that can be verified by FEMA (or the interested public). This analysis must incorporate the 5-year maintenance schedule described by UCSF in its grant applications and must also provide details with regard to the specific built environment that will benefit from the proposed projects.

In its August 10, 2009, response letter, UCSF alludes to the notion that the proposed projects would improve wildfire firefighting capabilities within the proposed project areas. To improve the credibility of this argument, UCSF must incorporate the existing firefighting capabilities to fight a wildfire in the Sutro Forest and to then provide a direct comparison of how the proposed projects will result in improvements in these capabilities. Providing copies of letters from fire departments to this effect may be useful in strengthening this particular argument.

The August 10, 2009, response letter, states that "the Edgewood Avenue Area Project will be informed by the lessons learned in the South Ridge Area Project". If this is to be the case, UCSF must clarify if it may request a change in the Scope of Work contained in its Edgewood Avenue grant application as a result of the "lessons learned" from implementing the proposed South Ridge project.

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FEMA has received a number of unsolicited public comments concerning the effects of tree removal on fuel moisture levels in the Sutro Forest. Commenters argue that the proposed projects would increase wildfire hazard by removing some of the material that collects fog drip and keeps the forest moist and resistant to ignition and fire, thus allowing the forest to dry out more easily and increase the relative hazard for ignition. Can UCSF specifically address this comment and describe how overall forest moisture content will change after implementation of the proposed projects? Please provide scientific evidence to support any claims.

Additionally, several of these unsolicited public comments have stated that the proposed projects could result in changed wind patterns on Mount Sutro which could also increase the wildfire hazard in the forest. New wind patterns could reduce biomass moisture as well as reduce the effective windbreak created by the current forest. These commenters argue that the effective windbreak created by the existing forest limits the potential for wildfire spread in the forest and the immediately surrounding area. As UCSF has stated, winds are a contributing factor in wildfires. Provide a citable and logical defense regarding how the proposed projects, and the resulting changes in wind patterns, would not result in an increase in the wildfire hazard in the Sutro Forest.

4. Describe Alternatives to the Proposed Work

UCSF has failed to identify alternatives to the proposed projects that meet the purpose and need of wildfire mitigation. Assuming that UCSF has been able to establish a clear need for wildfire mitigation activities, UCSF must conduct a more thorough analysis to identify alternatives to the proposed projects that could mitigate wildfire hazard in the Sutro Forest to the vulnerable built environment. These alternatives must be technically, economically, and legally practical and feasible and can include activities not eligible for FEMA grant funding. As described in FEMA's Wildfire Mitigation Policy, MRR-2-08-1, FEMA wildfire mitigation grants are available for defensible space, structural retrofit, and vegetation reduction projects. It would seem reasonable that alternatives to the proposed projects could include defensible space or retrofit projects. UCSF has not indicated that these types of alternate projects have been analyzed. Please note that FEMA funding is available for ignition-resistant construction projects only after defensible space activities are complete.

FEMA requests a response within 31 days of the date of this letter, or by November 1, 2009, including a schedule of when the requested information will be provided. Should you have any questions or need further assistance please do not hesitate to contact me at (510) 627-7027 or fema-rix-ehp-documents@dhs.gov.

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flessandro Amaglio Invironmental Officer