BRIC2024 - City of Grass Valley -Wildfire Community Resilience Project

The City of Grass Valley is located in Nevada County, nestled in the foothills of the Sierra Nevada Mountain Range. The entire county is classified as a high to very-high fire hazard severity zone, with nearby counties having experienced some of California's most destructive and costly wildfires, including the Dixie, Caldor, and Camp Fires, which caused billions of dollars in damage. The entire county also falls within the Wildland Urban Interface. Over the past 50 years, there has been a decline in wildfire mitigation efforts, leading to overstocked wood products, dense vegetation, and ladder fuels, all of which pose a catastrophic wildfire risk to our communities. This situation is exacerbated by limited infrastructure, hindering our ability to implement, remove, and process hazardous vegetation effectively.

Grass Valley has a rich history as a mining town established during the gold rush, and many of its buildings hold irreplaceable historical value, having been built before the implementation of the California Building Code's Chapter 7A. Consequently, many structures are surrounded by dense vegetation and lack necessary home hardening measures to protect against ember intrusion. Additionally, several low-income census tracts within the city are home to vulnerable populations, including individuals with Access and Functional Needs, who lack the financial resources for essential wildfire resiliency measures such as defensible space, home hardening, green waste disposal, and wood product utilization for heating.

The community faces the risk of significant loss of life, property, and loved ones, compounded by the potential destruction of critical infrastructure, including communications, energy, transportation, medical facilities, and schools. These factors leave Grass Valley and its residents at an elevated risk of catastrophic loss due to the dangers of wildfire.

This collaborative partnership between the City of Grass Valley and the Fire Safe Council of Nevada County focuses on enhancing wildfire resilience through a combination of home hardening, defensible space, infrastructure hardening, and strategic hazardous fuels reduction. The project also includes nature-based solutions, such as grazing, to implement and maintain these efforts. Additional initiatives will focus on year-round green waste programs, wood product utilization, and biomass initiatives to reduce the risk of catastrophic wildfires in Grass Valley and surrounding areas. These efforts address shared protection challenges for critical community infrastructure, including communications, energy, water, wastewater, public safety, transportation, and healthcare facilities within the project zone.

The project aims to create a holistic, collaborative wildfire resiliency plan with multi-faceted goals. This includes hazardous fuel removal and processing from private residences, home hardening, defensible space, and large-scale landscape-level fuel reduction projects. It also supports long-term strategies for green waste processing, wood product utilization, and biomass initiatives. By working together, the community can achieve timely, responsible, and cost-effective actions that contribute to a sustainable wildfire resilience strategy.

These activities are essential in the Wildland Urban Interface to prevent loss of life and protect critical facilities from wildfires. Given the dangers and costs of wildfire suppression, the community is committed to investing in best practices, such as hazardous fuels reduction inclusive of nature-based solutions, home and infrastructure hardening paired with defensible

space, and green waste programs, to enhance community resilience and reduce the risk of catastrophic wildfires.

Implementing a single action alone will not resolve the risk to the community. Each proposed action is designed to work together seamlessly, supporting long-term risk reduction for the community and ensuring that residents can maintain these risk mitigation efforts over time. These actions are proposed as follows and will be implemented through the BRIC Program:

Infrastructure Hardening of Strategic Critical Facitlies ($7,500,000): Critical facilities, including hospitals, assisted living facilities, schools, churches and community centers, utility facilities (electric, communication, etc.), sewer and water treatment plants, and transportation facilities, will undergo a comprehensive review and hardening to reduce the risk associated with catastrophic wildfires. These actions will be carried out through projects, focusing on strengthening buildings and infrastructure vital to community resilience during disasters. This includes reinforcing structures, improving emergency preparedness, and incorporating technologies that can withstand or mitigate disaster impacts, ensuring the continued safety and functionality of these services in a crisis. Infrastructure hardening will be paired with other mitigation measures, such as fuels reduction, increased water storage, and better emergency access. Additionally, Temporary Refuge Areas (TRAs) will be identified and enhanced to provide shelter for residents unable to evacuate during mass evacuation events. A key aspect of this planning involves evaluating evacuation strategies, determining when sheltering in place is safest, and identifying alternative routes if major roadways are impassable during large-scale fires. Implementing these defined actions through infrastructure hardening is crucial for protecting low-income and
disadvantaged community members.

Hazard Fuels Reduction with Nature-Based Solutions ($12,000,000): 2,000-acres of strategic fuels reduction projects will employ a multi-method approach, including nature-based solutions like grazing, to implement and maintain treatments within and around the city limits. The project will create defensible perimeters around homes, structures, and critical facilities and infrastructure by removing flammable vegetation across the entire project zone, with at-risk communities serving as key points for the project boundary. These fuels reduction activities will significantly decrease the wildfire threat to human life, property, critical facilities, riparian zones, and local tribal lands. Of the $12,000,000 budget, $4,000,000 will be allocated to workforce development in agricultural businesses focused on prescribed herbivory resources to ensure a long-term maintenance strategy.

Hazard Tree Removal Cost Assistance ($3,000,000): At least 600 Hazard Trees removed from private parcels. Estimated at $5,000 per tree via crane removal. The action creates perimeters around homes, structures, and critical facilities, through the removal of flammable vegetation across the entirety of the project zone, using at risk communities as key points for the project boundary.
Reduces damages The fuels reduction activities will greatly reduce the threat of wildfire to human life and property, especially critical facilities, and riparian zones, and local tribal lands.

Home Hardening Retrofit Program combined with Defensible Space Clearing ($10,000,000): $6,000,000 will fund home hardening retrofits for a minimum of 600 homes, with up to $10,000 allocated per home. Priority will be given to income-qualified individuals. This action will adhere to the guidelines set forth in the Hazard Mitigation Assistance Guidance and its subsequent Addendum published by FEMA, specifically regarding non-structural retrofitting of existing buildings and facilities. These

modifications aim to reduce or eliminate future damage risks and protect inhabitants, such as bracing building contents to prevent earthquake damage or elevating utilities.

$4,000,000 will fund defensible space treatments for at least 400 residents within city limits, with the requirement that these treatments be combined with appropriate home hardening retrofits. Priority will be given to income-qualified individuals or those with Access and Functional Needs. This action will establish perimeters around homes, structures, and critical facilities by removing flammable vegetation throughout the project zone, with at-risk communities serving as key points for the project boundary. These fuels reduction efforts will significantly reduce the threat of wildfire to human life and property, particularly to critical facilities, riparian zones, and local tribal lands.

Green Waste Program and Processing ($4,500,000): A three-year program will collect green waste within city limits, transport it, and process it at a facility to assist residents with green waste disposal both inside and outside the city limits. As part of this activity, the City and Fire Safe Council of Nevada County will be identifying and implementing viable environmentally friendly wood debris reduction and conversion systems, such as purchasing and using carbonizers and implementing a firewood program. Carbonizers are unique in the curtain burner industry, providing environmentally sound and productive on-site conversion, reduction and carbonization of wood waste and debris. Viable wood will be identified for wood product utilization and firewood processing, which will be provided to income-qualified residents. This action will establish defensible perimeters around homes, structures, and critical facilities by removing flammable vegetation throughout the entire project zone, with at-risk communities serving as key points for the project boundary. These fuels reduction activities will significantly

reduce the wildfire threat to human life and property, particularly to critical facilities, riparian zones, and local tribal lands.

Education/Outreach/Demonstration Site ($2,500,000): All project and program components will incorporate public outreach, messaging, and workforce development opportunities. Public events will engage community stakeholders through evacuation plan messaging, educational workshops, and training sessions on various treatment methods and equipment. Education efforts will also develop tailored evacuation templates for schools, assisted living facilities, hospitals, and other venues with large populations.

A comprehensive 360-degree review and update of existing emergency plans will ensure that current protocols effectively address wildfire scenarios. In some cases, evacuating people outdoors may be hazardous, while in others, it could be the safest option. This planning will evaluate diverse evacuation strategies, including sheltering in place and alternative routes when major roadways are compromised.

Additionally, workforce development will be promoted through the use of tools such as masticators, burn bots, and UTVs, as outlined in the BRIC budget. Outreach materials—including design, printing, and educational software—will support these initiatives. A demonstration site will also be established to showcase nature-based fuels treatment methods, such as prescribed herbivory and herbicide applications.