



WILDFIRE PREPAREDNESS, MITIGATION AND RESILIENCY PROJECTS: PROPOSED USES OF PG&E SETTLEMENT FUNDS

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CITY MANAGER COMMENTS



WILDFIRE PREPAREDNESS, MITIGATION AND RESILIENCY



The Santa Rosa Fire Department (SRFD) proposed two, one-time expenditures to the City Council Public Safety Subcommittee (PSS) on September 25, 2020 and November 23, 2020, respectively.

- **Vegetation Management Program** - five-year pilot program that will focus on improving evacuation routes, community wildfire education, wildfire and evacuation preparedness, structural hardening of the built environment, vegetation treatments to reduce the wildfire threat, implementation of defensible space standards and increased staffing dedicated to the wildfire mitigation workload.
- **Santa Rosa Fire Department Wildland Resiliency and Response Strategic Plan** - holistic assessment of the Fire Department's wildland fire programs with recommended adjustments to the organization across all bureaus. Implementation of this plan would provide additional resources to legislative efforts, community engagement and education, additional wildland firefighting apparatus and equipment.

Funding of these two proposals would immediately improve the prevention, mitigation, and response capabilities for the community, City and Fire Department without adding additional fire stations or Operations Bureau personnel.



Vegetation Management Program

- In September of 2020 the City Council unanimously approved the final draft of the Community Wildfire Protection Plan (CWPP). This plan, the first of its kind in our City, is the result of a community-wide planning effort to quantify and evaluate the wildfire threat to the City and develop hazard mitigation strategies that enhance protection of life safety and other community assets from wildfire. Using the latest wildfire science and community input this plan serves to guide the development and implementation of a comprehensive Vegetation Management Program.
- The proposed program will focus on improving evacuation routes, community wildfire education, wildfire and evacuation preparedness, structural hardening of the built environment, vegetation treatments to reduce the wildfire threat, implementation of defensible space standards and increased staffing dedicated to the wildfire mitigation workload.
- As proposed this program will also provide annual updates to Council and at the conclusion of the five-year period will allow funding to complete an updated CWPP.



Santa Rosa Fire Department Wildland Resiliency and Response Strategic Plan

- Examines the risk and threat potential of wildland fires and adjusts the prevention, mitigation, and operational response components of the organization.
- Holistic assessment and adjustment to the organization to better prepare for and respond to the increased threat of wildland fires within or entering the City limits.
- Provides a living document to guide the Department over the course of the next five (5) years at which time an assessment of this plan will be completed, and a new plan created based off a new SWOT analysis.
- The SRFD Wildland Resiliency and Response Strategic Plan will assess and adjust six (6) major strategies that comprise the SRFD wildland programs:
 - Legislation (e.g. ordinances, statutes, fire code, State and Federal policy)
 - Capital Enhancements (e.g. Type 3 and Type 6 Fire engines, other apparatus)
 - Non-Capital Enhancements (e.g. radios, tool caches, PPE)
 - Operations (e.g. response matrix, training, strategies, tactics, command)
 - Staffing (e.g. Upstaffing Plan, staffing patterns, recall policy revision)
 - Community Engagement (e.g. focus on whole-community inclusion)



In addition to these proposals, in order to provide a more comprehensive approach to the wildland fire threat, the SRFD has identified the need to relocate and add additional fire stations with the associated personnel and apparatus.

Rebuilding Fire Station 5 (Fountaingrove) remains essential and unfunded although the purchase of property is in progress. Additionally, as identified in the SRFD Strategic Plan and the SRFD Deployment Analysis, two current fire stations should be relocated and two additional stations should be constructed.

These stations would significantly improve the capacity and capabilities of the SRFD to respond to the Wildland Urban Interface (WUI) areas of the City. In addition to the WUI threat, these stations would improve the response to all-risk hazards across the City by improving the strategic locations of fire stations to improve response times and additional units. As a longer term strategy, these proposed staffed stations would require not only one-time expenditures in infrastructure and apparatus, but also the on-going costs of additional personnel.



Relocate and Rebuild Fire Station 5

- To replace and relocate Fire Station 5 that was lost during the Tubbs Fire, staff recommends rebuilding Fire Station 5 at the corner of Stage Coach Road and Fountaingrove Parkway.
- The rebuild of Fire Station 5 will restore permanent service to the Fountaingrove neighborhood and protection of the Wildland Urban Interface (WUI).
- The new location will enhance service to the entirety of Fountaingrove and also improve the service level to the northern portions on north Mendocino Avenue and adjacent areas.
- The property for the new Fire Station 5 is in the purchasing process and is currently in the CEQA process.
- Staff has worked tirelessly with consultants to secure federal funding to rebuild Fire Station 5, however have been unsuccessful in that venture largely due to federal policy.



Construction of Four (4) New Fire Stations

- To improve the strategic locations of fire stations to better serve wildland fire protection services, staff recommends the construction of four (4) new fire stations.
- These stations would allow the Fire Department to increase service levels in several areas of the City (Roseland, Rincon Valley, Fountaingrove, Skyhawk, and South Park).
- In addition to providing increase service to these areas, the additions would benefit the entire City as a whole by reducing call volume at high volume stations and increasing the number of fire engines and personnel on duty, thus reducing response times throughout the entire system.
- Two of these additions would add protection to the Wildland Urban Interface (WUI) directly in the Rincon Valley/East Fountaingrove areas, add protection to the Taylor Mountain area, and add protection to the Roseland/Lower Santa Rosa Avenue area.
 - Move Fire Station 6 (Calistoga Road) to the area of Mountain Hawk Drive and Hwy. 12;
 - Construct Fire Station 12 in the area of Mission Boulevard and Montecito Avenue;
 - Move Fire Station 8 (Burbank Avenue) to the area of Hearn Avenue between Whitewood Drive and Highway 101;
 - Construct Fire Station 9 in the area of Kawana Terrace and Franz Kafka Avenue



Hire Additional Personnel to Staff New Fire Stations

- To adequately staff the additional fire stations and provide proper management and supervision, staff recommends the addition of twenty-one (21) additional full-time employees (FTE).
- The relocated stations will use current personnel for staffing.
- The new fire stations (Fire Station 9 and Fire Station 12) will require additional staffing.
 - The Fire Department currently staffs each engine company with three (3) personnel across three (3) shifts. In order to adequately staff these new fire stations, the Fire Department would require the addition of eighteen (18) additional FTEs.
- Additionally, in order to properly manage and supervise the additional stations and personnel, the Fire Department needs to add an additional on-duty Battalion Chief.
 - Adding a second on-duty Battalion Chief across three (3) shifts (3 FTE) would improve oversight and supervision by reducing the span of control of Battalion Chiefs from 14 to 1 to 7 to 1.



Purchase of Additional Apparatus to Staff New Fire Stations

- To adequately provide fire suppression and emergency response from the two new fire stations, staff recommends the purchase of two (2) additional Type 1 fire engines, two (2) additional Type 6 fire engines, and one (1) utility pickup truck.
- The relocated stations will use current apparatus for response.
- The new fire stations (Fire Station 9 and Fire Station 12) will require new apparatus for daily operations with the ability to cross staff a wildland specific fire engine.
- This is in addition to the request for additional engines in the Santa Rosa Fire Department Wildland Resiliency and Response Strategic Plan.
- The purchase of these apparatus would increase the abilities and capacities of the Fire Department on a daily basis as well as in times of need for upstaffing, Department recalls, and during large scale incidents that occur within or adjacent to the City limits.



INFRASTRUCTURE PROJECTS

CITY-FUNDED



Build “Hot” Emergency Operations Center (EOC) - \$550,000

- Current EOC is considered “Cold”
 - Occupies three adjoining conference rooms in Utilities Field Offices (UFO) building
 - EOC equipment moved from storage and configured at time of EOC Activation
- EOC was activated 5 times in 2019 and 5 times in 2020
- Hot EOC would provide City with permanent EOC facility located at Transit Operations Building (TOB) and adjacent MSC-N
- Help City meet emergency management of multiple potential disasters in Santa Rosa, including Earthquakes, Hazardous Materials Response, Chemical Spills, Civil Unrest, etc.
- Construction of Hot EOC would include the following
 - \$400,000 convert space in TOB/MS-C-N to EOC
 - Conversion/Renovation includes furnishings, IT equipment, cabling
 - \$150,000 for back-up generator and potential seismic retrofits



Evacuation Equipment - \$650,000

- **\$500,000:** 30-foot diesel bus with multiple wheelchair tiedowns and fold-up seats
 - Would provide a better option than current CityBus fleet for evacuating Senior Assisted Living Centers, hospitals, other care facilities
 - Having a piece of equipment that is built to support these operations while being able to facilitate daily transit operations would be a huge benefit
- **\$150,000:** Barricades and Message Boards with transport trailer
 - Creates a ready-to-go stock of barricades that will facilitate easy deployment rather than needing to rely on rental agencies, contractors or mutual aid to provide and transport to the sites
 - Barricades include a combination of concrete k-rail, plastic waterfilled barrier, lighted a-frame barricades, light towers, message boards and transport trailer



Modernize Radio Infrastructure – \$3,206,000

Non-Fire Radios

- The new city-wide radio infrastructure was installed in 2020.
- Requires a maintenance and software upgrade agreement to remain reliable over the next nine years.
- This agreement supersedes the current agreement and expands service to cover to all non-fire City radios.
- Provides seamless system upgrades with minimal interruption to daily operations

Water Enterprise

- Add remote communication between reservoirs and pump stations
- Current radio system is an outdated point-to-point system
- Upgraded radios will provide higher data rate, reduce interference, and provide more efficient use of the overly dense existing wireless spectrum



Traffic Signalization to Aid Evacuation Choke Points - \$10, 230,000

- Improve evacuation of the WUI areas
- Addition of quick connections, portable generators and closed-circuit cameras to key intersections as well as a fiberoptic interconnect along Fountaingrove Parkway, Farmers Lane, Sonoma Hwy, and College Ave
- Allows for Traffic Engineers to assist Police and Fire better manage traffic flow in evacuation routes
- Work with a consultant to develop flushing plans for all evacuation plans in the WUI area
- Cameras will allow real time assessment of where resources are needed
 - Fiberoptic interconnect - \$10,000,000 (\$500,000 per mile)
 - Closed Circuit Cameras - \$120,000 (\$10,000 ea. if fiber connected)
 - Portable Generators and Quick Connections - \$10,000
 - Evacuation Route Flushing Plans - \$100,000



Fire Flow Facility Improvements - \$26,100,000

- Fire flow facility improvements that would increase Water Operations ability to quickly increase pumping capacity to refill water reservoirs during fire-fighting events
- Improvement located within the WUI, and are the first line of defense during wildland fires
- Improvements to pipes, pump stations, and/or tanks are necessary to meet station flow and fire flow goals
 - Increased pipeline diameter to increase flow - **\$13,000,000**
 - Bennett Valley near Annadale State Park (Pressure Zone 10) - **\$3,500,000**
 - Suction pipeline improvements are recommended to increase suction pressures at Station 10 to a minimum of 20 psi
 - Oakmont (Pressure Zones 13 and 14) - **\$4,800,000**
 - Installation of high flow pumps at Station 13 and 14 and associated pipeline improvements
 - Fountaingrove (Pressure Zones 16 and 17) – **\$4,800,000**
 - Installation of two 1,500 gpm high flow pumps would support the existing pumps to maximize the flow from Station 16 and 17



Improve Evacuation Routes from the WUI - \$88,000,000

- Four primary evacuation routes from the WUI providing access to either US Highway 101 or the western part of the city away from the WUI areas
- Three routes within City control
- Chanate Road (\$10,000,000)
 - Current road is one-way in each direction with pinch points at Parker Hill, Franklin Ave. and Mendocino Ave intersections
 - Proposed construction of traffic circle, removal of medians, and widening with lane reconfiguration
- Santa Rosa Ave/Petaluma Hill Road (\$28,000,000)
 - Hearn Avenue Interchange is primary access point to Hwy 101 and Western side of City
 - Requires reconfiguration of Hearn Avenue Interchange
- Sonoma Hwy (\$50,000,000)
 - SR-12/Hwy 101 has shown not to have sufficient capacity to accommodate significant evacuation
 - Farmers Lane extension and reconfigured Hearn Ave interchange will reduce burden on SR-12/Hwy 101 interchange



INFRASTRUCTURE PROJECTS OTHER AGENCY INVOLVEMENT



Underground Utilities in the WUI areas - \$21,000,000

- Areas within the WUI that do not have adequate circulation in the event of an evacuation order
- These areas are further compromised by the presence of overhead utilities that can block the limited and narrow evacuation routes
- Undergrounding overhead utilities in these areas would eliminate potential traffic blockages and ensure accessibility for emergency response
- Estimate of \$4,000,000 per mile based on prior underground projects on the city's primary arterials
 - Montecito Heights - \$16,800,000
 - Los Olivos Road (1.34 mi.); Alta Vista Ave. (1.10 mi.); Montecito Ave. (1.75 mi.)
 - Figure Eights - \$4,200,000
 - Osage Ave (0.20 mi.); Del Rosa Ave (0.20 mi.); Juliet Drive (0.15 mi.); Sunrise Ave (0.50 mi.)



Improve Evacuation Routes from the WUI - \$100,000,000






- Four primary evacuation routes from the WUI providing access to either US Highway 101 or the western part of the city away from the WUI areas
- Two routes within City, but would require partnership with CalTrans
- Fountaingrove Parkway (\$50,000,000)
 - Reconfigure Mendocino Overcrossing Interchange
 - Would increase capacity to efficiently help evacuees onto US Highway 101 or the western portion of the City
 - An improved interchange will significantly increase the viability of commercial and retail in the northern portion of the city
- Sonoma Highway (\$50,000,000)
 - Two-lane section of Sonoma Highway between Melita Road and Pythian Road creates a bottleneck for Oakmont and Kenwood area evacuations
 - Proposal for widening this 3 miles segment of Sonoma Highway to either three or four lanes



SUMMARY OF PROJECTS



Summary Slides Legend

-  Projects that could be funded through Enterprise Fund
-  Projects with potential for State or Federal Funding
-  Projects with no outside agency or Enterprise funding source
-  Projects under appeal with FEMA
-  Projects that have been appealed and denied by FEMA



Summary of Projects – Wildfire Resiliency

Project	Cost Estimate
Comprehensive Five-Year Vegetation Management Prog.	5,250,000
Wildland Resiliency and Response Strategic Plan	2,750,000
Rebuild and Relocate Fire Station 5	15,000,000
Move Two (2) and Add Two (4) Fire Stations	60,000,000
<i>(Additional Staffing \$4.6M/year)</i>	
Additional Apparatus for New Fire Stations	2,305,000
Subtotal One-Time Wildland Resiliency Projects	\$85,305,000



Summary of Projects – Infrastructure

Project Description	Cost Estimate
City-Controlled Projects	
Build “Hot” EOC	550,000
Evacuation Equipment	650,000
Radio Infrastructure (Non-fire & Water Enterprise)	3,206,000
Traffic Signalization	10,230,000
Fire Flow Facility Improvements	26,100,000
Improve Evacuation Routes from WUI	88,000,000
Subtotal One-Time Infrastructure Projects	\$128,736,000
Projects w/ Other Agency Involvement	
Underground Utilities in WUI	21,000,000
Improve Evacuation Routes from WUI area	100,000,000
Subtotal Regional Projects	\$249,736,000



Project	Cost Estimate
Fire Burn Area Unmet Needs	
FEMA Public Assistance Local Match	1,100,000
Sidewalk Repair (FEMA PA Project) – damaged areas only	4,100,000
Sidewalk Repair – replace all sidewalks, damaged and not	45,200,000
FEMA Potential Ineligible Costs	5,000,000
Pavement Repair (FEMA PA Project)	24,000,000
Subtotal Fire Burn Area Unmet Needs	\$79,400,000
Fiscal Sustainability	
Restore General Fund Reserves	\$30,000,000
Additional Projects	
Housing Downtown	10,000,000
SE Greenway Land Acquisition	12,000,000
Roseland Library	10,000,000
Subtotal Other	\$32,000,000



Summary of Projects

Project Category	Cost Estimate
Wildfire Resiliency	\$85,305,000
Infrastructure	\$128,636,000
Burn Area Unmet Needs	\$79,400,000
Restore General Fund Reserves	\$30,000,000
Other Projects	\$32,000,000
City-Controlled Projects	\$355,341,000
Regional Projects	\$121,000,000
Total One-time Project Costs	\$476,341,000
<i>New Fire Station Staffing (Ongoing)</i>	<i>\$4,040,000/year</i>



Other Projects Mentioned In Survey and Community Meetings

- Affordable Housing
-
- Climate
-
- Fiber to Premises
-
- Homeless programs
-
- Parks and Sports Complexes
-
- Protect vulnerable populations
-
- Rental Assistance



QUESTIONS?