

## COVER PAGE

**a) Funding Opportunity:**

EPA-OW-OGWDW-25-01

**b) Project Title:**

City of Santa Rosa Farmers Lane Water Treatment Plant Rehabilitation Project

**c) Applicant Information:**

City of Santa Rosa  
100 Santa Rosa Ave.  
Santa Rosa, California 95404-4959

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**d) National Priority Area Addressed:**

National Priority Area 2  
Large Community Infrastructure Investments for Drinking Water System Resilience

**e) Short Description of the Project:**

The City of Santa Rosa proposes to rehabilitate and modernize the Farmers Lane Water Treatment Plant, which serves more than 175,000 residents. Sonoma County has repeatedly been included in FEMA disaster declarations for wildfires (DR-4558, DR-4569) and floods (DR-4683), and while the WTP site lies in a Zone X minimal flood hazard area, it is adjacent to mapped 1% annual chance flood zones along Spring Creek. In addition, CAL FIRE mapping shows that while the WTP site itself is not within a designated hazard zone, it is immediately adjacent to “High” and “Very High” Fire Hazard Severity Zones in the wildland–urban interface east of Santa Rosa. This project will harden critical systems against wildfire, flood, seismic, and cybersecurity risks to ensure safe and reliable drinking water.

**f) Proposed Funding Request: \$2,000,000**



## **Executive Summary**

The City of Santa Rosa seeks funding to rehabilitate and modernize the Farmers Lane Water Treatment Plant (WTP), a critical facility serving more than 175,000 residents. Located alongside Pump Station 4 at 2260 Sonoma Avenue, the WTP is central to the City’s drinking water supply system but is increasingly vulnerable to both wildfire and flood hazards.

Sonoma County has been included in multiple FEMA disaster declarations in the last five years, underscoring the severity of these risks. The county was designated for Individual and Public Assistance following the catastrophic 2020 wildfires under DR-4558 and DR-4569 and again under DR-4683 in 2023 due to severe winter storms, flooding, and landslides. While the FEMA Flood Insurance Rate Map places the Farmers Lane WTP site itself in a Zone X “area of minimal flood hazard,” adjacent areas of Santa Rosa are identified as being within the 1% annual chance flood zone along Spring Creek. In addition, CAL FIRE Hazard Severity Zone maps show the WTP directly borders areas classified as “High” and “Very High” wildfire hazard in the wildland–urban interface. This proximity underscores the facility’s exposure to both hydrologic and wildfire risks despite its own parcel’s designation.

The proposed rehabilitation project addresses these risks. Planned improvements include replacing outdated electrical and control systems with secure, modernized components; rehabilitating pumps, motors, and filter vessels to maintain reliable delivery during emergencies; recoating and upgrading storage and backwash tanks; adding a redundant chlorine tank with automated controls to ensure uninterrupted disinfection; and structurally hardening the shop building to better withstand heat, smoke, and potential flood impacts. Together, these upgrades will reduce operational vulnerabilities to drought-driven aquifer drawdown, seismic stress, extreme weather, and cyberattacks.

The project will strengthen the City’s resilience to the documented wildfire and flood risks affecting Sonoma County, extend the useful life of a critical public facility, and ensure continued compliance with drinking water standards. The project will safeguard reliable, safe drinking water for a midsize-to-large community while directly addressing the natural hazard vulnerabilities demonstrated by recent FEMA disaster designations, CAL FIRE hazard severity mapping, and FEMA flood mapping.

## **Workplan**

### **a) Project Description**

The City of Santa Rosa proposes to rehabilitate and modernize the Farmers Lane Water Treatment Plant (WTP), a critical facility that supplies potable water to more than 175,000 residents, well above the 10,000-individual threshold for midsize and large communities. The WTP, located at 2260 Sonoma Avenue alongside Pump Station 4, is a cornerstone of the City’s drinking water system and requires investment to withstand natural hazards, extreme weather, and cybersecurity threats.



Sonoma County has been repeatedly designated in recent FEMA disaster declarations, demonstrating the community's exposure to both fire and flood risk. The county received Individual and Public Assistance under DR-4558 and DR-4569 following the 2020 wildfires, and was again designated under DR-4683 for severe winter storms, flooding, and landslides in early 2023. FEMA flood maps also show that while the WTP parcel itself lies within Zone X (minimal flood hazard), it is adjacent to Spring Creek, which is classified within the 1% annual chance flood zone. CAL FIRE Hazard Severity Zone mapping further shows that while the WTP parcel is not itself within a designated hazard zone, it is located immediately adjacent to "High" and "Very High" fire hazard areas in the wildland–urban interface. Copies of the FEMA disaster declaration maps, FEMA flood map (FIRMette) and Fire Hazard Severity Zone are attached to this application. These designations underscore the very real fire and flood risks that affect Santa Rosa's water infrastructure.

The rehabilitation project will directly address these vulnerabilities. Planned work includes replacing obsolete electrical and SCADA control systems with modern, secure technology to reduce the risk of cyber intrusion; recoating and upgrading treatment and storage vessels to maintain structural integrity under extreme stress conditions; and rehabilitating booster pumps and motors to sustain reliable delivery during drought and emergency events. The project will also add a redundant chlorine tank with automated switchover to ensure uninterrupted disinfection, harden the shop building (roof, siding, HVAC, and partitioning) to protect vital electrical equipment from wildfire smoke and heat, and remove unnecessary degassing equipment to simplify operations and reduce failure points.

Recent hazard events have demonstrated the urgency of these improvements. More frequent and extended droughts have lowered well yields and increased stress on pumping infrastructure. Wildfires in 2017, 2020, and 2023 disrupted operations through smoke, power outages, and surges in community demand. Outdated control systems present cybersecurity vulnerabilities that could compromise water quality and health and safety of the community. By addressing these risks, the project will improve performance of the drinking water system, extend the useful life of assets, and ensure reliability under conditions that the community is already experiencing. The project will ensure the delivery of secure and reliable drinking water service, improve system resilience to fire, flood, drought, seismic, and cyber threats, and protect public health in Santa Rosa.

## **b) Expedition Project Readiness to Proceed**

The Farmers Lane WTP Rehabilitation is well-positioned for rapid mobilization. Santa Rosa has completed 90% design drawings and technical memoranda, leaving only limited updates (95% and 100% submittals) before bidding. It has been determined that this project is CEQA-exempt and will not need to go through the lengthy review process because all work is confined to existing city facilities. The project also does not require easements, rights-of-way, or relocations.

The City's \$2,500,000 cost match amount is already in place and has been allocated to the project fund. The City has a strong record of implementing resilience practices, including rehabilitating booster pumps and motors in 2013, monitoring dissolved gas from 2014–2025 that confirmed no ongoing water quality risks, and implementing emergency power redundancy



through a 750 kW generator that protects both the Farmers Lane WTP and adjacent Pump Station 4. These completed planning, design, and operational readiness steps ensure the project can move forward expeditiously once funds are awarded.

### **c) Environmental Results and Measuring Progress**

#### **i. Stated Objective**

The objective is to rehabilitate and modernize the Farmers Lane WTP to strengthen resilience against natural hazards, extreme weather events, and cybersecurity vulnerabilities, ensuring reliable drinking water service to the residents of Santa Rosa.

#### **ii. Results of Activities (Outputs)**

Anticipated outputs include a completed 100% design package; replacement and commissioning of Motor Control Centers (MCCs), Variable Frequency Drives (VFDs), and Supervisory Control and Data Acquisition (SCADA) systems; rehabilitation of filter vessels, booster pumps, and motors; installation of a secondary chlorine tank with automated controls; structural upgrades to the shop building; and community outreach sessions. Progress will be tracked through monthly briefings to the City Manager and quarterly progress updates submitted to the US EPA, documenting completed tasks, expenditures, and operational readiness.

#### **iii. Projected Environmental Improvements (Outcomes)**

Expected outcomes include improved reliability of potable water supply during droughts, floods, wildfires, and seismic events; reduced contamination risks through dependable disinfection and infrastructure upgrades; enhanced cybersecurity resilience through modernized controls; and extended infrastructure life cycles, reducing unplanned failures. These outcomes will be measured through annual performance reports tracking supply reliability (e.g., GPM capacity maintained), downtime incidents, and water quality compliance, supplemented by post-construction evaluation against baseline conditions.

### **d) Milestone Schedule**

The project is scheduled to begin in **July 2026**, with substantial completion within three years.

<b>Phase</b>	<b>Key Tasks</b>	<b>Timeline</b>
Bidding & Procurement	Issue bid documents, contractor selection, contract award	July–Oct. 2026
Construction Phase 1	Electrical/control upgrades, shop building rehabilitation, chlorine system improvements	Nov. 2026–June 2027
Construction Phase 2	Filter vessel recoating/media replacement, pump/motor rehabilitation, piping and valve upgrades	July–Dec. 2027
Final Integration	SCADA and cybersecurity upgrades, system testing, staff training	Jan.–March 2028
Closeout & Commissioning	Final inspections, acceptance testing, public outreach reporting, EPA final reporting	April–June 2028



## **e) Detailed Budget Narrative**

The total project budget is \$4,500,000, with \$2,000,000 requested from EPA and \$2,500,000 committed by the City of Santa Rosa as non-federal match. Santa Rosa contracts all work for projects of this type and is not seeking indirect costs on this project. Therefore, all costs fall under the “Contractual” line item.

### **Contractual – \$4,500,000 (\$2,000,000 Federal, \$2,500,000 Non-Federal)**

Contractual costs include all construction, inspection, supplies, equipment and specialized consulting services required. Work includes structural, mechanical, electrical, control, and cybersecurity improvements.

All contracts will be competitively procured in compliance with City of Santa Rosa purchasing requirements, Federal Uniform Guidance (2 CFR 200.317–.326), and Build America, Buy America (BABA) domestic-content provisions.

#### **Construction Contractors – approx. \$3,500,000**

##### **General Construction Contractor**

Responsible for site mobilization, demolition, mechanical and civil rehabilitation, and coordination of all specialty trades.

##### **Specialty Subcontractors and Work Items:**

- **Coatings & Surface Rehabilitation (\$650,000):** Recoating of filter vessels and backwash tanks (interior and exterior), surface preparation, safety containment, and filter media replacement
- **Mechanical & Pump Rehabilitation (\$850,000):** Rebuild and testing of booster pumps and motors, replacement of bearings and seals, and installation of new valves, fittings, and process piping
- **Electrical & Controls Contractor (\$950,000):** Replacement of motor control centers (MCCs), variable frequency drives (VFDs), control panels, conduits, and wiring; addition of a new electrical service and dedicated meter
- **Shop Building Rehabilitation (\$550,000):** Roof and siding replacement, painting, installation of HVAC and partitioning for a dust-protected electrical control room
- **Chlorination System & Feed Upgrades (\$300,000):** Installation of secondary chlorine tank, new piping, control valves, and automatic switchover system integrated with plant PLCs
- **Instrumentation & SCADA Integration (\$200,000):** Field wiring, sensors, telemetry, and integration into modern supervisory control systems

All construction materials, including recoating compounds, valves, piping, electrical components, and control equipment, will be procured from domestic manufacturers consistent with BABA and EPA SRF standards.



### **Construction Management & Inspection – approx. \$600,000**

Independent professional construction management and inspection services will oversee daily field activities, quality control, and compliance documentation.

Tasks include:

- Field inspection and progress verification
- Materials testing and verification of BABA documentation
- Contractor submittal review and pay application validation
- Safety monitoring, recordkeeping, and closeout documentation

### **SCADA and Cybersecurity Consulting – approx. \$400,000**

Specialized consulting services will provide technical oversight for SCADA modernization, cybersecurity hardening, and system commissioning.

Work includes:

- Assessment of current control systems and data networks
- Specification of secure SCADA architecture and cybersecurity measures
- Integration support with new MCCs, VFDs, sensors, and telemetry equipment
- System testing, staff training, and commissioning of digital controls

### **Summary: Federal vs. Non-Federal Allocation**

- **EPA Federal Share (requested): \$2,000,000**
- City of Santa Rosa Non-Federal Share (match): \$2,500,000
- Total Project Cost: \$4,500,000

### **Cost-Effectiveness and Reasonableness**

The budget reflects cost-effective allocations by leveraging existing City staff for project management, matching federal funds with local contributions, and focusing federal resources on high-impact resilience measures. The proposed expenditures are consistent with EPA's allowability guidelines and ensure that project outputs (modernized electrical systems, rehabilitated vessels and pumps, redundant disinfection, and structural hardening) are completed on schedule and within budget.

### **f) Programmatic Capability/Experience**

#### **i. Organizational Experience**

The City of Santa Rosa's Water Department manages the City's municipal water supply and treatment infrastructure, serving a population of approximately 175,000 residents. The organization has decades of experience implementing capital improvement projects (CIPs) of similar scale and complexity, including treatment plant upgrades, well rehabilitation, and distribution system improvements. The City's infrastructure includes established engineering, finance, procurement, and operations divisions, all of which are coordinated through the City's



Capital Improvement Program. This structure ensures strong project management, transparent financial oversight, and the technical expertise necessary to successfully deliver federally funded projects.

## **ii. Staff Expertise/Qualifications**

The project will be led by the City's Engineering Services Division within the Water Department, supported by experienced operations staff and outside design consultants. The anticipated project manager is a registered professional engineer with over 15 years of experience in water treatment facility design and construction management. Support staff include licensed operators, construction inspectors, and administrative staff with direct experience in grant compliance and reporting.

Key personnel bring knowledge of state and local regulatory frameworks, including the California Environmental Quality Act (CEQA), Department of Drinking Water permitting requirements, and City of Santa Rosa procurement policies. The core project team is expected to include the equivalent of 2.5 full-time equivalent (FTE) positions, supported by additional consultant resources as needed. Biographical sketches of the project manager and key support staff will be attached to this application.

## **g) Past Performance**

Over the past three years, the City of Santa Rosa has managed two federal assistance agreements, demonstrating strong technical delivery, financial stewardship, and compliance:

### **1. FEMA Hazard Mitigation Grant Program (HMGP) – Backup Generators at Water & Wastewater Facilities (CIP #2256)**

The City was awarded \$3.4 million under HMGP to install and replace backup generators at 18 water and wastewater facilities. The project has been actively managed since award and is on schedule for completion in 2025. This demonstrates the City's ability to successfully complete complex, multi-site resilience projects with federal funding.

The City has consistently met reporting requirements through regular submittals to Cal OES and FEMA, including progress reports and financial documentation. Oversight has been reinforced through City Council and Board of Public Utilities updates. The City has documented progress against scope, schedule, and budget through its internal project management system and published CIP updates. Interim deliverables, such as generator installations at selected facilities, have been reported in public updates and verified with oversight agencies.

### **2. HUD Community Development Block Grant – Disaster Recovery (CDBG-DR), Roadway Recovery Project**

In 2023, the City accepted a \$13.8 million CDBG-DR award to repair and restore disaster-damaged public infrastructure. Construction began in October 2023 and is on track for completion by spring 2025, showing the City's ability to successfully complete federally funded projects on time and within budget.



The City has fulfilled reporting requirements by submitting quarterly performance and financial reports through HUD’s Disaster Recovery Grant Reporting (DRGR) system. Technical deliverables and financial documentation have been reviewed and accepted. The City has documented progress through construction milestones such as completed roadway segments and tracked expenditures. Progress updates have been communicated publicly through City Council briefings and contractor reports, ensuring transparency and accountability.

In both agreements, the City has successfully completed project tasks, adhered to all reporting requirements, and consistently documented progress toward achieving expected results. No unresolved compliance or audit issues have been reported.

#### **h) Documentation of Hazard, Cybersecurity, and Extreme Weather Risk**

The following documentation is attached to this application:

- **FEMA Disaster Declarations** DR-4558 and DR-4569 (2020 wildfires) and DR-4683 (2023 severe winter storms, flooding, and landslides), each designating Sonoma County for assistance
- **FEMA Flood Insurance Rate Map (FIRMette)** showing the Farmers Lane WTP site in Zone X with adjacent 1% annual chance flood hazard areas along Spring Creek
- **CAL FIRE Fire Hazard Severity Zone Map** showing that while the Farmers Lane WTP parcel is not within a designated hazard zone, it is immediately adjacent to “High” and “Very High” fire hazard severity zones in the wildland–urban interface east of Santa Rosa
- **City of Santa Rosa Local Hazard Mitigation Plan (LHMP)** and **Sonoma County Hazard Mitigation Plan** excerpts documenting flood, fire, drought, and seismic risks

#### **i) Quality Assurance/Quality Control**

The Farmers Lane WTP Rehabilitation project involves physical infrastructure upgrades and does not include original collection of environmental data for regulatory decision-making. However, the City will comply with all applicable EPA Quality Assurance/Quality Control (QA/QC) requirements for projects involving environmental data. Any monitoring or testing associated with construction (e.g., water quality sampling during commissioning, compliance verification sampling post-construction) will follow approved City and State Division of Drinking Water (DDW) QA/QC protocols.

The City has established laboratory contracts and certified staff operators trained in EPA-approved analytical methods. If additional project-specific QA/QC documentation is required, the City will prepare and submit a Quality Assurance Project Plan (QAPP) consistent with EPA guidelines before beginning any environmental data collection.