# 1. SIERRAVILLE PUBLIC UTILITY DISTRICT

*Source: Sierraville Public Utility District*

## 1.1 LOCAL HAZARD MITIGATION PLANNING TEAM

This annex was developed by the local hazard mitigation planning team for the Sierraville Public Utility District. Members are listed below in Table 1-1.

Table 1-1. Local Planning Team

| **Primary Point of Contact** | | **Alternate Point of Contact** | |
|---|---|---|---|
| Name and Title: | Elizabeth Archer District Clerk Secretary | Name and Title: | Patrick Baird, District Water Operator |
| Address: | PO Box 325<br>305 S. Lincoln<br>Sierraville, CA 96126 | Address: | PO Box 325<br>305 S. Lincoln<br>Sierraville, CA 96126 |
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| **Contributors:** | | | |
| Name and Title:<br>Method of Participation: | Thomas Archer, Sierraville PUD District Counsel<br>Legal Oversight | | |
| Name and Title:<br>Method of Participation: | Bill Quesnel, Sierraville District Engineer, Acumen Engineering LLC<br>Technical Capabilities, Infrastructure and Capital Improvement Projects | | |
| Name and Title:<br>Method of Participation: | Lee Wright, Director, President<br>Supported annex development | | |
| Name and Title:<br>Method of Participation: | Tom McElroy, Director, Vice President and CFO<br>Supported annex development | | |
| Name and Title:<br>Method of Participation: | Tim Larson, Director<br>Supported annex development | | |
| Name and Title: | Glenn Hawxhurst, Director | | |

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|---|---|
| Method of Participation: | Supported annex development |
| Name and Title:<br>Method of Participation: | Travis Spencer, Director<br>Supported annex development |

# 1.2 JURISDICTIONAL PROFILE

## 1.2.1 Overview

The Sierraville Public Utility District (SPUD or District) was organized under the Public Utility Act of 1921. The boundaries of the District were defined, and a petition was circulated to place a measure before the voters within District bounds. The petition was signed by at least 15% of the "qualified electors" and was presented to the Sierra County Board of Supervisors, which body authorized a Special Election. The ballot measure was entitled "Incorporation and Formation of the Sierraville Public Utility District". The voters approved the measure, and SPUD became a Special District with its first Directors being elected on August 2, 1945.

SPUD is a Public Agency which owns, operates, and maintains its water system providing water for domestic and fire suppression purposes to its customers located within its service territory generally described as the Community of Sierraville, California. Domestic demand is a combination of single-family residential and commercial accounts, including the Tahoe National Forest Sierraville Ranger District Station, two restaurants, one café, two small hotels and the Caltrans Maintenance facility.

The District's Mission is to provide a reliable supply of potable water that meets all State of California and Federal EPA requirements at the lowest possible cost to its customers. The system is permitted by the State Water Resources Control Board (SWRCB) Division of Drinking Water and operated by Mountain Water System Management.

The sole source of water is Railroad Spring, which consists of east and west collection systems. Railroad Spring is classified by the SWRCB as a percolating ground water source, located on Tahoe National Forest land and operated by the District under Special Use Permit #2007-4 (V.01/2014). The facilities occupy approximately 1.16 acres of land (all publicly owned) and the Permit allows "continued operation and maintenance of the existing buried collection system at Railroad Spring including a spring, fenced enclosure, pipeline, pump house, powerline and access road along with new construction activities and improvements."

In September 1958, the District received the assignment of the water rights from Randolph Water Company, recorded August 16, 1960, in Volume 25, Page 294, Official Records of Sierra County. The Members of Randolph Water Company joined in and signed the Agreement of Water Rights, recorded November 6, 1964, in Volume 38 Page 476, Official Records of Sierra County. The Agreement of Water Rights, signed by the Members of Randolph Water Company, provided in that the Water Users/Members of the Town of Randolph assigned to the District all of their right, title, and interest in and to the "water rights", as defined and adjudicated in the Decree for the Middle Fork of the Feather River and Its Tributaries, filed with the Plumas County Superior Court.

SPUD has no employees or staff. The District's Bookkeeper/Business Manager, Water Operator, Legal Counsel and Professional Engineer are all independently contracted.

### 1.2.2 Service Area

The District serves an area of approximately 0.65 square miles (425 acres) and an estimated 250 residents and provides water services to the community of Sierraville within the District's Boundaries.

### 1.2.3 Mitigation Success Stories

Even though this is the first hazard mitigation planning effort for the District, several completed mitigation activities demonstrate the District's ongoing commitment to mitigation:

- The combined capacity of the District's water storage tanks is 415,000 gallons. This amount provides Maximum Day Demand plus ISO identified fire protection requirements for structures within the District's service area.
- The District's recently constructed booster pump station is fire resistant to the extent possible including non-flammable construction materials, defensible space around the facility and stationary emergency generator with buried fuel tank (propane) to be able to operate the station for extended periods of time.
- The District's water storage tanks are steel construction with defensible space clearing around the tanks.

### 1.2.4 Governing Body

The District is governed by an elected five-member Board of Directors, which assumes responsibility for the adoption of this plan. The Board of Directors will oversee the plan's implementation.

### 1.2.5 Assets

| Asset | Value |
|---|---|
| **Property** | |
| Land; Railroad Springs Easement; Nichols Mill Road | $35,937 |
| **Equipment** | |
| SCADA System (Storage Tanks and Booster Pump Station) | $25,000 |
| Booster Pump Station including emergency generator (Nichols Mill Road) | $2,325,876 |
| Water Storage Tanks & Solar Power Panels (Randolph Hill) | $1.3 M including both tanks |
| Water Distribution System (4.5 miles at $1.32M/mile) (Service Area) | $5,940,000 |
| ***Total:*** | ***$9,626,273*** |
| **Critical Facilities** | |
| All of the above assets are necessary to provide and maintain a source of water for fire protection and potable domestic supply for public health and safety to District's service area and customers during natural hazard events | |

## 1.3 CURRENT TRENDS

The District has observed minimal population growth over the past 20 years (52 persons according to the 2000 and 2020 census)

# 1.4 CAPABILITY ASSESSMENT

This section describes an assessment of existing capabilities for implementing hazard mitigation strategies. The introduction at the beginning of this volume of the hazard mitigation plan describes the components included in the capability assessment and their significance for hazard mitigation planning.

Findings of the capability assessment were reviewed to identify opportunities to expand or improve upon capabilities to further hazard mitigation goals and objectives. Where such opportunities were identified and determined to be feasible, they are included in the action plan.

## 1.4.1 Planning and Regulatory Capabilities

Jurisdictions have the ability to develop plans and programs and to implement regulations to protect and serve community members. An assessment of planning and regulatory capabilities is presented in Table 1-2.

Table 1-2. Planning and Regulatory Capabilities

| Plan, Study or Program | Date of Most Recent Update | Comment |
|---|---|---|
| Construction Standards Handbook | March 2025 | Provides standards for customers who need to replace their private water lines |
| Sierraville Public Utility District Water Ordinance 07-10 | Ratified & Adopted 08.15.2018 | Addresses water conservation and drought |
| Emergency Operations/Response Plan | Update in Progress | |

### *Opportunities to Expand Planning and Regulatory Capabilities*

The District is currently updating its EOP

## 1.4.2 Fiscal Capabilities

Assessing a jurisdiction's fiscal capability provides an understanding of the ability to fulfill the financial needs associated with hazard mitigation projects. This assessment identifies both outside resources, such as grant-funding eligibility, and local jurisdictional authority to generate internal financial capability, such as through impact fees. An assessment of fiscal capabilities is presented in Table 1-3.

Table 1-3. Fiscal Capabilities

| Financial Resource | Accessible or Eligible to Use? |
|---|---|
| Community Development Block Grants | Yes |
| Capital Improvements Project Funding | Yes |
| Authority to Levy Taxes for Specific Purposes | No |
| User Fees for Water, Sewer, Gas or Electric Service | Yes |
| *If yes, specify:* Water Service Fees | |
| Incur Debt through General Obligation Bonds | No |
| Incur Debt through Special Tax Bonds | No |
| Incur Debt through Private Activity Bonds | No |
| Withhold Public Expenditures in Hazard-Prone Areas | No |

| | |
|---|---|
| State-Sponsored Grant Programs | Yes |
| Development Impact Fees for Homebuyers or Developers | No |

### *Opportunities to Expand Fiscal Capabilities*

The District is committed to supporting Countywide outreach mitigation action *CW-3: Provide notification through links on the website or email distribution for available grant funding opportunities to the Planning Partnership.*

## 1.4.3 Administrative and Technical Capabilities

Planning, regulatory, and fiscal capabilities provide the backbone for successfully developing a mitigation strategy; however, without appropriate personnel, the strategy may not be implemented. Administrative and technical capabilities focus on the availability of personnel resources responsible for implementing all the facets of hazard mitigation. These resources include technical experts, such as engineers and scientists, as well as personnel with capabilities that may be found in multiple departments, such as grant writers. An assessment of administrative and technical capabilities is presented in Table 1-4.

Table 1-4. Administrative and Technical Capabilities

| Staff/Personnel Resource | | Available? |
|---|---|---|
| Planners or engineers with knowledge of land development and land management practices | | Yes |
| *If Yes, Department /Position:* | The District retains both Legal Counsel and a Professional Engineer | |
| Engineers or professionals trained in building or infrastructure construction practices | | Yes |
| *If Yes, Department /Position:* | The District retains both Legal Counsel and a Professional Engineer | |
| Planners or engineers with an understanding of natural hazards | | Yes |
| *If Yes, Department /Position:* | As above | |
| Staff with training in benefit-cost analysis | | No |
| *If Yes, Department /Position:* | | |
| Surveyors | | Yes |
| *If Yes, Department /Position:* | As needed on given Projects | |
| Personnel skilled or trained in GIS applications | | No |
| *If Yes, Department /Position:* | | |
| Scientist familiar with natural hazards in local area | | No |
| *If Yes, Department /Position:* | | |
| Emergency manager | | Yes |
| *If Yes, Department /Position:* | The District retains a Certified Water Operator and a Water Emergency Plan Protocol | |
| Grant writers | | Yes |
| *If Yes, Department /Position:* | District Clerk Secretary | |
| Procurement Services and Management | | No |

### *Opportunities to Expand Administrative and Technical Capabilities*

There is no need to expand these capabilities beyond what the District already has.

## 1.4.4 Education and Outreach Capabilities

Regular engagement with the community on issues regarding hazard mitigation provides an opportunity to directly interface with community members. Assessing this outreach and education capability

illustrates the connection between the government and community members, which opens a two-way dialogue that can result in a more resilient community based on education and public engagement. An assessment of education and outreach capabilities is presented in Table 1-5.

Table 1-5. Education and Outreach Capabilities

| Criterion | Response |
|---|---|
| Do you have a public information officer or communications office? | No |
| Do you have personnel skilled or trained in website development? Yes | Maintenance |
| Do you have hazard mitigation information available on your website? | Not yet |
| *If yes, briefly describe:* | |
| Do you use social media for hazard mitigation education and outreach? | No |
| *If yes, briefly describe:* | |
| Do you have any citizen boards or commissions that address issues related to hazard mitigation? | No |
| *If yes, briefly describe:* | |
| Do you have any other programs in place that could be used to communicate hazard-related information? | No |
| *If yes, briefly describe:* | |
| Do you have any established warning systems for hazard events? | No |
| *If yes, briefly describe:* | |

### *Opportunities to Expand Education and Outreach Capabilities*

The District could expand the website for hazard communication.

## 1.4.5 Community Classifications

Other programs, such as Storm Ready, can enhance a jurisdiction's ability to mitigate, prepare for, and respond to natural hazards. These programs indicate a jurisdiction's capability to go beyond minimum regulatory requirements in order to create a more resilient community. These programs focus on communication, mitigation, and community preparedness to minimize the impact of natural hazards on a community. Classifications under various community mitigation programs are presented in Table 1-6.

Table 1-6. Community Classifications

| | Participating? | Classification | Date Classified |
|---|---|---|---|
| FIPS Code | No | n/a | n/a |
| UEI# | No | n/a | n/a |
| Community Rating System | No | n/a | n/a |
| Building Code Effectiveness Grading Schedule | No | n/a | n/a |
| Public Protection | No | n/a | n/a |
| Storm Ready | No | n/a | n/a |
| Firewise | No | n/a | n/a |

## 1.4.6 Adaptive Capacity for Climate Change

An adaptive capacity assessment evaluates a jurisdiction's ability to anticipate impacts from future conditions. By looking at public support, technical adaptive capacity, and other factors, jurisdictions identify their core capability for resilience against issues such as extreme heat. The adaptive capacity assessment provides jurisdictions with an opportunity to identify areas for improvement by ranking their

capacity high, medium, or low. The community's adaptive capacity for the impacts of climate change is presented in Table 1-7.

Table 1-7. Adaptive Capacity for Climate Change

| Criterion | Jurisdiction Rating[a] |
|---|---|
| **Technical Capacity** | |
| Jurisdiction-level understanding of potential climate change impacts | Low |
| *Comment:* | |
| Jurisdiction-level monitoring of climate change impacts | Low |
| *Comment:* | |
| Technical resources to assess proposed strategies for feasibility and externalities | Low |
| *Comment:* | |
| Jurisdiction-level capacity for development of greenhouse gas emissions inventory | Low |
| *Comment:* | |
| Capital planning and land use decisions informed by potential climate impacts | Low |
| *Comment:* | |
| Participation in regional groups addressing climate risks | Low |
| *Comment:* | |
| **Implementation Capacity** | |
| Clear authority/mandate to consider climate change impacts during public decision-making processes | Low |
| *Comment:* | |
| Identified strategies for greenhouse gas mitigation efforts | Low |
| *Comment:* | |
| Identified strategies for adaptation to impacts | Low |
| *Comment:* | |
| Champions for climate action in local government departments | Low |
| *Comment:* | |
| Political support for implementing climate change adaptation strategies | Low |
| *Comment:* | |
| Financial resources devoted to climate change adaptation | Low |
| *Comment:* | |
| Local authority over sectors likely to be negative impacted | Low |
| *Comment:* | |
| **Public Capacity** | |
| Residents' knowledge of and understanding of climate risk | Unknown |
| *Comment:* | |
| Residents' support of adaptation efforts | Unknown |
| *Comment:* | |
| Residents' capacity to adapt to climate impacts | Unknown |
| *Comment:* | |
| Local economy current capacity to adapt to climate impacts | Low |
| *Comment:* | |

| | |
|---|---|
| Local ecosystems capacity to adapt to climate impacts | Low |
| *Comment:* | |

a. High = Capacity exists and is in use; Medium = Capacity may exist but is not used or could use some improvement; Low = Capacity does not exist or could use substantial improvement; Unsure= Not enough information is known to assign a rating.

## 1.5 INTEGRATION

For hazard mitigation planning, "integration" means that hazard mitigation information is used in other relevant planning mechanisms, such as capital facilities planning, and that relevant information from those sources is used in hazard mitigation. This section identifies where such integration is already in place, and where there are opportunities for further integration in the future. Resources listed at the end of this annex were used to provide information on integration. The progress reporting process described in Volume 1 of the hazard mitigation plan will document the progress of hazard mitigation actions related to integration and identify new opportunities for integration.

### 1.5.1 Opportunities for Future Integration

The capability assessment in this annex indicates opportunities to integrate this mitigation plan with other jurisdictional planning/regulatory capabilities. Capabilities were identified as integration opportunities if they can support or enhance the actions identified in this plan or be supported or enhanced by components of this plan. The capability assessment identified the following plans and programs that do not currently integrate hazard mitigation information but provide opportunities to do so in the future:

- Construction of an alternate water source (i.e., deep well) to supplement Railroad Spring source in process. The Well will be less susceptible to contamination due to fire or other hazardous events than Railroad Springs.
- Emergency Operations/Response Plan – Currently undergoing an update which will better identify the chain of command before a hazard event occurs.

## 1.6 NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE

Special purpose districts are not eligible to participate in the National Flood Insurance Program. However, any new assets or infrastructure developed by the district is in compliance with the floodplain regulations established by the County.

## 1.7 RISK ASSESSMENT

### 1.7.1 Jurisdiction-Specific Natural Hazard Event History

Table 1-8 lists past occurrences of natural hazards for which specific damage was recorded in this jurisdiction. Other hazard events that broadly affected the entire planning area, including this jurisdiction, are listed in the risk assessments in Volume 1 of this hazard mitigation plan.

Table 1-8. Past Natural Hazard Events

| Type of Event | Declaration Title | State or Federal Disaster # | Declaration Date | Damage Assessment |
|---|---|---|---|---|
| Severe Storm | Severe Winter Storms, Straight-Line Winds, Flooding, Landslides, and Mudslides | DR-4699-CA | 4/3/2023 | |
| Flood | Severe Winter Storms, Flooding, Landslides, and Mudslides | EM-3592-CA | 3/10/2023 | |
| Storm | December 2021 Storms | 2022-03 | 12/30/2021 | |
| Fire | Wildfires | DR-4558-CA 2020-06 | 8/22/2020 | |
| Biological | Covid-19 Pandemic | DR-4482-CA | 3/22/2020 | |
| Flood | Severe Winter Storms, Flooding, and Mudslides | DR-4308-CA 2017-03 | 4/1/2017 | |
| Severe Storm | Severe Winter Storms, Flooding, and Mudslides | DR-4301-CA | 2/14/2017 | |
| Flood | 2008 January Storms | 2008-01 | 1/5/2008 | |
| Severe Storm | Severe Storms, Flooding, Mudslides, and Landslides | DR-1628-CA 2006-01 | 2/3/2006 | |
| Flood | Extreme Rainfall | 2005-07 | 11/7/2005 | $504,323 |
| Severe Storm | Severe Storms, Flooding, Mud and Landslides | DR-1155-CA 97-01 | 1/4/1997 | |
| Severe Storm | Severe Winter Storms, Flooding Landslides, Mud Flow | DR-1046-CA 95-03 | 3/12/1995 | |
| Flood | Severe Winter Storm, Mud & Land Slides, & Flooding | DR-979-CA 93-01 | 2/3/1993 | |
| Fire | 1987 Wildland Fires | No number | 9/10/87, 9/3/87 | |
| Flood | Severe Storms & Flooding | DR-758-CA 86-01 | 2/21/1986 | |
| Flood | Heavy Rains and Flooding | 82-03 | 4/1/1982 | |
| Flood | 1980 April Storms | 80-01 thru 80-25 | 4/1/1980 | |
| Drought | Drought | EM-3023-CA | 1/20/1977 | |
| Flood | Severe Storms & Flooding | DR-253-CA | 1/26/1969 | |
| Flood | Heavy Rains & Flooding | DR-183-CA | 12/24/1964 | |
| Flood | 1963 Floods and Rains | No number | 2/7/63, 2/26/63, | |

| | | | | |
|---|---|---|---|---|
| | | | 2/29/63, 4/22/63 | |
| Flood | 1962 Floods and Rains | No number | 10/17/62, 10/25/62, 10/30/62, & 11/4/62 | |
| Fire | 1960 Major Fires | No number | 8/16/1960 | |

## 1.7.2 Hazard Ranking

The prioritization and categorization of identified hazards for the District is based principally on the Priority Risk Index (PRI), a tool used to measure the degree of risk for identified hazards in a particular planning area. The PRI was used to assist the District in identifying hazards that pose the most significant threat. Table 1-9 presents a local ranking of all hazards of concern for which this hazard mitigation plan provides complete risk assessments. As described in detail in Volume 1, the ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property and the economy.

Table 1-9. Hazard Risk Ranking Summary

| Hazard | Weighted Risk Factors | | | | | PRI | Risk Ranking |
|---|---|---|---|---|---|---|---|
| | Probability | Impact | Spatial Extent | Warning Time | Climate Change | | |
| Avalanche | .60 | .60 | .40 | .40 | .30 | 2.3 | Medium |
| Dam Failure | 0 | 0 | 0 | 0 | 0 | 0 | None |
| Drought | 1.2 | .60 | .80 | .10 | .40 | 3.1 | High |
| Earthquake | .30 | .60 | .80 | .40 | .20 | 2.3 | Medium |
| Extreme Heat | 1.2 | .60 | .80 | .10 | .40 | 3.1 | High |
| Flood | .90 | .60 | .80 | .10 | .30 | 2.7 | Medium |
| Landslide/Mass Movement | 1.2 | .60 | .60 | .40 | .30 | 3.13.1 | High |
| Volcanic Activity | .30 | .30 | .80 | .10 | .20 | 1.7 | Low |
| Wildfire | 1.2 | .60 | .80 | .40 | .30 | 3.3 | High |
| Winter Storm | 1.2 | .60 | .80 | .10 | .40 | 3.1 | High |

## 1.7.3 Jurisdiction-Specific Vulnerabilities

Volume 1 of this hazard mitigation plan provides complete risk assessments for each identified hazard of concern. This section provides information on a few key vulnerabilities for this jurisdiction. Available jurisdiction-specific risk maps of the hazards are provided at the end of this annex.

There are no additional jurisdiction-specific issues that have been identified based on a review of the results of the risk assessment, public involvement strategy.

## 1.8 HAZARD MITIGATION STRATEGY

This section includes the following components of the mitigation strategy for this jurisdiction:

- Hazard Mitigation Action Plan Matrix
- Mitigation Action Prioritization
- Mitigation Action Classification and Natural Hazards Addressed

Table 1-10. Hazard Mitigation Action Plan Matrix

| Action Number | Action Description | Community Lifeline Addressed | Benefits New or Existing Assets | Goals and Objectives Met | Lead and Support Implementers | Benefits Equity Priority Community? | Estimated Cost | Potential Funding Sources | Timeline |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Where appropriate, support retrofitting, purchase or relocation of structures located in hazard areas, prioritizing those that have experienced repetitive losses and/or are in high- or medium-risk hazard areas. | Safety & Security; Food, Hydration, Shelter; Health & Medical; Energy; Communications; Transportation; Haz Mat; Water Systems | Existing | Goal: | Lead: District Water Operator Support: Board of Directors | Yes | Very High ($1,000,000 and above) | | Long-Term (5 years or more) |
| 2 | Integrate the hazard mitigation plan into other plans that address natural hazards within the service area including:<br>• Emergency Operations/Response Plan | Food, Hydration, Shelter | New and Existing | Goals: | Lead: District Water Operator | Yes | Low ($0-$50,000) | Staff Time, General Fund | Short-Term (less than 5 years) |
| 3 | Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan. | Safety & Security; Food, Hydration, Shelter; Health & Medical; Energy; Communications; Transportation; Haz Mat; Water Systems | New and Existing | Goals: | Lead: District Water Operator | Yes | Low ($0-$50,000) | Staff Time | Short-Term (less than 5 years) |
| 4 | Purchase generators for District-owned critical facilities and infrastructure that lack adequate backup power. | Safety & Security; Food, Hydration, Shelter; Health & Medical; Energy; | Existing | Goal: | Lead: District Water Operator | Yes | High ($250,000-$1,000,000) | | Short-Term (less than 5 years) |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Communications; Transportation | | | | | | | |
| **5** | Support the Countywide mitigation actions outlined in Volume 1 of this hazard mitigation plan. | Safety & Security; Food, Hydration, Shelter; Health & Medical; Energy; Communications; Transportation; Haz Mat; Water Systems | New and Existing | Goals: | Lead: District Water Operator | Yes | Low ($0-$50,000) | Staff Time | Short-Term (less than 5 years) |

## 1.9 PUBLIC OUTREACH

| Local Outreach Activity | Date | Number of People Involved |
|---|---|---|
| None | | |
| | | |
| | | |
| | | |
| | | |

## 1.10 INFORMATION SOURCES USED FOR THIS ANNEX

The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for this annex.

- Sierraville PUD Preliminary Engineering Report Tank Replacement Project August 2016
- Construction Specifications and Drawings for Sierraville PUD Pump Station Replacement Project February 2022
- Sierraville PUD Preliminary Engineering Report Groundwater Well Project July 2024

The following outside resources and references were reviewed:

- **Hazard Mitigation Plan Annex Development Toolkit**—The toolkit was used to support the identification of past hazard events and noted vulnerabilities, the risk ranking, and the development of the mitigation action plan.