Annex U Sierra Joint Community College District

U.1 Introduction

This Annex details the hazard mitigation planning elements specific to Sierra Joint Community College District (SJCCD or District), a new participating jurisdiction to the 2021 Placer County Local Hazard Mitigation Plan (LHMP) Update. This Annex is not intended to be a standalone document, but appends to and supplements the information contained in the Base Plan document. As such, all sections of the Base Plan, including the planning process and other procedural requirements apply to and were met by the District. This Annex provides additional information specific to SJCCD, with a focus on providing additional details on the risk assessment and mitigation strategy for this community.

Note: SJCCD participated in the original 2005 Placer County LHMP. A copy of that document could not be located by SJCCD, Placer County, or Cal OES. Additionally, staff turnover in the past 16 years has reduced institutional memory of that 2005 Plan. It can be assumed that none of SJCCD's proposed mitigation actions were completed, SJCCD's mitigation priorities at that time are unknown, and that the 2005 Plan was not incorporated into any SJCCD planning mechanisms. Development in the District since 2005 was described by SJCCD as minimal, and a general description of more recent development in the District is included in Section U.5.2 of this Annex.

U.2 Planning Process

As described above, the District followed the planning process detailed in Chapter 3 of the Base Plan. In addition to providing representation on the Placer County Hazard Mitigation Planning Committee (HMPC), the District formulated their own internal planning team to support the broader planning process requirements. Internal planning participants, their positions, and how they participated in the planning process are shown in Table U-1. Additional details on plan participation and District representatives are included in Appendix A.

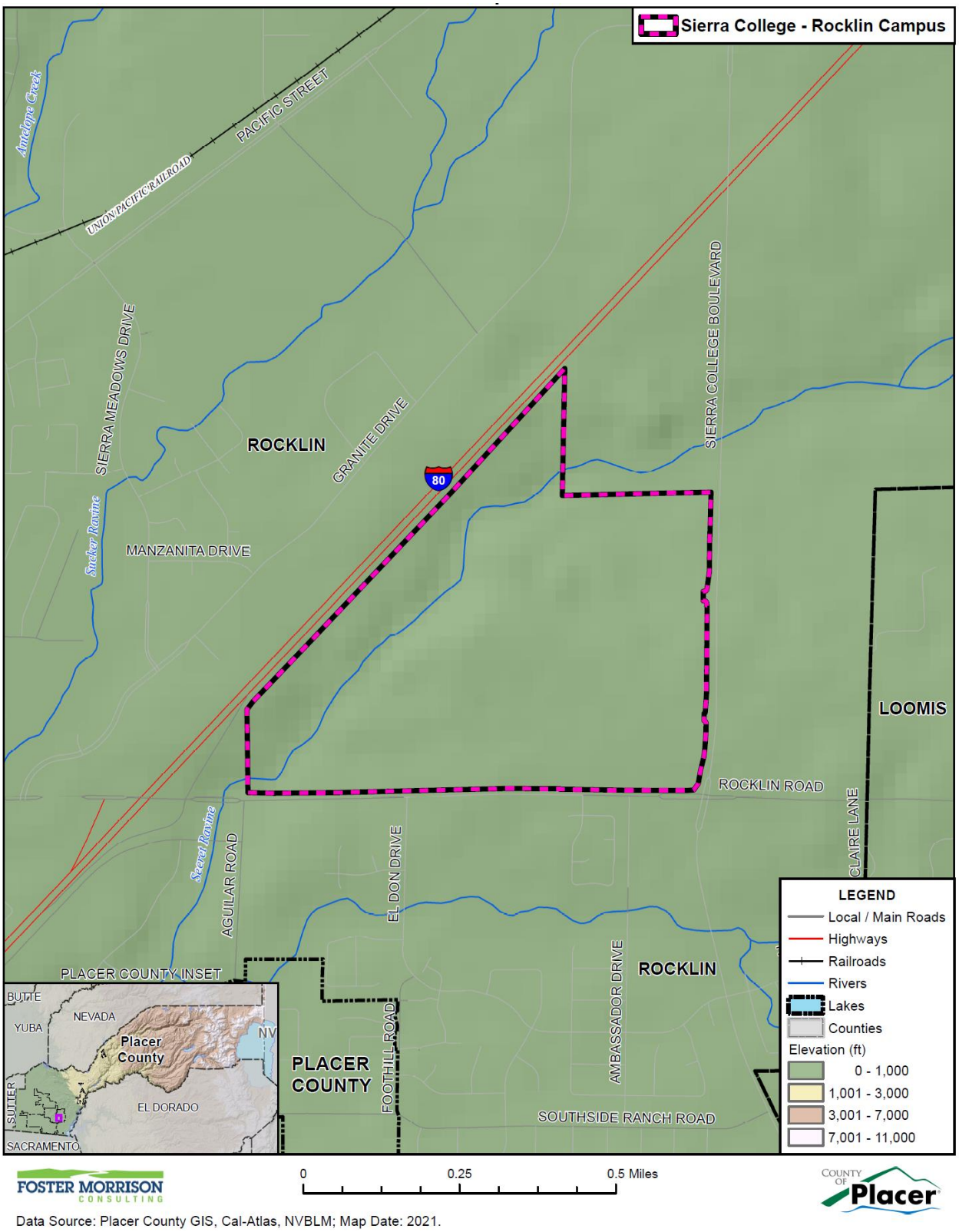
Table U-1 SJCCD – Planning Team

Name	Position/Title	How Participated
Erik Skinner	Vice President, Administrative Services	Coordination, planning, drafting
Linda Fisher	Director of Finance	Planning, drafting
Laura Doty	Director of Facilities	Planning, drafting
Judy Alquist	Director of Budget	Planning, drafting
Jamison Lopizich	Chief of Security	Planning, drafting
Stacey Carroll	Executive Assistant, Administrative Services	Coordination, planning, drafting

U.3 District Profile

The District profile for the SJCCD is detailed in the following sections. Figure U-1 displays a map and the location of the District within Placer County.

Figure U-1 SJCCD



Data Source: Placer County GIS, Cal-Atlas, NVBLM; Map Date: 2021.

U.3.1. Overview and Background

Sierra College is a public community college in Rocklin, California. Sierra College is owned and operated by the Sierra Joint Community College District, a district that covers over 3,200 square miles, serves Placer, Nevada and parts of El Dorado and Sacramento counties.

The college was officially founded in 1936 and is fully accredited by the Western Association of Schools and Colleges. The main campus in Rocklin was chosen by 1960, out of 35 possible sites. The planned construction of Interstate 80 was a consideration in the decision making. In 1961, the new campus opened. In 1996, another campus in Nevada County opened, in between Grass Valley and Nevada City. During 2000–2005, outreach campuses in Roseville and near Truckee were opened. Today the SJCCD serves over 24,000 students.

SJCCD is governed by a board of seven trustees who are elected district-wide and a student trustee. The constituent groups within the district—trustees, faculty, students, management and classified staff—are committed to our mission of providing education and opportunity to area residents. The principle of participatory governance for assuring broad and deep participation in all decisions is a defining feature of the college and district. SJCCD is proud of our tradition of strong and stable leadership with only five individuals having held the post of president in the last 50 years and a board with long tenures of service.

U.4 Hazard Identification

SJCCD identified the hazards that affect the District and summarized their location, extent, frequency of occurrence, potential magnitude, and significance specific to District (see Table U-2).

Table U-2 SJCCD—Hazard Identification Assessment

Hazard	Geographic Extent	Likelihood of Future Occurrences	Magnitude/ Severity	Significance	Climate Change Influence
Agriculture Pests and Diseases	Limited	Unlikely	Negligible	Low	Medium
Avalanche	Limited	Unlikely	Negligible	Low	Medium
Climate Change	Extensive	Likely	Limited	Low	–
Dam Failure	Limited	Unlikely	Limited	Low	Medium
Drought & Water Shortage	Extensive	Unlikely	Negligible	Medium	High
Earthquake	Significant	Occasional	Limited	Low	Low
Floods: 1%/0.2% annual chance	Significant	Unlikely	Limited	Low	Medium
Floods: Localized Stormwater	Limited	Likely	Negligible	Medium	Medium
Landslides, Mudslides, and Debris Flows	Limited	Unlikely	Limited	Low	Medium
Levee Failure	Limited	Unlikely	Limited	Low	Medium
Pandemic	Extensive	Likely	Critical	High	Medium
Seiche	Limited	Unlikely	Negligible	Low	Medium
Severe Weather: Extreme Heat	Extensive	Likely	Limited	Low	High
Severe Weather: Freeze and Snow	Extensive	Likely	Limited	Low	Medium
Severe Weather: Heavy Rains and Storms	Extensive	Likely	Limited	Low	Medium
Severe Weather: High Winds and Tornadoes	Significant	Occasional	Negligible	Low	Low
Tree Mortality	Significant	Occasional	Limited	Low	High
Wildfire	Significant	Occasional	Limited	Medium	High

Geographic Extent
Limited: Less than 10% of planning area
Significant: 10-50% of planning area
Extensive: 50-100% of planning area

Likelihood of Future Occurrences
Highly Likely: Near 100% chance of occurrence in next year, or happens every year.
Likely: Between 10 and 100% chance of occurrence in next year, or has a recurrence interval of 10 years or less.
Occasional: Between 1 and 10% chance of occurrence in the next year, or has a recurrence interval of 11 to 100 years.
Unlikely: Less than 1% chance of occurrence in next 100 years, or has a recurrence interval of greater than every 100 years.

Magnitude/Severity
Catastrophic—More than 50 percent of property severely damaged; shutdown of facilities for more than 30 days; and/or multiple deaths
Critical—25-50 percent of property severely damaged; shutdown of facilities for at least two weeks; and/or injuries and/or illnesses result in permanent disability
Limited—10-25 percent of property severely damaged; shutdown of facilities for more than a week; and/or injuries/illnesses treatable do not result in permanent disability
Negligible—Less than 10 percent of property severely damaged, shutdown of facilities and services for less than 24 hours; and/or injuries/illnesses treatable with first aid

Significance
Low: minimal potential impact
Medium: moderate potential impact
High: widespread potential impact

Climate Change Influence
Low: minimal potential impact
Medium: moderate potential impact
High: widespread potential impact

U.5 Hazard Profile and Vulnerability Assessment

The intent of this section is to profile the District's hazards and assess the District's vulnerability separate from that of the Placer County Planning Area as a whole, which has already been assessed in Section 4.3 Hazard Profiles and Vulnerability Assessment in the Base Plan. The hazard profiles in the Base Plan discuss overall impacts to the Placer County Planning Area and describes the hazard problem description, hazard location and extent, magnitude/severity, previous occurrences of hazard events and the likelihood of future occurrences. Hazard profile information specific to the District is included in this Annex. This vulnerability assessment analyzes the property and other assets at risk to hazards ranked of medium or high significance specific to the District. For more information about how hazards affect the County as a whole, see Chapter 4 Risk Assessment in the Base Plan.

U.5.1. Hazard Profiles

Each hazard vulnerability assessment in Section 0, includes a hazard profile/problem description as to how each medium or high significant hazard (as shown in Table U-2) affects the District and includes information on past hazard occurrences and the likelihood of future hazard occurrence. The intent of this section is to provide jurisdictional specific information on hazards and further describes how the hazards and risks differ across the Placer County Planning Area.

U.5.2. Vulnerability Assessment and Assets at Risk

This section identifies the District's total assets at risk, including values at risk, populations at risk, critical facilities and infrastructure, natural resources, and historic and cultural resources. Growth and development trends are also presented for the District. This data is not hazard specific, but is representative of total assets at risk within the District.

Assets at Risk and Critical Facilities

This section considers the SJCCD's assets at risk, with a focus on key District assets such as critical facilities, infrastructure, and other District assets and their values. With respect to District assets, the majority of these assets are considered critical facilities as defined for this Plan. Critical facilities are defined for this Plan as:

> ***Any facility, including without limitation, a structure, infrastructure, property, equipment or service, that if adversely affected during a hazard event may result in severe consequences to public health and safety or interrupt essential services and operations for the community at any time before, during and after the hazard event.***

This definition is further refined by separating out three classes of critical facilities:

> ***Class 1 facilities include those facilities that contribute to command, control, communications and computer capabilities associated with managing an incident from initial response through recovery.***

Class 2 facilities include those facilities that house Emergency Services capabilities.

Class 3 facilities are those facilities that enable key utilities and can be used as evacuation centers/shelters/mass prophylaxis sites, etc.

Additional information on the three classes of critical facilities is described further in Section 4.3.1 of the Base Plan.

Table U-3 lists critical facilities and other District assets identified by the District Planning Team as important to protect in the event of a disaster. SJCCD's physical assets, valued at over $481 million, consist of the buildings and infrastructure to support the District's operations.

Table U-3 SJCCD Critical Facilities, Infrastructure, and Other District Assets

Name of Asset	Facility Type	Replacement Value	Which Hazards Pose Risk
Rocklin Campus	Classrooms, Offices, Student Services, Dorm, Server Room	$350 million	Earthquake, Flooding, Stormwater Flooding, Severe Weather, Tree Mortality and Wildfire
Nevada County Campus	Classrooms, Offices, Student Services, Public Safety Training Center, Server Room	$100 million	Earthquake, Flooding, Stormwater Flooding, Severe Weather, Tree Mortality and Wildfire
Tahoe-Truckee Campus	Classrooms, Offices, Student Services, Server Room	$25 million	Earthquake, Flooding, Stormwater Flooding, Severe Weather, Tree Mortality and Wildfire
Roseville Leased Space	Classroom and Office Contents, Server Room	$6 million	Earthquake, Flooding, Stormwater Flooding

Source: SJCCD

Populations Served

Also potentially at risk should the District be affected by natural hazard events are the populations served by the District. SJCCD provides services to over 24,000 students.

Natural Resources

SJCCD has a variety of natural resources of value to the District. These natural resources parallel that of the City of Rocklin. Information can be found in Section 4.3.1 of the Base Plan

Historic and Cultural Resources

SJCCD has a variety of historic and cultural resources of value to the District. These historic and cultural resources parallel that of the City of Rocklin. Information can be found in Section 4.3.1 of the Base Plan.

Growth and Development Trends

General growth in the District parallels that of the City of Rocklin. Information can be found in Section 4.3.1 of the Base Plan.

Future Development

The District is currently implementing a $500 million construction program for the Rocklin Campus, funded primarily through the passage of the Measure E bond authorization. Part of this work includes a West Placer Transfer Center that will be built in conjunction with Sacramento State University's new center at Placer Ranch. More general information on growth and development in Placer County as a whole can be found in "Growth and Development Trends" in Section 4.3.1 Placer County Vulnerability and Assets at Risk of the Base Plan.

U.5.3. Vulnerability to Specific Hazards

This section provides the vulnerability assessment, including any quantifiable loss estimates, for those hazards identified above in Table U-2 as high or medium significance hazards. Impacts of past events and vulnerability of the District to specific hazards are further discussed below (see Section 4.1 Hazard Identification in the Base Plan for more detailed information about these hazards and their impacts on the Placer County Planning Area). Methodologies for evaluating vulnerabilities and calculating loss estimates are the same as those described in Section 4.3 of the Base Plan.

An estimate of the vulnerability of the District to each identified priority hazard, in addition to the estimate of likelihood of future occurrence, is provided in each of the hazard-specific sections that follow. Vulnerability is measured in general, qualitative terms and is a summary of the potential impact based on past occurrences, spatial extent, and damage and casualty potential. It is categorized into the following classifications:

- **Extremely Low**—The occurrence and potential cost of damage to life and property is very minimal to nonexistent.
- **Low**—Minimal potential impact. The occurrence and potential cost of damage to life and property is minimal.
- **Medium**—Moderate potential impact. This ranking carries a moderate threat level to the general population and/or built environment. Here the potential damage is more isolated and less costly than a more widespread disaster.
- **High**—Widespread potential impact. This ranking carries a high threat to the general population and/or built environment. The potential for damage is widespread. Hazards in this category may have occurred in the past.
- **Extremely High**—Very widespread with catastrophic impact.

Depending on the hazard and availability of data for analysis, this hazard specific vulnerability assessment also includes information on values at risk, critical facilities and infrastructure, populations at risk, and future development.

Drought & Water Shortage

Likelihood of Future Occurrence–Unlikely
Vulnerability–Medium

Hazard Profile and Problem Description

Drought is a complex issue involving many factors—it occurs when a normal amount of precipitation and snow is not available to satisfy an area's usual water-consuming activities. Drought can often be defined regionally based on its effects. Drought is different than many of the other natural hazards in that it is not a distinct event and usually has a slow onset. Drought can severely impact a region both physically and economically. Drought affects different sectors in different ways and with varying intensities. Adequate water is the most critical issue and is critical for agriculture, manufacturing, tourism, recreation, and commercial and domestic use. As the population in the area continues to grow, so will the demand for water.

Location and Extent

Drought and water shortage are regional phenomenon. The whole of the County, as well as the whole of the District, is at risk. The US Drought Monitor categorizes drought conditions with the following scale:

- None
- D0 – Abnormally dry
- D1 – Moderate Drought
- D2 – Severe Drought
- D3 – Extreme drought
- D4 – Exceptional drought

Drought has a slow speed of onset and a variable duration. Drought can last for a short period of time, which does not usually affect water shortages and for longer periods. Should a drought last for a long period of time, water shortage becomes a larger issue. Current drought conditions in the District and the County are shown in Section 4.3.10 of the Base Plan.

Past Occurrences

There has been one state and one federal disaster declaration due to drought since 1950. This can be seen in Table U-4.

Table U-4 Placer County – State and Federal Disaster Declarations Summary 1950-2020

Disaster Type	State Declarations		Federal Declarations	
	Count	Years	Count	Years
Drought	1	2014	1	1977

Source: Cal OES, FEMA

Since drought is a regional phenomenon, past occurrences of drought for the District are the same as those for the County and includes 5 multi-year droughts over an 85-year period. Details on past drought occurrences can be found in Section 4.3.10 of the Base Plan.

The District experienced moderate loss of landscaping (plants, shrubs, turf, etc.) during the 2014 drought.

Vulnerability to and Impacts from Drought and Water Shortage

Based on historical information, the occurrence of drought in California, including the District, is cyclical, driven by weather patterns. Drought has occurred in the past and will occur in the future. Periods of actual drought with adverse impacts can vary in duration, and the period between droughts can be extended. Although an area may be under an extended dry period, determining when it becomes a drought is based on impacts to individual water users. Drought impacts are wide-reaching and may be economic, environmental, and/or societal. Tracking drought impacts can be difficult.

The most significant qualitative impacts associated with drought in the Placer County Planning Area are those related to water intensive activities such as agriculture, wildfire protection, municipal usage, commerce, tourism, recreation, and wildlife preservation. Mandatory conservation measures are typically implemented during extended droughts. Drought conditions can also cause soil to compact and not absorb water well, potentially making an area more susceptible to flooding. With a reduction in water, water supply issues based on water rights becomes more evident. Climate change may create additional impacts to drought and water shortage in the County and the District.

During periods of drought, vegetation can dry out which increases fire risk. Drought that occurs during periods of extreme heat and high winds can cause Public Safety Power Shutoff (PSPS) events to be declared in the County. More information on power shortage and failure can be found in the Severe Weather: Extreme Heat Section below, as well as in Section 4.3.2 of the Base Plan.

Identified vulnerabilities include moderate loss of landscaping (plants, shrubs, turf, etc.). To mitigate these risks and contribute to regional water conservation efforts, the District has developed a Landscape Master Plan for the Rocklin Campus that incorporates low-water, drought tolerant design.

Assets at Risk

There are no identified threats to assets listed in table U-3, damage would likely be limited to landscaping.

Flood: Localized Stormwater Flooding

Likelihood of Future Occurrence–Likely
Vulnerability–Medium

Hazard Profile and Problem Description

Flooding occurs in areas other than the FEMA mapped 1% and 0.2% annual chance floodplains. Flooding may be from drainages not studied by FEMA, lack of or inadequate drainage infrastructure, or inadequate maintenance. Localized, stormwater flooding occurs throughout the County during the rainy season from

November through April. Prolonged heavy rainfall contributes to a large volume of runoff resulting in high peak flows of moderate duration.

Location and Extent

The SJCCD is subject to localized flooding throughout the District. Flood extents are usually measured in areas affected, velocity of flooding, and depths of flooding. Expected flood depths in the District vary by location. Flood durations in the District tend to be short to medium term, or until either the storm drainage system can catch up or flood waters move downstream. Localized flooding in the District tends to have a shorter speed of onset, especially when antecedent rainfall has soaked the ground and reduced its capacity to absorb additional moisture.

Past Occurrences

There have been no federal or state disaster declarations in the County due to localized flooding. The District noted the following past occurrences of localized flooding:

- **January 3-12, 2017** – Flooding from heavy rains occurred at the Rocklin, Roseville, Grass Valley, and Tahoe-Truckee campuses. Campuses were closed intermittently between January 3 & 12. Disaster No: FEMA DR-4301 Heavy rains and high winds causing damage to buildings and roofs, fallen trees, debris and localized flooding. Various intermittent campus closures due to severe weather, power outages and flying debris. Flooded elevator shaft, roof damage on several buildings, overwhelmed drains in pool complex, overwhelmed roof drains, water intrusion, fallen or damaged trees. These losses were not insured losses, since origin of most damage was flood water related.

Vulnerability to and Impacts from Localized Flooding

Historically, much of the growth in the District and County has occurred adjacent to streams, resulting in significant damages to property, and losses from disruption of community activities when the streams overflow. Additional development in the watersheds of these streams affects both the frequency and duration of damaging floods through an increase in stormwater runoff.

Primary concerns associated with stormwater flooding include life safety issues, and impacts to property and to infrastructure that provides a means of ingress and egress throughout the community. Ground saturation can result in instability, collapse, or other damage to trees, structures, roadways and other critical infrastructure. Objects can also be buried or destroyed through sediment deposition. Floodwaters can break utility lines and interrupt services. Standing water can cause damage to crops, roads, and foundations. Other problems connected with flooding and stormwater runoff include erosion, sedimentation, degradation of water quality, losses of environmental resources, and certain health hazards.

Assets at Risk

All District assets (from Table U-3) are at risk from this hazard. District personnel may be affected as they travel to and from work, as transportation routes may be affected.

Pandemic

Likelihood of Future Occurrence–Likely
Vulnerability–High

Hazard Profile and Problem Description

According to the World Health Organization (WHO), a disease epidemic occurs when there are more cases of that disease than normal. A pandemic is a worldwide epidemic of a disease. A pandemic may occur when a new virus appears against which the human population has no immunity.

A pandemic occurs when a new virus emerges for which people have little or no immunity, and for which there is no vaccine. This disease spreads easily person-to-person, causes serious illness, and can sweep across the country and around the world in a very short time. The U.S. Centers for Disease Control (CDC) and Prevention has been working closely with other countries and the WHO to strengthen systems to detect outbreaks of that might cause a pandemic and to assist with pandemic planning and preparation. An especially severe pandemic could lead to high levels of illness, death, social disruption, and economic loss.

Location and Extent

During a pandemic, the whole of the District, County, and surrounding region is at risk, as pandemic is a regional, national, and international event. The speed of onset of pandemic is usually short, while the duration is variable, but can last for more than a year as shown in the 1918/1919 Spanish Flu. There is no scientific scale to measure the magnitude of pandemic. Pandemics are usually measured in numbers affected by the pandemic, and by number who die from complications from the pandemic.

Past Occurrences

There has been one state and federal disaster declaration due to pandemic, as shown in Table U-5.

Table U-5 Placer County – State and Federal Pandemic Disaster Declarations 1950-2020

Disaster Type	Federal Declarations		State Declarations	
	Count	Years	Count	Years
Pandemic	1	2020	1	2020

Source: Cal OES, FEMA

The 20th century saw three outbreaks of pandemic flu.

- The 1918-1919 Influenza Pandemic (H1N1)
- The February 1957-1958 Influenza Pandemic (H2N2)
- The 1968 Influenza Pandemic (H3N2)

To date, the 21st century has seen two acknowledged pandemics.

- 2009 Swine Flu (H1N1)
- 2019/2020 COVID 19

In the District, the COVID-19 Pandemic resulted in a severe disruption to campus operations. It affected the Rocklin, Roseville, Grass Valley, and Tahoe-Truckee campuses. As of January 25, 2021, approximately 21 positive tests reported among on-site employees and students. Beginning in March 2020, roughly 95% of instruction converted to online delivery. Operations converted to a largely remote model. Continuing in this manner in spring of 2021 and into the foreseeable future. No community transmissions of the virus have occurred on site. No deaths have occurred among on-site employees and students.

Vulnerability to and Impacts from Pandemic

Pandemics have and will continue to have impacts on human health in the region. A pandemic occurs when a new virus emerges for which there is little or no immunity in the human population; the virus causes serious illness and spreads easily from person-to-person worldwide. There are several strategies that public health officials can use to combat a pandemic. Constant surveillance regarding the current pandemic, use of infection control techniques, and administration of vaccines once they become available. Citizens can help prevent the spread of a pandemic by staying home, or "self-quarantining," if they suspect they are infected. Pandemic does not affect the buildings, critical facilities, and infrastructure in the District. Pandemic can have varying levels of impact to the citizens of the District and greater County, depending on the nature of the pandemic.

Impacts could range from school and business closings to the interruption of basic services such as public transportation, health care, and the delivery of food and essential medicines. Hospitalizations and deaths can occur, especially to the elderly or those with pre-existing underlying conditions. As seen with Covid-19, multiple businesses were forced to close temporarily (some permanently), and unemployment rose significantly. Supply chains for food and essentials can be interrupted. Prisons may need to release prisoners to prevent significant outbreaks.

Assets at Risk

Pandemics do not affect District facilities, but can affect District personnel who operate District facilities.

Severe Weather: Extreme Heat

Likelihood of Future Occurrence–Likely
Vulnerability–Medium

Hazard Profile and Problem Description

According to FEMA, extreme heat is defined as temperatures that hover 10 degrees or more above the average high temperature for the region and last for several weeks. Heat kills by taxing the human body beyond its abilities. In extreme heat and high humidity, evaporation is slowed, and the body must work extra hard to maintain a normal temperature." Most heat disorders occur because the victim has been overexposed to heat or has over-exercised for his or her age and physical condition. Older adults, young children, and those who are sick or overweight are more likely to succumb to extreme heat.

In addition to the risks faced by citizens of the District, there are risk to the built environment from extreme heat. While extreme heat on its own does not usually affect structure, extreme heat during times of drought

can cause wildfire risk to heighten. Extreme heat and high winds can cause power outages and PSPS events, causing issues to buildings in the District.

Extreme Heat and Power Shortage/Power Failure

The US power grid crisscrosses the country, bringing electricity to homes, offices, factories, warehouses, farms, traffic lights and even campgrounds. According to statistics gathered by the Department of Energy, major blackouts are on the upswing. Incredibly, over the past two decades, blackouts impacting at least 50,000 customers have increased 124 percent. The electric power industry does not have a universal agreement for classifying disruptions. Nevertheless, it is important to recognize that different types of outages are possible so that plans may be made to handle them effectively. In addition to blackouts, brownouts can occur. A brownout is an intentional or unintentional drop in voltage in an electrical power supply system. Intentional brownouts are used for load reduction in an emergency. Electric power disruptions can be generally grouped into two categories: intentional and unintentional. More information on types of power disruptions can be found in Section 4.3.2 of the Base Plan.

Public Safety Power Shutoff (PSPS)

A new intentional disruption type of power shortage/failure event has recently occurred in California. In recent years, several wildfires have started as a result of downed power lines or electrical equipment. This was the case for the Camp Fire in 2018. As a result, California's three largest energy companies (including PG&E), at the direction of the California Public Utilities Commission (CPUC), are coordinating to prepare all Californians for the threat of wildfires and power outages during times of extreme weather. To help protect customers and communities during extreme weather events, electric power may be shut off for public safety in an effort to prevent a wildfire. This is called a PSPS. More information on PSPS criteria can be found in Section 4.3.2 of the Base Plan.

Location and Extent

Heat is a regional phenomenon and affects the whole of the District. Heat emergencies are often slower to develop, taking several days of continuous, oppressive heat before a significant or quantifiable impact is seen. Heat waves do not strike victims immediately, but rather their cumulative effects slowly affect vulnerable populations and communities. Heat waves do not generally cause damage or elicit the immediate response of floods, fires, earthquakes, or other more "typical" disaster scenarios.

The NWS has in place a system to initiate alert procedures (advisories or warnings) when extreme heat is expected to have a significant impact on public safety. The expected severity of the heat determines whether advisories or warnings are issued. The NWS HeatRisk forecast provides a quick view of heat risk potential over the upcoming seven days. The heat risk is portrayed in a numeric (0-4) and color (green/yellow/orange/red/magenta) scale which is similar in approach to the Air Quality Index (AQI) or the UV Index. This can be seen in Section 4.3.2 of the Base Plan.

Past Occurrences

There has been no federal or state disaster declarations in the County for heat. The District Planning Team noted that since extreme heat is a regional phenomenon, events that affected the County also affected the District. Those past occurrences were shown in the Base Plan in Section 4.3.2.

In recent years, PSPS events have impacted campus operations and forced closure of the campuses due to inability to operate building systems.

Vulnerability to and Impacts from Extreme Heat

The District experiences temperatures in excess of 100°F during the summer and fall months. The temperature moves to 105-110°F in rather extreme situations. During these times, drought conditions may worsen. Also, power outages and PSPS events may occur during these times as well. Health impacts, including loss of life, are the primary concern with this hazard, though economic impacts are also an issue.

Days of extreme heat have been known to result in medical emergencies, and unpredictable human behavior. Periods of extended heat and dryness (droughts) can have major economic, agricultural, and water resources impacts. Extreme heat can also dry out vegetations, making it more vulnerable to wildfire ignitions.

During periods of extreme heat, the District takes measures to ensure that facilities and grounds personnel employ safety procedures including hydration, rest breaks, and/or performing indoor duties. In the campus dormitory, each room is equipped with an air conditioning unit. The District plans to purchase and install a generator for the dormitory to ensure continued operation of air conditioners and other building systems in the event of power loss.

Assets at Risk

No District assets (from Table U-3) are at risk from this hazard.

Wildfire

Likelihood of Future Occurrence–Occasional
Vulnerability–Medium

Hazard Profile and Problem Description

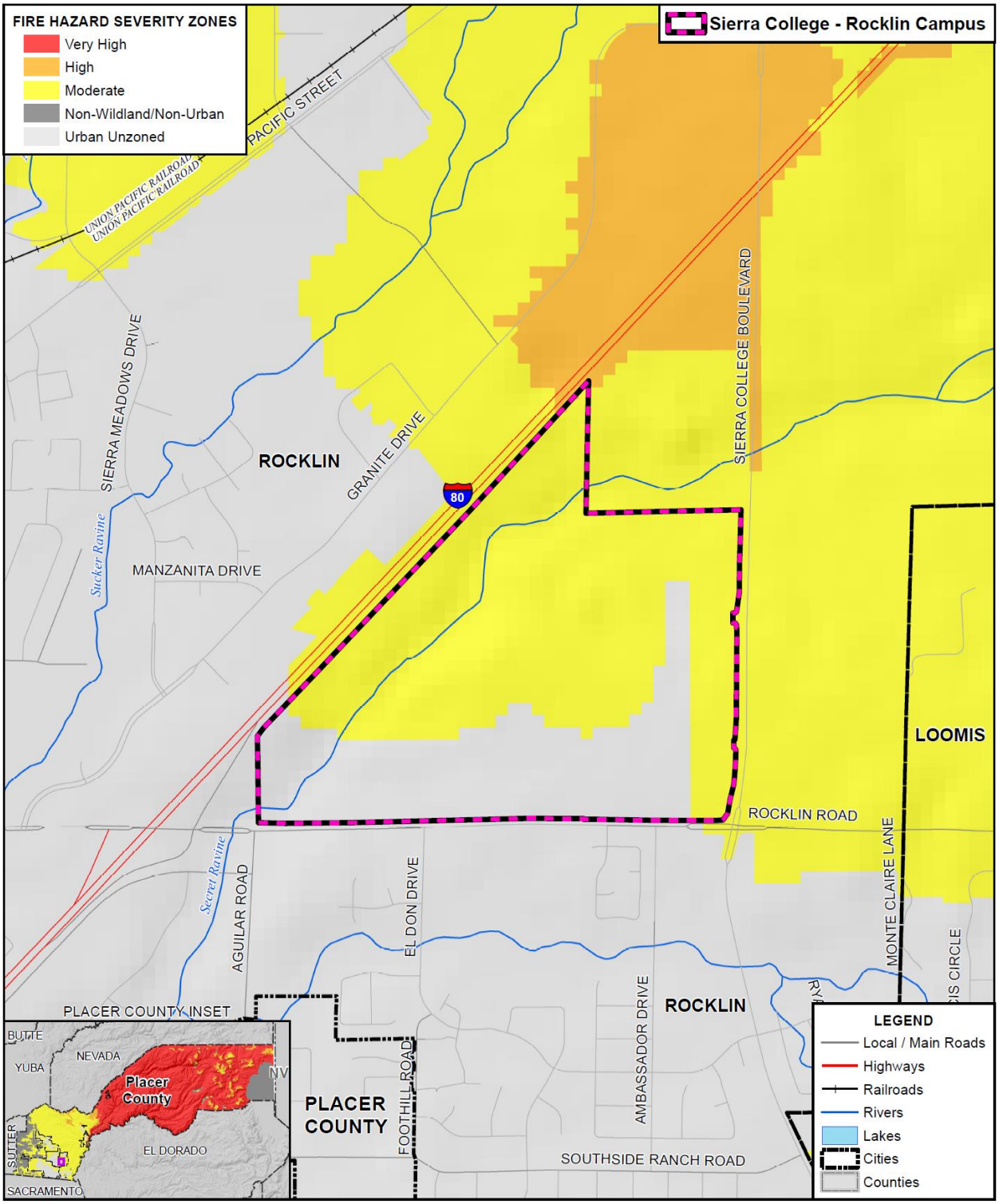
Wildland fire and the risk of a conflagration is an ongoing concern for the SJCCD. Throughout California, communities are increasingly concerned about wildfire safety as increased development in the foothills and mountain areas and subsequent fire control practices have affected the natural cycle of the ecosystem. Wildland fires affect grass, forest, and brushlands, as well as any structures located within them. Where there is human access to wildland areas the risk of fire increases due to a greater chance for human carelessness and historical fire management practices. Historically, the fire season extends from early spring through late fall of each year during the hotter, dryer months; however, in recent years, the risk of wildfire has become a year around concern. Fire conditions arise from a combination of high temperatures,

low moisture content in the air and fuel, accumulation of vegetation, and high winds. While wildfire risk has predominantly been associated with more remote forested areas and wildland urban interface (WUI) areas, significant wildfires can also occur in more populated, urban areas.

Location and Extent

Wildfire can affect all areas of the District. CAL FIRE has estimated that the risk varies across the District and has created maps showing risk variance. Following the methodology described in Section 4.3.19 of the Base Plan, wildfire maps for the SJCCD were created. Figure U-2 shows the CAL FIRE FHSZ in the District. As shown on the maps, FHSZs within the District range from Urban Unzoned to Moderate (though the District borders a High FHSZ).

Figure U-2 SJCCD – Fire Hazard Severity Zones



FOSTER MORRISON CONSULTING

COUNTY OF Placer

Data Source: Cal-Fire (Draft 09/2007 - c31fhszl06_1, Adopted 11/2007 - fhszs06_3_31, Recommended 12/2008 - c31fhszl06_3), Placer County GIS, Cal-Atlas, NVBLM; Map Date: 2021.

Wildfires tend to be measured in structure damages, injuries, and loss of life as well as on acres burned. Fires can have a quick speed of onset, especially during periods of drought or during hot dry summer months. Fires can burn for a short period of time, or may have durations lasting for a week or more.

Past Occurrences

There has been five state and six federal disaster declarations for Placer County from fire. These can be seen in Table U-6.

Table U-6 Placer County – State and Federal Disaster Declarations Summary 1950-2020

Disaster Type	State Declarations		Federal Declarations	
	Count	Years	Count	Years
Fire	5	1961, 1965, 1973, 1987, 2010	6	2002, 2004, 2008, 2009, 2014 (twice)

Source: Cal OES, FEMA

While no fires have directly threatened the District, wildfires have affected the District in recent years. Campuses have been closed for a total of approximately 8 days over past three years. Wildfires resulting from dry conditions and high winds. Resulted in limited hardship and disruption to campuses due to poor air quality. Campus closures.

Vulnerability to and Impacts from Wildfire

Risk and vulnerability to the Placer County Planning Area and the District from wildfire is of significant concern, with some areas of the Planning Area being at greater risk than others as described further in this section. High fuel loads in the Planning Area, combined with a large built environment and population, create the potential for both natural and human-caused fires that can result in loss of life and property. These factors, combined with natural weather conditions common to the area, including periods of drought, high temperatures, low relative humidity, and periodic winds, can result in frequent and potentially catastrophic fires. During the nearly year around fire season, the dry vegetation and hot and sometimes windy weather results in an increase in the number of ignitions. Any fire, once ignited, has the potential to quickly become a large, out-of-control fire. As development continues throughout the County and the District, especially in these interface areas, the risk and vulnerability to wildfires will likely increase.

Potential impacts from wildfire include loss of life and injuries; damage to structures and other improvements, natural and cultural resources, croplands, and loss of recreational opportunities. Wildfires can cause short-term and long-term disruption to the District. Fires can have devastating effects on watersheds through loss of vegetation and soil erosion, which may impact the District by changing runoff patterns, increasing sedimentation, reducing natural and reservoir water storage capacity, and degrading water quality. Fires can also affect air quality in the District; smoke and air pollution from wildfires can be a severe health hazard.

Although the physical damages and casualties arising from large fires may be severe, it is important to recognize that they also cause significant economic impacts by resulting in a loss of function of buildings and infrastructure. Economic impacts of loss of transportation and utility services may include traffic

delays/detours from road and bridge closures and loss of electric power, potable water, and wastewater services. Schools and businesses can be forced to close for extended periods of time. Recently, the threat of wildfire, combined with the potential for high winds, heat, and low humidity, has caused PG&E to initiate PSPSs which can also significantly impact a community through loss of services, business closures, and other impacts associated with loss of power for an extended period. More information on power shortage and failure can be found in the Severe Weather: Extreme Heat Section above, as well as in Section 4.3.2 of the Base Plan. In addition, catastrophic wildfire can create favorable conditions for other hazards such as flooding, landslides, and erosion during the rainy season.

The District faces potential building loss, and need for campus evacuation and closure. Potential threats to the health and safety of students and employees. District performs annual fuel reduction in nature area with plans to expand these activities in the near future if additional funding can be secured.

Assets at Risk

All District assets (from Table U-3) are at risk from this hazard.

U.6 Capability Assessment

Capabilities are the programs and policies currently in use to reduce hazard impacts or that could be used to implement hazard mitigation activities. This capabilities assessment is divided into five sections: regulatory mitigation capabilities, administrative and technical mitigation capabilities, fiscal mitigation capabilities, mitigation education, outreach, and partnerships, and other mitigation efforts.

U.6.1. Regulatory Mitigation Capabilities

Table U-7 lists regulatory mitigation capabilities, including planning and land management tools, typically used by local jurisdictions to implement hazard mitigation activities and indicates those that are in place in the SJCCD.

Table U-7 SJCCD Regulatory Mitigation Capabilities

Plans	Y/N Year	Does the plan/program address hazards? Does the plan identify projects to include in the mitigation strategy? Can the plan be used to implement mitigation actions?
Comprehensive/Master Plan/General Plan	Y	Hazards addressed in campus EIR
Capital Improvements Plan	Y	Facilities Master Plan (all campuses except Roseville)
Economic Development Plan	N	
Local Emergency Operations Plan	Y	Emergency Operations Plan (Rocklin)/COVID-19 Safe Return to Campus Plan
Continuity of Operations Plan	Y	Embedded within EOP
Transportation Plan	Y	Dorm evacuation plan embedded within EOP
Stormwater Management Plan/Program	Y	Pending – in process in response to EIR
Engineering Studies for Streams	n/a	

Community Wildfire Protection Plan	n/a	
Other special plans (e.g., brownfields redevelopment, disaster recovery, coastal zone management, climate change adaptation)	n/a	
Building Code, Permitting, and Inspections	**Y/N**	**Are codes adequately enforced?**
Building Code	Y	Version/Year: CA Building Code/ADA Various years (1957-2021)
Building Code Effectiveness Grading Schedule (BCEGS) Score	N	Score:
Fire department ISO rating:	N	Rating:
Site plan review requirements	N	
Land Use Planning and Ordinances	**Y/N**	**Is the ordinance an effective measure for reducing hazard impacts? Is the ordinance adequately administered and enforced?**
Zoning ordinance	Y	Rocklin campus located in mixed-use zone. Wildfire mitigation required for vacant properties.
Subdivision ordinance	N	
Floodplain ordinance	N	
Natural hazard specific ordinance (stormwater, steep slope, wildfire)	N	
Flood insurance rate maps	N	
Elevation Certificates	N	
Acquisition of land for open space and public recreation uses	N	
Erosion or sediment control program	N	
Other		
How can these capabilities be expanded and improved to reduce risk?		
The District utilizes the planning processes named above to assess campus needs and develop appropriate responses.		

Source: SJCCD

U.6.2. Administrative/Technical Mitigation Capabilities

Table U-8 identifies the District department(s) responsible for activities related to mitigation and loss prevention in SJCCD.

Table U-8 SJCCD's Administrative and Technical Mitigation Capabilities

Administration	**Y/N**	**Describe capability Is coordination effective?**
Planning Commission	N	
Mitigation Planning Committee	N	

Maintenance programs to reduce risk (e.g., tree trimming, clearing drainage systems)	Y	Annual fuel reduction activities in the nature area adjacent to the Rocklin Campus (clearing dead wood, brush reduction through mowing and grazing)
Mutual aid agreements	N	
Other		
Staff	**Y/N FT/PT**	**Is staffing adequate to enforce regulations? Is staff trained on hazards and mitigation? Is coordination between agencies and staff effective?**
Chief Building Official	Y	
Floodplain Administrator	N	
Emergency Manager	Y	
Community Planner	N	
Civil Engineer	N	
GIS Coordinator	N	
Other	N	
Technical		
Warning systems/services (Reverse 911, outdoor warning signals)	Y	
Hazard data and information	Y	
Grant writing	Y	
Hazus analysis	N	
Other		
How can these capabilities be expanded and improved to reduce risk?		
District plans to expand fuel reduction activities.		

Source: SJCCD

U.6.3. Fiscal Mitigation Capabilities

Table U-9 identifies financial tools or resources that the District could potentially use to help fund mitigation activities.

Table U-9 SJCCD's Fiscal Mitigation Capabilities

Funding Resource	Access/ Eligibility (Y/N)	Has the funding resource been used in past and for what type of activities? Could the resource be used to fund future mitigation actions?
Capital improvements project funding	Y	Capital Project Fund, Bond Fund
Authority to levy taxes for specific purposes	N	
Fees for water, sewer, gas, or electric services	N	
Impact fees for new development	N	
Storm water utility fee	N	

Funding Resource	Access/ Eligibility (Y/N)	Has the funding resource been used in past and for what type of activities? Could the resource be used to fund future mitigation actions?
Incur debt through general obligation bonds and/or special tax bonds	Y	
Incur debt through private activities	Y	
Community Development Block Grant	N	
Other federal funding programs	Y	
State funding programs	Y	
Other		
How can these capabilities be expanded and improved to reduce risk?		
Implementation of construction upgrades will result in improved safety systems, including new detection and fire suppression.		

Source: SJCCD

U.6.4. Mitigation Education, Outreach, and Partnerships

Table U-10 identifies education and outreach programs and methods already in place that could be/or are used to implement mitigation activities and communicate hazard-related information.

Table U-10 SJCCD's Mitigation Education, Outreach, and Partnerships

Program/Organization	Yes/No	Describe program/organization and how relates to disaster resilience and mitigation. Could the program/organization help implement future mitigation activities?
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	N	
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Y	The District conducts ongoing campus safety training programs covering a variety of topics including building evacuation and first aid.
Natural disaster or safety related school programs	N	
StormReady certification	N	
Firewise Communities certification	N	
Public-private partnership initiatives addressing disaster-related issues	N	
Other		
How can these capabilities be expanded and improved to reduce risk?		
The District continually reviews campus safety trainings to ensure effectiveness and relevance,		

Source: SJCCD

U.6.5. Other Mitigation Efforts

The District has many other completed or ongoing mitigation efforts that include the following:

- Training of Incident Command Team
- Outfitting of Emergency Operation Centers
- Installation of AEDs
- Installation of First Aid Kits
- Installation of emergency generators

U.7 Mitigation Strategy

U.7.1. Mitigation Goals and Objectives

The SJCCD adopts the hazard mitigation goals and objectives developed by the HMPC and described in Chapter 5 Mitigation Strategy.

U.7.2. Mitigation Actions

The planning team for the SJCCD identified and prioritized the following mitigation actions based on the risk assessment. Background information and information on how each action will be implemented and administered, such as ideas for implementation, responsible office, potential funding, estimated cost, and timeline are also included. The following hazards were considered a priority for purposes of mitigation action planning:

- Drought and Water Shortage
- Flood: Localized Stormwater Flooding
- Pandemic
- Severe Weather: Extreme Heat
- Wildfire

It should be noted that many of the projects submitted by each jurisdiction in Table 5-4 in the Base Plan benefit all jurisdictions whether or not they are the lead agency. Further, many of these mitigation efforts are collaborative efforts among multiple local, state, and federal agencies. In addition, the countywide public outreach action, as well as many of the emergency services actions, apply to all hazards regardless of hazard priority. Collectively, this multi-jurisdictional mitigation strategy includes only those actions and projects which reflect the actual priorities and capacity of each jurisdiction to implement over the next 5-years covered by this plan. It should further be noted, that although a jurisdiction may not have specific projects identified for each priority hazard for the five year coverage of this planning process, each jurisdiction has focused on identifying those projects which are realistic and reasonable for them to implement and would like to preserve their hazard priorities should future projects be identified where the implementing jurisdiction has the future capacity to implement.

Multi-Hazard Actions

Action 1. Campus safety: fire, earthquake, active shooter, power outage, health emergencies, and pandemics.

Hazards Addressed: Drought and Water Shortage, Localized Flood, Pandemic, Extreme Heat, Wildfire

Goals Addressed: 1, 2, 3, 4, 5, 6, 7

Issue/Background: There is an ongoing need to provide campus safety trainings covering a variety of topics including building evacuation, active shooter, fire, first aid, and responding to pandemic-related threats. In addition, it is critical to outfit campuses with necessary emergency supplies.

Project Description: This project will mitigate hazards by training staff and students on potential hazards, and seeking ways to respond to those hazards in times of emergencies. There will be an educational component to this mitigation action.

Other Alternatives: Participate in trainings made available by external groups.

Existing Planning Mechanisms through which Action will be Implemented: Review by Safety and Emergency Preparedness Coordinator, input from campus stakeholders, input from community partners

Responsible Office: Safety and Emergency Preparedness Coordinator

Priority (H, M, L): High

Cost Estimate: unknown

Potential Funding: District funds, external grants as available

Benefits (avoided Losses): Avoid and/or mitigate losses to life and property.

Schedule: Ongoing

Action 2. Storm Water Flooding Mitigation

Hazards Addressed: Storm Water Flooding

Goals Addressed: 1, 2, 3, 4, 5, 6, 7

Issue/Background: Intense rainstorms has the potential to cause flooding on campus.

Project Description: Design and implement storm water management solutions, including retention ponds and drainage systems.

Other Alternatives: Develop more limited and site-specific flood protection solutions such as raising door thresholds, installing ditches, etc.

Existing Planning Mechanism(s) through which Action Will Be Implemented: Facilities Master Planning and Landscape Master Planning

Responsible Agency/ Department/Partners: Sierra College Facilities Department, in conjunction with architectural and construction consultants.

Cost Estimate: $2 million to $4 million, depending on number and complexity of storm water management solutions

Benefits (Losses Avoided): Avoid possible flooding damages.

Potential Funding: Bond funds

Timeline: 2021-2027

Project Priority (H, M, L): M

Action 3. Drought Tolerant Landscaping

Hazards Addressed: Drought

Goals Addressed: 1, 2, 3, 4, 5, 6, 7

Issue/Background: Californian has increasingly experienced droughts.

Project Description: Redesign campus landscaping to reduce watering needs.

Other Alternatives: Continue with current landscaping.

Existing Planning Mechanism(s) through which Action Will Be Implemented: Landscaping Master Planning process.

Responsible Agency/ Department/Partners: Sierra College Facilities in conjunction with landscaping architects, other consultants, and landscaping firms.

Cost Estimate: TBD

Benefits (Losses Avoided): Potential loss in campus vegetation in case of prolonged drought. Also broader negative impacts to the environment and agricultural operations.

Potential Funding: Bond funds and other District funds

Timeline: 2021 to 2027

Project Priority (H, M, L): Medium

Action 4. Fuel Reduction

Hazards Addressed: Wildfire

Goals Addressed: 1, 2, 3, 4, 5, 6, 7

Issue/Background: Sierra College's Rocklin and Tahoe-Truckee campuses both abut forested nature areas. There is potential for wild fires in these areas as a result of lightning strikes or human behaviors such as car accidents and smoking.

Project Description: Expand efforts to clear brush and deadwood in nature areas.

Other Alternatives: Do not expand fuel reduction efforts.

Existing Planning Mechanism(s) through which Action Will Be Implemented: Review of fuel reduction needs and contract for necessary fuel reduction services including cutting and hauling deadwood, brush removal, and mowing.

Responsible Agency/ Department/Partners: Sierra College Facilities in conjunction with environmental consultants.

Cost Estimate: TBD

Benefits (Losses Avoided): Loss of life and property damage

Potential Funding: District funds

Timeline: ongoing

Project Priority (H, M, L): M

Action 5. Emergency Power Generation

Hazards Addressed: Temporary Loss of Electric Power

Goals Addressed: 1, 2, 3, 4, 5, 6, 7

Issue/Background: Electricity outages affecting the campus occur from time to time due to grid failures and public safety power shutoff events.

Project Description: Review need for back-up power and assess feasibility of installing emergency generators. The District has installed a number of generators of the years, but continues to assess changing needs and threats through ongoing planning.

Other Alternatives: Do not install additional emergency generators.

Existing Planning Mechanism(s) through which Action Will Be Implemented: Ongoing campus safety planning processes

Responsible Agency/ Department/Partners: Sierra College Facilities

Cost Estimate: Variable

Benefits (Losses Avoided): Disruption to campus operations, inconvenience and hardship for dorm residents, loss of food supplies in cafeteria kitchen, and loss of vaccine supplies and other sensitive supplies.

Potential Funding: Bond funds and other District funds

Timeline: 2021-2027

Project Priority (H, M, L): M