



Annex T Tahoe Truckee Unified School District

T.1 Introduction

This Annex details the hazard mitigation planning elements specific to the Tahoe Truckee Unified School District (TTUSD), a participating jurisdiction to the 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 the TTUSD, with a focus on providing additional details on the risk assessment and mitigation strategy for this special district.

T.2 Planning Process

As described above, the District followed the planning process detailed in Section 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 T-1. Additional details on plan participation and City representatives are included in Appendix A.

Table T-1 District Planning Team

Name	Position/Title	How Participated
Rebecca McGough	Administrative Assistant	Attended meetings. Updated hazard ID table. Provided update on previous action items. Provided updated assets information. Provided updates to 2010 Annex.
Tiffany Hambrick	Administrative Assistant	Completed Mitigation Action Worksheet
Mark Burton	Director of Facilities, Maintenance & Operations	Oversaw process.

Coordination with other community planning efforts is paramount to the successful implementation of this plan. This Section provides information on how the District integrated the previously-approved 2010 Plan into existing planning mechanisms and programs. Specifically, the District incorporated into or implemented the 2010 LHMP through other plans and programs shown in Table T-2.

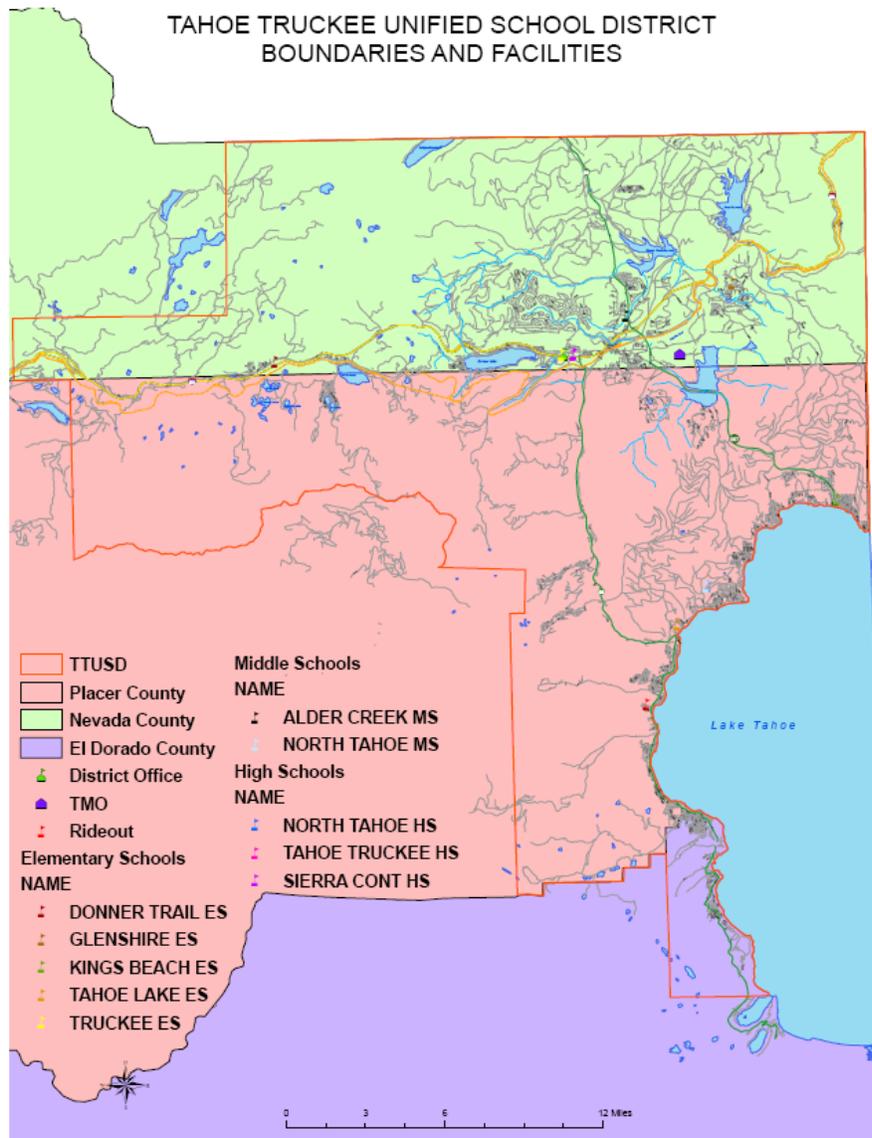
Table T-2 2010 LHMP Incorporation

Jurisdiction	Planning Mechanism 2010 LHMP Was Incorporated/Implemented In. Details?
Tahoe Truckee Unified School District	The District did not integrate the 2010 Plan into other planning mechanisms, as no other major planning were done in the interim.

T.3 District Profile

The District boundaries are illustrated in Figure T-1.

Figure T-1 Tahoe Truckee Unified School District Service Area



Source: TTUSD

T.3.1. District Information and Background

The Tahoe Truckee Unified School District is located in the Sierra Nevada mountain range, 100 miles northeast of Sacramento. The TTUSD serves approximately 4,200 students in Nevada, Placer and El Dorado Counties. The District offices are located in Truckee, California and the school facilities are located in both Placer and Nevada Counties. Although TTUSD is comprised of portions of three (3) counties, the District falls under the jurisdiction of the Placer County Office of Education. The District boundaries stretch from the Sierra County line, twenty-seven miles North of Truckee, to Emerald Bay, near South Lake Tahoe; and from Cisco Grove, twenty miles to the west, to the Nevada state line, ten miles to the east. TTUSD's Eastern Boundary follows nearly the entire length of the Western shore of Lake Tahoe. The District encompasses more than 720 square miles. Within this vast geographic area are many different communities, severe climate zones, and three County jurisdictions, all of which create unique planning challenges. See map of TTUSD Boundaries and facilities Figure T-1.

School District Facility Composition

The Tahoe Truckee Unified School District currently owns/operates fourteen facilities: one comprehensive high school, one middle school/high school, one continuation high school, one middle school, one facility used for District personnel and community programs, six elementary schools, a District Office, and a Transportation Maintenance and Operations building. The respective attendance areas of the active schools are divided between the Truckee area (facilities in Nevada County) and the Lake area schools (facilities in Placer County).

In the Tahoe area there are two active elementary schools - Kings Beach and Tahoe Lake - that create two elementary school attendance areas. A third elementary facility, Rideout Elementary School, is currently being used as a Community Center. The two elementary schools feed into the area middle school, North Tahoe Middle School and the middle school feeds into the area high school, North Tahoe High School.

The Truckee area schools also have one high school, Truckee High School; one continuation high School, Sierra Continuation High School; and one middle school, Alder Creek Middle School, that serve all of the students in the area. The middle school is fed by three K-5 elementary schools - Donner Trail, Glenshire and Truckee Elementary. Donner Trail is a magnet K-5 and draws students from other attendance areas, but also has its own attendance area. The Truckee Area is also home to Sierra Mountain Middle school which is currently being utilized by District Administrative staff, state and federal preschool programs, and other community programs. The main District Office is also located in Truckee.

District Mission

The primary mission of the District is to provide education to all children within the boundaries of the District. TTUSD is often seen as the hub of the community and our facilities are open to all members of public. Many meetings, sporting events, and community enrichment activities are held at District facilities. In collaboration with local law enforcement and public safety agencies, our facilities also act as emergency operations centers, shelters, and staging areas during emergency and disaster situations. Due to the importance of the facilities to the community during these situations, TTUSD facilities are considered critical facilities.

The Tahoe City area is characterized by mild summers and cool, wet winters, with an average high temperature in July of 82 and 42 in January. Annual precipitation in the watershed varies from an average of 65 inches in the west to approximately 40 inches per year in the east. The majority of precipitation occurs as snowfall during the winter months. A relatively small amount of precipitation occurs as rain during the spring and summer months.

T.4 Hazard Identification and Summary

The District’s planning team identified the hazards that affect the District and summarized their frequency of occurrence, spatial extent, potential magnitude, and significance specific to the District (see Table T-3).

Table T-3 Tahoe Truckee Unified School District Hazard Identification Table

Hazard	Geographic Extent	Probability of Future Occurrences	Magnitude/Severity	Significance
Agricultural Hazards	Limited	Unlikely	Negligible	Low
Avalanche	Limited	Likely	Limited	Low
Dam Failure	Limited	Occasional	Negligible	Low
Drought and Water Shortage	Extensive	Highly Likely	Critical	High
Earthquake	Extensive	Likely	Critical	Medium
Flood: 100/500 year	Limited	Occasional	Limited	Low
Flood: Localized Stormwater Flooding	Extensive	Likely	Critical	Medium
Landslides and Debris Flows	Significant	Occasional	Limited	Low
Levee Failure	Limited	Occasional	Negligible	Low
Seiche (Lake Tsunami)	Limited	Occasional	Limited	Low
Severe Weather: Extreme Heat	Significant	Likely	Negligible	Low
Severe Weather: Freeze and Snow	Extensive	Highly Likely	Catastrophic	High
Severe Weather: Fog and Freezing Fog	Significant	Occasional	Negligible	Low
Severe Weather: Heavy Rains and Storms (Thunderstorms/Hail, Lightning/Wind/Tornadoes)	Extensive	Highly Likely	Catastrophic	High
Soil Bank Erosion	Significant	Likely	Limited	Low
Subsidence	Limited	Occasional	Limited	Low
Wildfire	Extensive	Likely	Catastrophic	Medium
Hazardous Materials Transport	Significant	Occasional	Limited	Low

Hazard	Geographic Extent	Probability of Future Occurrences	Magnitude/Severity	Significance
	Geographic Extent Limited: Less than 10% of planning area Significant: 10-50% of planning area Extensive: 50-100% of planning area Probability 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

T.5 Vulnerability Assessment

The intent of this section is to assess the District’s vulnerability separate from that of the planning area as a whole, which has already been assessed in Section 4.3 Vulnerability Assessment in the main plan. This vulnerability assessment analyzes the population, property, and other assets at risk to hazards ranked of medium or high significance that may vary from other parts of the planning area. For more information about how hazards affect the County as a whole, see Chapter 4 Risk Assessment in the main plan.

T.5.1. Assets at Risk

This section considers the District’s assets at risk. All facilities owned by the District would be categorized as critical facilities. Damage to these facilities would have a large impact on students, personnel, and members of the community. In addition to the social costs associated with the identified hazard, there is potential for extremely high monetary costs as well. Damage as a result of a natural hazard can range from minor repairs that can be performed with minimal maintenance staff time to catastrophic, requiring major repair, replacement, and reconstruction of buildings and their components. These costs can range from minimal staff salary expenditures to entire building replacement.

Table T-4 lists particular critical facilities and other community assets identified by the District’s planning team as important to protect in the event of a disaster.

Table T-4 South Placer FPD’s Critical Facilities, Infrastructure, and Other District Assets

Name of Asset	Facility Type	Replacement Value
Kings Beach Elementary School	High Potential Loss Facility	\$15,000,000
Rideout Elementary School	High Potential Loss Facility	\$10,000,000
Tahoe Lake Elementary School	High Potential Loss Facility	\$24,000,000

Name of Asset	Facility Type	Replacement Value
North Tahoe Middle/High School	High Potential Loss Facility	\$100,000,000
Donner Trail Elementary School	High Potential Loss Facility	\$4,200,000
Glenshire Elementary School	High Potential Loss Facility	\$35,000,000
Truckee Elementary School	High Potential Loss Facility	\$40,000,000
Alder Creek Middle School	High Potential Loss Facility	\$51,000,000
Truckee High School	High Potential Loss Facility	\$138,000,000
Sierra High School	High Potential Loss Facility	\$3,200,000
Transportation, Maintenance, Operations Building	High Potential Loss Facility	\$13,000,000
District Office	High Potential Loss Facility	\$15,000,000

Source: South Placer FPD

It is important to reiterate that TTUSD buildings and equipment are utilized by the community during disasters and severe weather. For example, in 2007, one of the campuses was used as a shelter for travelers when Interstate 80 was closed due to heavy snow. The importance of maintaining the facilities and providing a safe environment goes far beyond the students, personnel, and community.

Growth and Development Trends

There has been recovering in the areas of development and population growth within the boundaries of TTUSD over the last 10 years. As growth continues, the number of students at the various facilities is expected to increase. The increase in new students may require additional school facilities and/or expansion of existing facilities. This would increase the number and value of District-owned assets and potentially, the vulnerability of District facilities, students and staff.

Development since 2010 Plan

Development in the TTUSD is similar to that of Placer County. Placer County's development since 2010 is discussed in Section 4.3.1 of the base plan.

T.5.2. Estimating Potential Losses

This section provides the vulnerability assessment, including any quantifiable loss estimates, for those hazards identified above in Table T-3 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 for more detailed information about these hazards and their impacts on the Placer County planning area). Methodologies for calculating loss estimates are the same as those described in Section 4.3 of the base plan. In general, the most vulnerable structures are those located within the floodplain, in the wildland urban interface, other priority hazard areas, unreinforced masonry buildings, and buildings built prior to the introduction of modern building codes.

An estimate of the vulnerability of the District to each identified hazard, in addition to the estimate of risk 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.

Drought and Water Shortage

Likelihood of Future Occurrence—Highly Likely

Vulnerability—High

The impact of a drought on the District is primarily one of water supply. A multiple-year drought can severely compromise the water supply within the District. Recently, after 2 years of below-average rainfall and very low snow-melt run off, Governor Schwarzenegger in June of 2008 declared a state of emergency for drought conditions statewide. The final California Department of Water Resources showed snowpack water content at only 67 percent of normal. With the unknowns of drought and globally changing climate conditions, the TTUSD continues to be vulnerable to the effects of drought.

Restrictions in water use could affect the ability of the District to provide sufficient water to students, operate lunch programs, maintain clean facilities, and maintain playing fields and landscaping at school sites. This could impact the health and safety of children and result in significant costs to the District. The challenges were seen this in the summer of 2015 with required water restrictions. Due to the water restrictions that had been implemented by the State and local agencies, the District's field suffered and were not able to be properly maintained. This has brought the awareness that not being able to properly maintain our fields may result in increased numbers of student, athlete, and community member injuries due to uneven surfaces and divots due to lack of watering ability.

Earthquake

Likelihood of Future Occurrence—Likely

Vulnerability—Medium

As indicted on the Earthquake Shaking Map in the base plan, the shaking potential is greatest in the eastern portion of the County, including within the TTUSD boundaries. Extreme eastern Placer County borders the Basin and Range province that entails most of Nevada and western Utah. This area is riddled with active faults that are responsible for, and form the boundary between, each basin or valley and the neighboring mountain range.

In 2003/2004, volcanic magma migrating about 20 miles below the surface of the Sierra Nevada Mountains caused a swarm of about 1,600 small earthquakes. Since February of 2008, more than 600 earthquakes of magnitude greater than 1.0 have been recorded in nearby Reno, Nevada, with the most powerful one recorded at 4.7 magnitude. It is unknown to what extent these earthquakes were felt by residents in the Tahoe area, but clearly the District lies within a seismically active area. According to the District, none of its facilities have incurred any substantial damage during past earthquake events. However, several of the District's schools were built as many as 50 years ago and have never been structurally retrofitted to withstand large scale earthquakes. These older schools include: Tahoe Lake Elementary School, Kings Beach Elementary School, Truckee Elementary School, Donner Trail Elementary School, and Truckee High School. These schools will have seismic retrofits completed as part of the Measures U & E Bond projects.

Flood: Localized Stormwater Flooding

Likelihood of Future Occurrence–Likely

Vulnerability–Medium

Localized flooding has occurred at the District in the parking lots, school grounds, and in the current District Office building. The District Office was once a middle school which flooded in 1997, forcing students and staff to wade through water to work and learn. The flooding in the parking lots and school grounds pose accessibility issues for our students and staff getting from building to building; this issue can be a particular problem for the District and community's persons with disabilities. Accessibility issues can occur with parents, transportation, and first responders in being able to safely and successfully access our school sites. The accessibility and drainage issues are being addressed through the projects that have been identified by Measures E & U Bond projects.

Severe Weather: Freeze and Snow

Likelihood of Future Occurrence–Highly Likely

Vulnerability–High

Temperatures during winter months can drop very low with average highs of 42° and average lows of 18°. On the extreme side, the temperature has been known to drop as low as -39° F. These extreme temperatures during the winter have created many problems for the District over the years such as frozen water pipes in the building as well as underground. The frozen pipes can lead to flooding and water damage but also limit the water supply of the building. In addition, the extreme cold has also frozen and damaged heating coils which has caused flooding and affected the heating of the school site. The cold temperatures can also cause building materials and equipment to break down at a more rapid pace.

Snow events are a major concern to the District. Between the months of November and April, most precipitation occurring within TTUSD falls in the form of snow. However, snowfall has occurred even during the summer months. Depending on the location of the District, snowfall can average from just less than 200 inches to over 400 inches per year. Heavy snowfall can be associated with high winds (blizzard conditions), extreme temperatures, avalanches, and dangerous traveling conditions. Snow and ice falling from roofs and slippery surfaces are just some of the dangers to our students and staff. Snowfall has caused

numerous school closures and power outages throughout the history of the District. Snow accumulation can also create obstacles involving the safe transportation of students and stress the structural integrity of building and infrastructure. The District spends approximately \$125,000 to \$225,000 on snow removal annually to reduce the risks of injury to the community and damage to structures.

Damage to Structures

Heavy snowfall from fast moving storms can test the structural integrity of school buildings (specifically the roof strength), thus directly impacting the safety of children and employees of the District. Recognizing the inherent structural dangers to buildings during snowstorms, local building departments have increased the snow load requirements for roofs extensively over the last fifty years. New schools constructed within the District must meet or exceed roof snow loads ranging from 166 to 260 pounds per square foot according to current local building codes. Most of the school buildings within the District were built under old building codes and therefore do not meet the new snow load requirements. Some facilities have snow loads as low as 40 pounds per square foot in certain areas of the building. It is not uncommon for District personnel (or hired crews) to shovel off the roofs at these sites after or during a storm to bring the snow load below its recommended threshold and prevent damage to the structure. This is a regular task during heavy winters and can be extremely costly to the District. It also can present a danger to the staff or crews who are performing the snow removal from the rooftops.

The District experienced the collapse of a DOH classroom in 1996 because shoveling crews were unable to keep up with a major storm. Although shoveling is often needed to mitigate the potential hazard of roof collapse, the action also creates a new hazard for the personnel performing these duties. The act of shoveling the roof can also cause an imbalance in the live load of the roof making it more susceptible to collapse. In addition, snow covered buildings deficient in the snow load requirement would also be more vulnerable to collapse during an earthquake.

Snow/Ice Fall

Snow and ice falling from roofs can also create a danger to students and others at ground level and inside buildings. It can also potentially block emergency exits and damage building and building systems as well as neighboring structures and property (e.g., broken windows, torn roofs, etc.).

Infrastructure

Snow and ice buildup on structures can cause building system failures and ventilation blockage which can affect the health and safety of students and personnel.

Power Outages

As previously mentioned, power and utility outages often occur due to winter storms. The outages are usually minor but on occasion have lasted as long as one week at some school sites. These power outages can also require that students be sent home early and/or school being cancelled, as the school may not be able to maintain an ambient temperature to be conducive to a safe environment for the students.

Vehicle Damage

A large portion of our maintenance vehicles and buses are not housed in covered areas, exposing them to the harsh elements. Not only does this contribute to wear and tear and ultimately reduce the useful life of these vehicles, but it also can affect the performance of the vehicles. There is great potential for the freezing of vehicle fluids and ice buildup on mechanical components which could inhibit the normal operation of these vehicles. This in conjunction with operating the vehicles in harsh weather conditions during student transport increases the hazard to students and personnel. There is also an increase risk of vehicle accidents during these storms.

Severe Weather: Heavy Rains and Storms (Thunderstorms/Hail, Lightning/Wind/Tornadoes)

Likelihood of Future Occurrence–Highly Likely

Vulnerability–Likely

Severe rain/thunderstorms can occur within the District during all seasons. These thunderstorms often produce high winds and lightning which can damage District structures and cause power outages. Heavy rains can also create flooding of creeks or drains which can also damage structures and impede the transportation of students. In addition, lightning can ignite forest and structure fires which can cause damage to buildings and endanger the lives of students and personnel. The impacts associated with heavy rains/thunderstorms can potentially affect the District's ability to operate and carry out their mission.

TTUSD has experienced significant damages from heavy rain and thunderstorms over the years. TTUSD sustained over \$300,000 in damages ranging from pothole repair and replacing walls and insulation to a major oil/fuel spill from underground tanks as a result of the 1997 floods. In addition, TTUSD experiences regular power and gas outages caused by storms. These power and gas outages can be lengthy and can impact the ability to heat the building and operate the school.

Wildfire

Likelihood of Future Occurrence–Likely

Vulnerability–Medium

All areas of the Sierra Nevada are surrounded by forest and are prone to major wildfires. Over one hundred years of aggressive fire suppression under the national fire suppression policy has rendered wildlands severely overgrown. The District has school facilities in areas that are heavily wooded and could be at risk during a major forest fire. Rideout Elementary School and North Tahoe Middle/High School, located in Tahoe City, are two school sites that are surrounded by forest. In addition, there is only one major in/out access road for both sites increasing the risk to students in the event an evacuation was required during a major wildfire.

The most notable recent wildfire to impact the District is the Washoe fire. This fire occurred in the wildland urban interface area of Tahoe Park and Tahoe Woods Subdivision, along the West shore of Lake Tahoe. The fire was caused by a failure of some propane equipment. Although no lives were lost, the fire destroyed 5 residential structures and encompassed 19 acres. Power and gas utilities were incurred damages. There

were also losses to timber assets, loss of watershed protection, and loss of the aesthetic value of a scenic corridor. This event caused major disruptions to west shore and Tahoe City traffic and business on a busy summer weekend. Highway 89, West Lake was closed for a period of time.

T.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 four sections: regulatory mitigation capabilities; administrative and technical mitigation capabilities; fiscal mitigation capabilities; and mitigation education, outreach, and partnerships.

T.6.1. Regulatory Mitigation Capabilities

Table T-5 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 District.

Table T-5 Tahoe Truckee Unified School District’s 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	No	TTUSD has a Facilities Master Plan. All General Plans are under the jurisdiction of Town of Truckee and Counties of Placer, Nevada, and El Dorado
Capital Improvements Plan	Yes	TTUSD Facilities Master Plan
Economic Development Plan	N	Jurisdiction of Town of Truckee and Counties of Placer, Nevada, and El Dorado
Local Emergency Operations Plan	Y	The plans that the District are involved in are run through Placer and Nevada County OES’, along with local first responders and other outside agencies.
Continuity of Operations Plan	N	
Transportation Plan	N	
Stormwater Management Plan/Program	N	
Engineering Studies for Streams	N	
Community Wildfire Protection Plan	N	
Other special plans (e.g., brownfields redevelopment, disaster recovery, coastal zone management, climate change adaptation)		
Building Code, Permitting, and Inspections	Y/N	Are codes adequately enforced?
Building Code	N	Jurisdiction of Town of Truckee and Counties of Placer, Nevada, and El Dorado

Building Code Effectiveness Grading Schedule (BCEGS) Score	N	Score:
Fire department ISO rating:	N	Truckee Donner Fire District, North Tahoe Fire District
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	N	Jurisdiction of Town of Truckee and Counties of Placer, Nevada, and El Dorado
Subdivision ordinance	N	Jurisdiction of Town of Truckee and Counties of Placer, Nevada, and El Dorado
Floodplain ordinance	N	Jurisdiction of Town of Truckee and Counties of Placer, Nevada, and El Dorado
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?		

As indicated above, the District has several programs, plans, policies, and codes and ordinances that guide hazard mitigation. Some of these are described in more detail below.

Tahoe-Truckee Unified School District Facilities Master Plan, April 9, 2014

The Tahoe Truckee Unified School District Facilities Master Plan was adopted on April 9, 2014. It is a comprehensive plan that addresses the current and future facility needs of the District. The plan includes information on student demographics, existing school facilities and condition assessments, short range and long range facility planning issues, and the routine and deferred maintenance plan for facilities in the District. This plan is considered a living document and will be updated as conditions in the District change.

Tahoe-Truckee Unified School District School Site Safety Plans, April 8/November 20th and 21st, 2009/15

TTUSD has prepared a comprehensive School Safety Plan for each site that includes all school and administrative/support sites staff. The most recent update of the School Safety Plans was adopted on April 8, 2009/November 20th and 21st, 2015. The Comprehensive School Safety Plans created and enforces policies procedures that promote a safe, caring, and disciplined environment for students and staff. The plan includes: and Emergency Operations Plan for school emergencies and disasters, action guides,

individual Safe School Plans for each site, ingress/egress plans, and evacuation and emergency response procedures.

T.6.2. Administrative/Technical Mitigation Capabilities

TTUSD is governed by a Board of Trustees consisting of five members. Each member is elected by the public for a four year term and represents a specific constituency of the District. Table T-6 identifies the personnel responsible for activities related to mitigation and loss prevention in the District.

Table T-6 Tahoe Truckee Unified School District’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)	N	
Mutual aid agreements		
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	N	
Floodplain Administrator	N	
Emergency Manager	N	
Community Planner	N	
Civil Engineer	N	
GIS Coordinator	N	
Other		
Technical	Y/N	Describe capability Has capability been used to assess/mitigate risk in the past?
Warning systems/services (Reverse 911, outdoor warning signals)	Y	All sites have warning systems and communications devices.
Hazard data and information	N	
Grant writing	N	
Hazus analysis	N	
Other		
How can these capabilities be expanded and improved to reduce risk?		

T.6.3. Fiscal Mitigation Capabilities

Table T-7 identifies financial tools or resources that the District could potentially use to help fund mitigation activities.

Table T-7 Tahoe Truckee Unified School District'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	State School Building Program, FEMA Disaster Funding and Assistance (PDM, etc.) CAL Trans/Federal Safe Routes to School, general fund, developer impact fees
Authority to levy taxes for specific purposes	Y	
Fees for water, sewer, gas, or electric services	N	
Impact fees for new development	Y	Residential and Commercial Developer Fees (Restricted Uses)
Storm water utility fee	N	
Incur debt through general obligation bonds and/or special tax bonds	Y	
Incur debt through private activities	N	
Community Development Block Grant	N	
Other federal funding programs	N	
State funding programs		
Other		
How can these capabilities be expanded and improved to reduce risk?		

T.6.4. Mitigation Outreach and Partnerships

Table T-8 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. More information can be found below the table.

Table T-8 Tahoe Truckee Unified School District'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	This has been done through educational resources available through the schools, as well as information contained on the District's website.
Natural disaster or safety related school programs	Y	All of the schools participate in regular safety drills, and the District works regularly on our natural disaster plan.
StormReady certification		
Firewise Communities certification		
Public-private partnership initiatives addressing disaster-related issues		
Other		
How can these capabilities be expanded and improved to reduce risk?		

TTUSD has partnered with many other public agencies, emergency service organizations, and local districts to either prevent and/or minimize loss of life and property in the event of emergencies and natural disasters. TTUSD has partnered with North Tahoe Fire District in conjunction with Nevada Fire Safe Council to increase the defensible space surrounding lake area school sites. We have also established partnerships with CAL FIRE, U.S. Forest Service, and local fire crews to provide housing and central command facilities on our sites for firefighters during wildland fires. In addition to fire crew housing, TTUSD has also established school facilities as safety shelters for civilians, law enforcement, other emergency service and public personnel in the event of natural disasters and emergencies such as storm and road closures. TTUSD also works in close cooperation with local hospitals and County health departments to inform students, staff, and community members during epidemiological outbreaks and other health concerns.

T.6.5. Other Mitigation Efforts

The District is involved in a variety of mitigation activities including public outreach and project activities. These mitigation activities include:

Emergency and Safety Education Programs at School Sites

TTUSD's Comprehensive School Safety Plans details how the school district will operate during critical incidents affecting students, faculty, staff, or facilities. The District's Emergency Operations section of the plan provides guidance for personnel who discover or are notified of an emergency situation. The Emergency Operations Plan is based on the nationally recognized Incident Command System (ICS). ICS establishes common standards and procedures consistent with local emergency service agencies. This allows for quicker reaction time and better communication with emergency services which will lower the risk of life and property loss during a natural disaster.

Flood

The District has experienced damage to its facilities during major floods. However, the damages were caused by conditions exceeding the capability of minor on-site mitigation actions (e.g. stormwater drain backup). All major mitigation actions to prevent flooding of school site would fall under the responsibility of other jurisdictions. The District will continue to comply with local storm water control requirements and implement any mitigation measures that the responsible authorities see fit in order to prevent damage to existing and future facilities.

T.7 Mitigation Strategy

T.7.1. Mitigation Goals and Objectives

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

T.7.2. Mitigation Actions

The planning team for the District identified and prioritized the following mitigation action 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, partners, potential funding, estimated cost, and schedule are included.

Action 1. North Tahoe High School and Middle School, Tahoe Lake Elementary School Emergency Generators.

Hazards Addressed: Multi-hazard

Issue/Background: All school sites are deemed Emergency Shelters in the event of a disaster. Buildings need to remain operational for occupancy in the event of a disaster.

Other Alternatives: Portable Generators

Existing Planning Mechanism(s) through which Action Will Be Implemented: Planning is complete. TTUSD Electrician will perform work. An engineer will be used for the design and a bid package will be sent out.

Responsible Office/Partners: Tahoe Truckee Unified School District

Project Priority: High

Cost Estimate:

- Tahoe Lake Elementary – \$150,000
- North Tahoe High School/ Middle School – \$180,000
- Rideout – \$120,000
- Kings Beach Elementary School – \$150,000

Benefits (Losses Avoided):

- Benefits – Uninterrupted occupancy of building
- Losses Avoided – Resorting to secondary shelters

Potential Funding: FEMA Funding and Operations, 25%

Timeline: 2016-2017 Project

Action 2. School Site and Community Education of Procedures Related to Safety and Emergency Situations. Improvement of District Wide Emergency Communication and Alert Systems.

Hazards Addressed: Multi-Hazard

Issue/Background: TTUSD is in the process of creating a District wide safety plan which documents safety and emergency procedures and for students and teachers. Selected representatives from each school site have attended special training sessions highlighting these procedures and the proper actions to take during an emergency. In addition TTUSD is standardizing the emergency communications equipment. All sites have received narrow-band Motorola handheld radios which will operate in most regions of the District. These devices enable all sites to notify the administration and local School Resource Officers in the event of an emergency. The District believes that proper safety training of personnel, in addition to an efficient alert system will significantly reduce the risks of serious injury or death in the event of an emergency or natural disaster. The training can also reduce the potential for physical damage to buildings and property. Since this mitigation project is currently being implemented and will become part of the District's administrative policy, it has not been rated as a prioritized mitigation action.

Other Alternatives: No action

Existing Planning Mechanism(s) through which Action Will Be Implemented: This project has been completed, with ongoing activity and improvements. Safety and emergency training meeting will occur regularly and plans will be updated annually.

Responsible Office: Facilities Department

Priority (High, Medium, Low): Medium

Cost Estimate: \$50,000

Benefits (Losses Avoided): Life safety, property loss

Potential Funding: Federal and state safety grants and TTUSD General Fund

Schedule: D Continued District-Wide safety training, increase of training for disaster preparedness and awareness.

Action 3. HVAC Control Upgrades

Hazards Addressed: Freeze/Snow

Issue/Background: Extreme temperature drops can damage heating coils, plumbing, and HVAC operating systems. Often this damage can be prevented if control systems are triggered to increase the building heat. Upgrades to the central HVAC operating system controls can shorten the response time in heating the buildings and prevent further damage caused by freezing temperatures. In addition, the upgraded building controls would have the capacity to control the building ventilation and could shut down the ventilation system in the event of a localized HAZMAT or chemical spill near the site.

Other Alternatives:

Existing Planning Mechanism(s) through which Action Will Be Implemented: This project is being evaluated again to see if there are further improvements to efficiencies can be made, and safety processes such as shutting off outside air due to smoke and other environmental hazards. Additionally, we are examining changing controls systems the current proprietary system that we currently have for improved maintenance and comfort for our scholars and staff.

Responsible Office: Facilities Department

Priority (High, Medium, Low): Medium

Cost Estimate: \$300,000

Benefits (Losses Avoided): reduction in property loss, life safety

Potential Funding: Unknown

Schedule: Within five years.