

Annex I Los Rios Community College District

I.1 Introduction

This Annex details the hazard mitigation planning elements specific to the Los Rios Community College District (LRCCD), a previously participating jurisdiction to the Sacramento 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 LRCCD. This Annex provides additional information specific to LRCCD, with a focus on providing additional details on the risk assessment and mitigation strategy for this District.

I.2 Planning Process

As described above, the LRCCD followed the planning process detailed in Section 3 of the Base Plan. In addition to providing representation on the Sacramento County Hazard Mitigation Planning Committee (HMPC), LRCCD or District formulated its 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 I-1. Additional details on plan participation and District representatives are included in Appendix A.

Table I-1 LRCCD Planning Team

Name	Position/Title	How Participated
Debbie Turner	General Service/Risk Mgmt Supervisor	Responsible for the plan update, coordinating meetings, collected data, and reviewed draft document. Attended (HMPC) meetings.
Vince Montoya	Director, Facilities Maintenance	Provided completed and future maintenance projects, attended committee meetings, provided input, provided mitigation projects, and reviewed draft document. Involved in the weekly planning meetings for short and long term maintenance and repair projects for LRCCD.
Joe Meyer	Supervisor, Facilities Planner	Responsible for providing information on completed and future construction projects, attended committee meetings, provided input, and reviewed draft document. Involved in the weekly planning meetings for short and long term capital improvement projects for LRCCD.
Daniel Broussard	Police Captain	Provided data, attended committee meetings, and reviewed draft document.
Jason Gregg	Director, IT	Provided information on IT systems and projects, provided input, and reviewed draft document. Involved in the weekly planning meeting for short and long term information technology projects for LRCCD.

I.2.1. Coordination with Other District Planning Efforts

Coordination with other community planning efforts is paramount to the successful implementation of this plan. This Section provides information on how the LRCCD integrated the previously-approved 2011 Plan into existing planning mechanisms and programs. Specifically, LRCCD incorporated into or implemented the 2011 LHMP through other plans and programs shown in Table I-2.

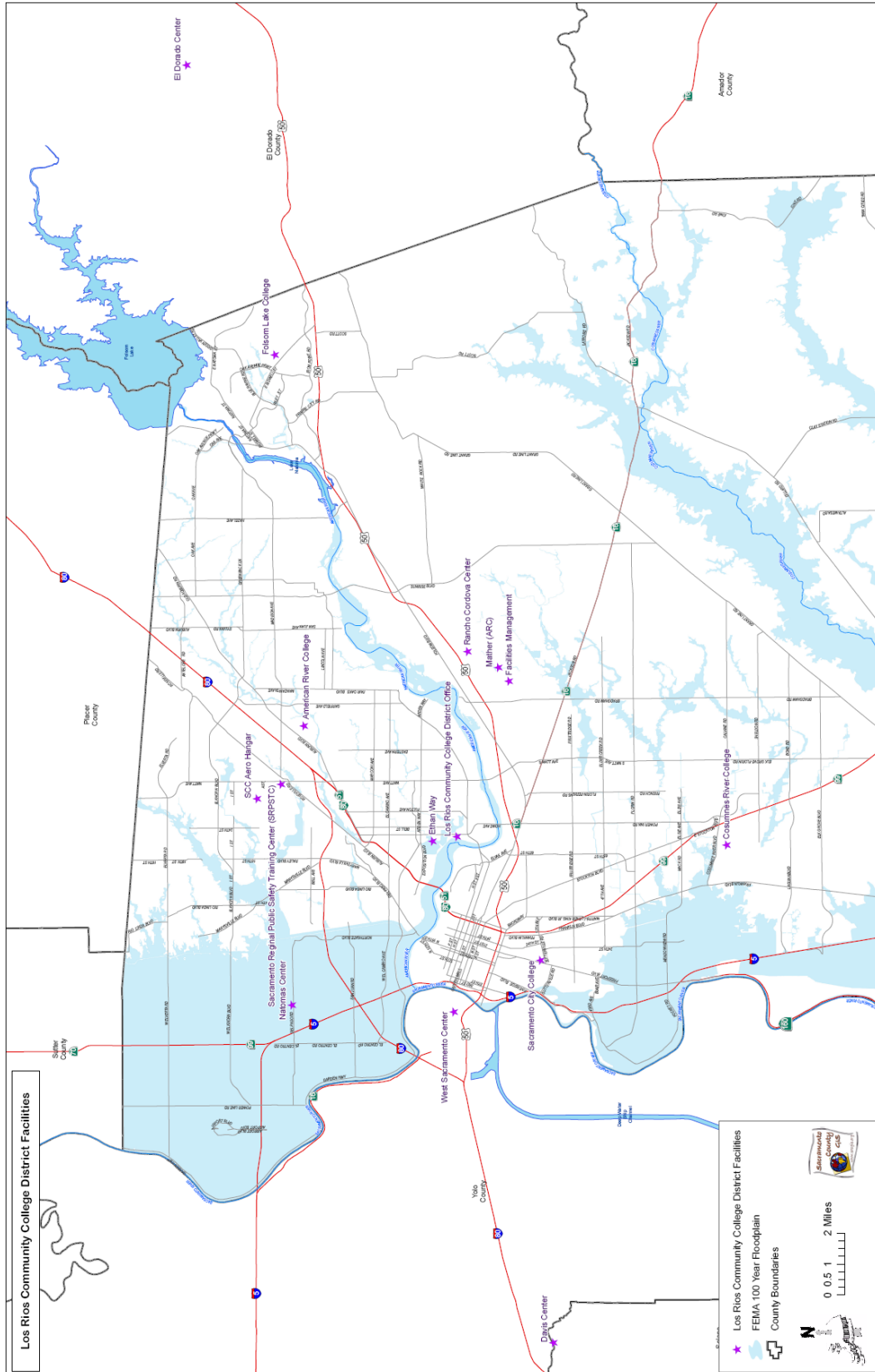
Table I-2 2011 LHMP Incorporation

Planning Mechanism 2011 LHMP Was Incorporated/Implemented In.	Details?
District Wide planning meetings for capital improvements and maintenance projects.	Provided information to assist in developing construction and maintenance projects.
Information Technology Planning Meetings	Resource for planning IT projects for continuing service and critical facilities.

I.3 Community Profile

The community profile for the LRCCD is detailed in the following sections. Figure I-1 displays a map and the location of LRCCD boundaries within Sacramento County.

Figure I-1 LRCCD Boundaries



I.3.1. College Overview, History, and Background

Los Rios Community College District is one of the nation's most respected learning institutions and the second-largest community college district in California. The College is a two-year public college district that serves the greater Sacramento region. Los Rios includes: American River, Cosumnes River, Folsom Lake and Sacramento City colleges; major education and outreach centers in Davis, Elk Grove, Natomas, Placerville, Rancho Cordova and West Sacramento; and specialized workforce and economic development programs for business, government and organizations throughout the region. The colleges offer AA/AS degrees, certificates and transfer education opportunities - students complete freshman and sophomore years and transfer to a four-year college or university - in more than 70 career fields.

The District's 2,400 square mile service area includes all of Sacramento County, most of El Dorado County and parts of Yolo, Placer and Solano counties. About 71,000 students are enrolled in the colleges and about 5,875 employees to include full-time, part-time, and temporary.

- American River College – 153 acres with 122 buildings
- Natomas Center – 1 building
- Cosumnes River College – 180 acres with 90 buildings
- Elk Grove Center – 1 building
- Folsom Lake College – 151 acres with 21 buildings
- El Dorado Center – 3 buildings
- Rancho Cordova Center – 1 building
- Sacramento City College – 72 acres with 38 buildings
- Aeronautics (McClellan) - 2 buildings
- Davis Center – 1 building
- West Sacramento Center – 1 building

Other sites support vocational programs include: Sacramento Regional Public Safety Center (1 building), Mather (2 buildings) for auto collision and bio-diesel program, and Pre-Apprenticeship training program (2 buildings).

Operational buildings include Facilities Management (1 building), District Office support (9 buildings) and Police Services and Workforce and Economic Development (1 building)

I.4 Hazard Identification

LRCCD's planning team identified the hazards that affect the district and summarized their geographic extent, probability of future occurrences, potential magnitude/severity, and significance specific to LRCCD (see Table I-3).

Table I-3 LRCCD—Hazard Identification

Hazard	Geographic Extent	Probability of Future Occurrences	Magnitude / Severity	Significance
Agricultural Hazards	Limited	Unlikely	Negligible	Low
Bird Strike	Limited	Unlikely	Negligible	Low
Climate Change	Limited	Unlikely	Negligible	Low
Dam Failure	Limited	Unlikely	Negligible	Low
Drought and Water Shortage	Limited	Unlikely	Negligible	Low
Earthquake	Limited	Unlikely	Negligible	Low
Earthquake: Liquefaction	Limited	Unlikely	Negligible	Low
Flood: 100/200/500-year	Limited	Unlikely	Critical	Medium
Flood: Localized Stormwater Flooding	Limited	Occasional	Critical	Medium
Landslides	Limited	Unlikely	Negligible	Low
Levee Failure	Limited	Unlikely	Negligible	Low
River/Stream/Creek Bank Erosion	Limited	Unlikely	Negligible	Low
Severe Weather: Extreme Temperatures – Cold/Freeze	Limited	Unlikely	Negligible	Low
Severe Weather: Extreme Temperatures – Heat	Limited	Unlikely	Negligible	Low
Severe Weather: Fog	Limited	Unlikely	Negligible	Low
Severe Weather: Heavy Rains and Storms (Thunderstorms, Hail, and Lightning)	Limited	Likely	Limited	Medium
Severe Weather: Wind and Tornadoes	Limited	Likely	Limited	Low
Subsidence	Limited	Unlikely	Negligible	Low
Volcano	Limited	Unlikely	Negligible	Low
Wildfire:(Burn Area/Smoke)	Limited	Unlikely	Negligible	Low
Geographic Extent Limited: Less than 10% of planning area Significant: 10-50% of planning area Extensive: 50-100% of planning area		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		
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.		Significance Low: minimal potential impact Medium: moderate potential impact High: widespread potential impact		

I.5 Hazard Profile and Vulnerability Assessment

The intent of this section is to profile LRCCD’s hazards and assess the vulnerability separate that of the Planning Area as a whole, which has already been assessed in Sections 4.2 and 4.3 Vulnerability Assessment in the main plan. The hazard profiles in the main plan discuss overall impacts to the Planning Area and describes the hazard problem description, hazard extent, magnitude/severity, previous occurrences of hazard events and the likelihood of future occurrences. Hazard profile information specific to the College is included in this Annex. This vulnerability assessment analyzes the property, population, critical facilities, 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 main plan.

I.5.1. Hazard Profiles

Each hazard vulnerability assessment in Section I.5.3, includes a description as to how the hazard affects LRCCD and information on past occurrences. The intent of this section is to provide jurisdictional specific information on hazards and further describe how the hazards and risks differ across the Planning Area.

I.5.2. Vulnerability Assessment and Assets at Risk

This section identifies LRCCD’s assets at risk, including values at risk, critical facilities and infrastructure, economic assets, natural resources, historic and cultural resources, and growth and development trends.

Assets at Risk

Table I-4 lists particular critical facilities and other community assets identified by the LRCCD’s planning team as important to protect in the event of a disaster. LRCCD’s physical assets, valued at over \$ 1 billion, consist of the buildings and infrastructure to support the LRCCD locations.

Table I-4 LRCCD’s Critical Facilities, Infrastructure, and Other College Assets

Name of Asset	Facility Type	Address	Replacement Value	Hazard Info
American River College (ARC)	Main Campus	4700 College Oak Dr. Sacramento 95841	\$254,197,824	Flooding, Severe Weather: heavy rain, wind and tornadoes
Cosumnes River College (CRC)	Main Campus	8401 Center Parkway Sacramento 95823	\$167,593,422	Severe Weather: heavy rain, wind, and tornadoes
Davis Center	Center under Sacramento City College	1720 Jade Street Davis 95616 (Yolo County)	\$9,161,562	Severe Weather: heavy rain, wind, and tornadoes
District Office	Operational Support	1919 Spanos Court Sacramento 95825	\$7,616,526	Flooding, Levee Failure, Severe Weather: heavy rain, wind and tornadoes

Name of Asset	Facility Type	Address	Replacement Value	Hazard Info
Elk Grove Center	Center under Cosumnes River College	10051 Big Horn Blvd. Elk Grove 95757	\$10,000,000	Severe Weather: heavy rain, wind, and tornadoes
El Dorado Center	Center under Folsom Lake College	6699 Campus Dr Placerville 95667 (El Dorado County)	\$24,769,530	Severe Weather: heavy rain, wind & tornadoes, and wildfire
Ethan Way Center	Special services for business and industry	1410 Ethan Way Sacramento 95825	\$7,824,282	Flooding, Levee failure, Severe Weather: heavy rain, wind & tornadoes
Facilities Management	Operational Support	3753 Bradview Dr. Sacramento 95827	\$9,787,218	Severe Weather: heavy rain, wind and tornadoes
Folsom Lake College	Main Campus	10 College Parkway Folsom 95630	\$164,452,008	Severe Weather: heavy rain, wind and tornadoes
Mather Location (Leased)	Off site program for American River College	10150 Missile Way Mather 95655	\$6,713,862	Severe Weather: heavy rain, wind and tornadoes
Natomas Center	Center under American River College	2221 Del Paso Rd Sacramento 95834	\$6,972,960	Flooding, Severe Weather: heavy rain wind, and tornadoes
Rancho Cordova Center	Center under Folsom Lake College	10259 Folsom Blvd, Rancho Cordova 95670	\$15,000,000	Severe Weather: heavy rain, wind and tornadoes
Sac Regional Public Safety Training Center	Center under American River College	5146 Arnold Ave McClellan 95652	\$12,060,594	Severe Weather: heavy rain, wind and tornadoes
Sacramento City College (SCC)	Main Campus	3835 Freeport Blvd. Sacramento 95822	\$321,608,676	Flooding, Severe Weather: heavy rain, wind and tornadoes
Sacramento City College Hangar (Leased)	Off site location for Sacramento City College	5803 Price Ave. Bld 1027 McClellan 95652	\$4,230,342	Severe Weather: heavy rain, wind and tornadoes
Water Tower Complex	Operational Support	2100 Northrop Sacramento 95825	\$4,599,288	Flooding, Levee Failure, Severe Weather: heavy rain, wind and tornadoes
West Sacramento Center	Center under Sacramento City College	1115 West Capitol Ave. West Sac 95691 (Yolo County)	\$12,324,468	Severe Weather: heavy rain, wind and tornadoes

Source: LRCCD

Critical Facilities

For purposes of this plan, a critical facility is defined as:

Any facility (a structure, infrastructure, equipment or service), that is adversely affected during a hazardous event may result in interruption of services and operations for the District at any time before, during and after the hazard event. A critical facility is classified by the following categories: (1) Essential Services Facilities, (2) At-risk Populations Facilities, (3) Hazardous Materials Facilities.

An inventory of critical facilities as determined by the LRCCD planning group as shown in Table I-5 and Table I-6.

Table I-5 LRCCD Critical Facilities: Summary Table

Location	Essential Services Facility	At Risk Population facility	Hazardous Material facility	Total by Location
ARC (American River College)	112	4	3	119
CRC (Cosumnes River College)	58	5	3	66
DO (District Office)	2	0	0	2
EDC (El Dorado Center)	5	1	1	7
Ethan Way	1	0	0	1
FLC (Folsom Lake College)	20	2	2	24
FM (Facilities Management)	1	0	1	2
SCC (Sacramento City College)	36	4	3	43
Total	235	16	13	264

Source: Los Rios Community College

Table I-6 LRCCD Critical Facilities: Detail Table

Facility	Type	Location	# of Buildings
Essential Services Facility	Business Operations	ARC	1
Essential Services Facility	Business Operations	CRC	1
Essential Services Facility	Business Operations	FLC	1
Essential Services Facility	Business Operations	SCC	1
Essential Services Facility	Business Service	District Office	1
Essential Services Facility	Central Plants (heat/air)	ARC	1
Essential Services Facility	Central Plants (heat/air)	CRC	1
Essential Services Facility	Central Plants (heat/air)	FLC	1

Facility	Type	Location	# of Buildings
Essential Services Facility	Central Plants (heat/air)	SCC	1
Essential Services Facility	Data Center with backup generator	District Office	1
Essential Services Facility	Data Center Alternate with backup generator	FLC	1
Essential Services Facility	Data Center with backup generator	ARC	1
Essential Services Facility	Data Center with backup generator (LRC Bld)	SCC	1
Essential Services Facility	Facilities Management	FM	1
Essential Services Facility	Instructional classrooms and labs	ARC	106
Essential Services Facility	Instructional classrooms and labs	CRC	54
Essential Services Facility	Instructional classrooms and labs	EDC	5
Essential Services Facility	Instructional classrooms and labs	FLC	15
Essential Services Facility	Instructional classrooms and labs	SCC	29
Essential Services Facility	IT Department	ARC	1
Essential Services Facility	IT Department	CRC	1
Essential Services Facility	IT Department	FLC	1
Essential Services Facility	IT Department	SCC	1
Essential Services Facility	Police Dispatch	Ethan Way	1
Essential Services Facility	Power Distribution (Hoos Pool)	SCC	1
Essential Services Facility	Red Cross Emergency Shelters (gym)	FLC	1
Essential Services Facility	Red Cross Emergency Shelters (gym)	ARC	1
Essential Services Facility	Red Cross Emergency Shelters (gym)	CRC	1
Essential Services Facility	Red Cross Emergency Shelters (gym)	SCC	1
Essential Services Facility	ARC Well (drinking and sewer water) 2 wells	ARC	1
Essential Services Facility	SCC Pumphouse (water for fire suppression system)	SCC	1
At Risk Population Facility	Adaptive PE	CRC	1
At Risk Population Facility	Adaptive PE	SCC	1
At Risk Population Facility	Child Dev. Center	ARC	1
At Risk Population Facility	Child Dev. Center	CRC	1
At Risk Population Facility	Child Dev. Center	SCC	1
At Risk Population Facility	DSP&S (Disability Support)	ARC	1
At Risk Population Facility	DSP&S (Disability Support)	CRC	1
At Risk Population Facility	DSP&S (Disability Support)	FLC	1
At Risk Population Facility	DSP&S (Disability Support)	SCC	1
At Risk Population Facility	Lab Techs (Chemistry and Biology)	ARC	2
At Risk Population Facility	Lab Techs (Chemistry and Biology)	CRC	1
At Risk Population Facility	Lab Techs (Chemistry and Biology)	EDC	1
At Risk Population Facility	Lab Techs (Chemistry and Biology)	FLC	1

Facility	Type	Location	# of Buildings
At Risk Population Facility	Lab Techs (Chemistry and Biology)	SCC	1
At Risk Population Facility	Veterinary Technology	CRC	1
Hazardous Material Facility	Above Ground Storage Tank (gas/diesel)	ARC	1
Hazardous Material Facility	Above Ground Storage Tank (gas/diesel)	CRC	1
Hazardous Material Facility	Above Ground Storage Tank (gas/diesel)	SCC	1
Hazardous Material Facility	Central Plants (heat/air)	ARC	1
Hazardous Material Facility	Central Plants (heat/air)	CRC	1
Hazardous Material Facility	Central Plants (heat/air)	FLC	1
Hazardous Material Facility	Central Plants (heat/air)	SCC	1
Hazardous Material Facility	Chemistry/Biology	ARC	1
Hazardous Material Facility	Chemistry/Biology	CRC	1
Hazardous Material Facility	Chemistry/Biology	EDC	1
Hazardous Material Facility	Chemistry/Biology	FLC	1
Hazardous Material Facility	Chemistry/Biology	SCC	1
Hazardous Material Facility	Facilities Management	FM	1

Source: Los Rios Community College

Economic Assets

LRCCD is one of the largest employers (5,875) within the local area and serving the largest student population (over 71,000).

Growth and Development Trends

Growth within LRCCD will include mostly infrastructure improvements, building modernization and a few additional buildings at current sites. Additional locations are not being added over the next five years.

Development since the 2011 Plan

The LRCCD has increased structures since the 2011 plan. Specifically, this includes opening a 28,480 square foot center in October 2015 valued at \$15 million dollars within in the city of Rancho Cordova (Sacramento County) serving 2,500 students. Students can pursue their general education requirements or learn English as a second language. This central location will also respond to local and state business needs with programs focused on skills needed to work in the public sector.

LRCCD implemented several development projects since 2011 increasing the numbers and capacity of LRCCD assets. New development tracked by totals and hazard risk areas are shown in Table I-7. All development in the identified hazard areas, including the 1% annual chance floodplains, areas protected by levees, and high wildfire risk areas, were completed in accordance with all current and applicable development codes and standards and should be adequately protected. Thus, with the exception of more

people living in campus areas potentially exposed to natural hazards, this growth should not cause a significant change in vulnerability of LRCCD to identified priority hazards.

Table I-7 LRCCD Development by Year and Hazard Areas since 2011

Asset Type	Year Built	Outside of Known Hazard Area	1% Annual Chance Flood	Area Protected by Levee	Wildfire Risk Area ¹	Other
ARC Life Science Modernization	2012	X				Severe Storm
ARC Student Center	2013	X				Severe Storm
ARC Parking Structure	2013	X				–
CRC Winn Center	2013	X				Severe Storm
CRC Parking Structure	2013	X				–
CRC Elk Grove Center	2013	X				Severe Storm
FLC Gym – New Building	2014	X				Severe Storm
FLC Rancho Cordova Center	2015	X				Severe Storm
SCC Student Services	2014		X			Localized flooding and severe storm
Total	9	8	1	0	0	–

Source: LRCCD

¹Moderate or higher wildfire risk area

I.5.3. Vulnerability to Specific Hazards

This section provides the vulnerability assessment, including any quantifiable loss estimates, for those hazards identified above in Table I-3 as high or medium significance hazards. Impacts of past events and vulnerability of LRCCD 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 Sacramento 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 floodprone areas, wildland areas, unreinforced masonry buildings, and buildings built prior to the introduction of modern building codes.

An estimate of the vulnerability of LRCCD to each identified priority 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.

Flooding and Localized Flooding

Likelihood of Future Occurrence—Occasional (Flooding); Likely (Localized)

Vulnerability—Medium

Although flooding is a “medium” risk for LRCCD, the County plan has an emphasis on flood hazards. The below information reflects flood data for LRCCD. Currently, there is one specific LRCCD project planned to address localized flooding since this is considered a medium risk for LRCCD.

Hazard Profile and Problem Description

The flooding hazard is considered occasional with a medium hazard risk based on past assessments. Please see map of LRCCD facilities overlaid on the 100 year flood zone on Figure I-1 in Section I.3

Past Occurrences

On December 1, 2012 the water from Arcade Creek surpassed the bank flowing onto the south east end of American River College campus creating damages to multiple buildings at the Health & Education complex. The recovery cost was \$122,671.44.

In 1995, the Arcade Creek flooding inundated the parking lot and track at American River College, the damages totaled \$23,000. According to SAFCO (June 2011) the Arcade creek at the base of American River College is routinely maintained to keep the creek in good standing to avoid overflow. During any storm event the LRCCD Police Department and Facilities Maintenance monitors the creek level in case the parking lot needs to be evacuated.

In 1994 at Cosumnes River College, the parking lot flooded due to slow storm drains. There were no damages. As a mitigation project, the City of Sacramento built a detention pond on the north/west corner of the campus to prevent future flooding.

There is a 11.55% percent chance of occurrence in the next year. (Where possible, frequency was calculated based on existing data. It was determined by dividing the number of events observed by the number of years on record and multiplying by 100—this gives the percentage of the event happening in any given year.)

Vulnerability to Flood

Values at Risk

As shown in the Table I-8, the number of structures and the value are divided up between flood zones. According to the DFIRM maps by FEMA, there are 44 structures in the floodplain and a replacement value of approximately \$336 million. However, the estimated loss would be approximately \$67 million, which is 20% of the value.

Table I-8 LRCCD Properties in the FEMA Floodplain

DFIRM Zone	# of Structures	Value-Structure plus Content	Estimated Loss (20% of the value)*	Population (Students & Employees)
AE	2	\$14,797,242	\$2,959,448	3161
X (200 yr)	42	\$321,608,676	\$64,321,735	17,853
Total	44	\$336,405,918	\$67,281,184	30,976

*Estimated losses assume that a flood is unlikely to cause total destruction. Losses are related to a variety of factors, including flood depth, flood velocity, building type and construction. Using FEMA's recommendations, average damage is estimated to be 20 percent of the total building value.

The 42 structures are all within one campus location (Sacramento City College).

Population at Risk

For the two sites listed (Natomas Center and Ethan Way) in the AE Flood zone, the approximate occupancy is 5,122 (student enrollment plus employees).

Critical Facilities at Risk

The critical facilities at risk in the AE flood zone are classrooms and computer labs that would be relocated to a different location or campus. The District police dispatch location is located on the second floor of the Ethan Way building.

The critical facilities listed in Zone X (200 year flood zone) include 37 essential service facilities, 4 at risk population facilities, and 3 hazardous materials. These number were obtained from the above Table I-6.

Insurance Coverage, Claims Paid, and Repetitive Losses

LRCCD is self-insured up to \$100,000 with insurance pool coverage up to \$600 million per occurrence (excluding flood coverage). LRCCD has separate flood insurance policies for the Natomas and Ethan Way facilities. Both of these facilities fall in the AE flood zone. LRCCD has not experienced repetitive losses due to flooding.

Future Development

Our Natomas site in the AE zone has a future plan for two more multi-story buildings. Working with the City of Sacramento on future flood planning and mitigation would be a move in a positive direction for this area.

The Sacramento City College location has a shared storm water drain system and with any site improvements on campus may be an opportunity to team up with the City of Sacramento for flood mitigation or solutions that could potentially be added to project planning.

Severe Weather: Heavy Rains and Storms; Wind and Tornadoes

Likelihood of Future Occurrence—Likely

Vulnerability—Medium

Hazard Profile and Problem Description

It is likely that each year we have a potential for storm damage and have identified this hazard as medium. There is a 23% percent chance of occurrence in the next year. (Where possible, frequency was calculated based on existing data. It was determined by dividing the number of events observed by the number of years on record and multiplying by 100—this gives the percentage of the event happening in any given year.)

When there are heavy rains and strong winds, it usually affects multiple locations within LRCCD. For example, the January 2008 storms caused damages at 7 locations incurring a cost of \$48,000 in damages. This included 16 items listed on the claim form. The state reimbursed LRCCD \$38,600. Majority of the replacement cost were for items that were outside of the buildings, such as bent fence post, ripped sun covers, ripped banners, damage to storage containers, fallen trees, debris cleanup, and a broken window. The Facilities Management building had part of the roofing system blown off which created a leak inside the building and the damages were over \$8,000. This was the first occurrence of damages to this building.

Past Occurrences

Historically, LRCCD has suffered approximately \$167,000 in damages of which approximately \$136,000 was recovered through disaster assistance programs. The events took place in 1994, 1995, 1997, 2003, 2004, 2008.

Vulnerability to Severe Weather

Assets at Risk

LRCCD has 295 structures and contents with a value of over one billion dollars.

Population at Risk

The population district wide is approximately 77,000 people to include students and employees. Severe weather has the ability to cancel classes or close campuses.

Critical Facilities at Risk

The main data center at the District Office supports the LRCCD's software systems, computers operations, and student services. This center has a 22-hour diesel generator that will provide power to the data center during a power outage.

The District police dispatch center at Ethan Way site is at risk of losing power. To mitigate this facility being affected by power outage, in 2008 a backup dispatch center was included in the new Operations building design at the Cosumnes River College campus. A backup generator is in the planning stages to be added at the Ethan Way location for dispatch.

Future Development

A repetitive loss to any one building or infrastructure is not common for LRCCD. When analyzing past losses, LRCCD grouped the losses by type within the district from 1994 through 2011.

For damages to roofing systems, there were approximately \$17,000 in damages due to the wind and the rain forcing water into the roofing system. A total of 25 buildings were affected and of those occurrences 20 buildings were damaged during the 1995 storm. These damages were in the 1995, 2004, 2008 events. There is a 11.5% chance of occurrence in the next year*.

For damages due to fallen trees, there were approximately \$11,000 in damages and those events took place in 1995, 2003, 2004, 2008. There were a total of 9 different incidents and of those occurrences 3 incidents took place in the 2008 storm. There is a 15% chance of occurrence in the next year*.

*Where possible, frequency was calculated based on existing data. It was determined by dividing the number of events observed by the number of years on record and multiplying by 100—this gives the percentage of the event happening in any given year.

I.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.

I.6.1. Regulatory Mitigation Capabilities

Table I-9 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 throughout LRCCD.

Table I-9 LRCCD'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	Y	Each campus has a master plan and mitigation actions are completed through capital improvement planning or maintenance and repair planning.
Capital Improvements Plan	Y	Hazards that are directly related to specific projects may be included within projects (individual).
Economic Development Plan	N	
Local Emergency Operations Plan	N	
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)	N	
Building Code, Permitting, and Inspections		
	Y/N	Are codes adequately enforced?
Building Code	Y	California Building Code 2013—LRCCD is under the jurisdiction of the Division of the State Architect and use the code they deem appropriate.
Building Code Effectiveness Grading Schedule (BCEGS) Score	N	
Fire department ISO rating:	N	
Site plan review requirements	Y	LRCCD has the state architect review projects site plans with respect to ADA Accessibility and Landscaping (water use).
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	
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?	

Source: LRCCD

I.6.2. Administrative/Technical Mitigation Capabilities

Table I-10 identifies the department(s) responsible for activities related to mitigation and loss prevention for LRCCD.

Table I-10 LRCCD's Administrative and Technical Mitigation Capabilities

Administration	Y/N	Describe capability Is coordination effective?
Planning Commission	N	
Mitigation Planning Committee	Y	To review hazards related to LRCCD
Maintenance programs to reduce risk (e.g., tree trimming, clearing drainage systems)	Y	Facilities Maintenance grounds department maintains drainage systems, roofing systems, and tree trimming to prevent damages to property and people.
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	N	
Floodplain Administrator	N	
Emergency Manager	Y	District police department works with multiple surrounding agencies to anticipate and respond to public safety issue, and natural disasters.
Community Planner	N	
Civil Engineer	N	
GIS Coordinator	N	
Other		
Technical		
Warning systems/services (Reverse 911, outdoor warning signals)	Y	We use a mass notification system to address emergencies with employees and students.
Hazard data and information	N	
Grant writing	N	
Hazus analysis	N	
Other		
How can these capabilities be expanded and improved to reduce risk?		

Source: LRCCD

I.6.3. Fiscal Mitigation Capabilities

Table I-11 identifies financial tools or resources that LRCCD could potentially use to help fund mitigation activities.

Table I-11 LRCCD’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 Improvement funds for mitigation projects if they are directly related to a specific Capital Improvement project. For example, while renovating the athletic fields the main storm drain is going to be improved to reduce the risk of localized flooding.
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	
Incur debt through general obligation bonds and/or special tax bonds	Y	Bond funding has been used for past projects—for example seismic retro fitting of Hughes Stadium which was first build in 1928.
Incur debt through private activities	N	
Community Development Block Grant	N	
Other federal funding programs	N	
State funding programs	Y	The State provided special maintenance and special repair (SMSR) funding for schools. With this funding, we were able to complete roofing renovations district wide.. This funding is not guaranteed to be part of the annual budget.
Other		
How can these capabilities be expanded and improved to reduce risk?		

Source: LRCCD

I.6.4. Mitigation Education, Outreach, and Partnerships

Table I-12 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 I-12 LRCCD’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.	Yes	Members of the LRCCD police department speak to campus groups (students and employees) up to 100 times per year providing public safety information that may include the 72-hour household preparedness.
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes	Members of the LRCCD police department speak to campus groups to provide fire safety and fire response specific training up to 15 times per year as well as including household preparedness (72-hour) in multiple public safety presentations each year.
Natural disaster or safety related school programs	Yes	Continue to train employees on National Incident Management System (NIMS) emergency preparation, and Campus Community Emergency Response Team (C-CERT) and building evacuation training.
StormReady certification	No	
Firewise Communities certification	No	
Public-private partnership initiatives addressing disaster-related issues	No	
Other		
How can these capabilities be expanded and improved to reduce risk?		

LRCCD Police Department conducts emergency operation drills at various locations throughout the school year. Depending on the type of drill it may involve outside agencies. In the past, outside agencies included local fire, police, CalEma (California Emergency Management Agency), Center for Disease Control, Red Cross, and Sacramento County OES. The LRCCD Police Department continues to train employee on Campus Community Emergency Response Team C-CERT and train employees to evacuate a building or shelter in place using the ACES (Action Coordinator for Emergency Survival) program.

I.6.5. Other Mitigation Efforts

To sustain our services during and after a disaster, such as flooding and severe weather, there is a strong support to protect LRCCD against data center failure including network and server infrastructure and access to the Internet. LRCCD is in the process of updating data centers at the District Office and Folsom Lake College. Currently the two data centers have generator backup power sources and each has a 10Gbps connection to the Corporation for Education Network Initiatives California (CENIC) for Internet access. Each of the connections connect at a different location on the CENIC backbone. LRCCD is in the process of projects at each of the data centers of upgrading to Liebert Smartrow technology. LRCCD

is also hopes to complete 4 additional 10Gbps circuits to create a 10Gbps Ring between the main campuses and District Office. LRCCD is also looking to install at least 1Gbps connection at the outreach centers and other district facilities. This is all in effort to improve connectivity for services including communications (phones, email, and others), and all Internet access.

LRCCD is also looking at architecture and deploying redundant WAN (Wide Area Network site to site) connectivity and on main campuses for the core and distribution LAN (Local Area Network with site building to building or floor to floor) networking. This will provide complete resiliency to failures of fiber and/or network electronics along either pathways, or data center, and failures at either of the CENIC connections, or the main data centers at LRCCD locations. The project continues with participation of CENIC, AT&T, SECC/Comcast and the LRCCD DO-IT Department. CENIC internet connections bandwidth was increased from 1Gbps each to 10Gbps (only one pathway is active at a time) and LRCCD will complete main campus WAN connectivity from single 1Gbps pathway to multiple 10Gbps pathways.

LRCCD purchased an emergency mass notification system in 2009 to alert students and employees for emergencies (such as disasters, shelter in place, campus closures, etc.) by sending text messages, email messages or calling a mobile phone. The system is in the process of being upgraded to improved features, ease of use, and aligns with technological advances for future options. With the upgrade, it will be easier to post to social media sites, and digital signage. The upgrades should be completed by October 2016.

The system can provide information to the majority of students and employees. The annual maintenance fees are funding by LRCCD.

In 2008, LRCCD established a Preparedness Assessment Team (PAT), to make on-going assessment of emergency management, preparedness and readiness in the district. The team assesses and makes recommendations for strategic actions to increase the capacity for and quality of disaster preparedness and management at all district locations. There are subcommittees for training, facility issues, communications, and building coordinator program. The Preparedness Assessment Team consists of 26 employees from various backgrounds and meet on a quarterly basis.

LRCCD District police have trained over 550 employees in the SEMS/NIMS program. This training is open to all employees and students but is mandatory for all employees who are an Emergency Operations Command member.

District police has trained 150 employees in the College Community Emergency Response Team (C-CERT) program district wide. Each year multiple trainings are offered across the district to update skills or certify staff. This program is self-funded by LRCCD.

I.7 Mitigation Strategy

I.7.1 Mitigation Goals and Objectives

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

I.7.2. Mitigation Actions

The planning team for LRCCD 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.

Action 1. District Wide Roofing Renovations

Hazards Addressed: Severe Weather: Heavy Rain, Wind, and Storms

Goals Addressed: 1, 2, 3

Issue/Background: In recent years, the State of California has stopped providing funds for public building maintenance. LRCCD used those funds for a roof maintenance program. Renovation to LRCCD roof systems will provide a proactive approach to minimize potential property damage and loss of equipment due to water damage from severe wind and rain. In looking at all the roofing systems District wide, this project would cover those roofing systems that are near the end of the roofs life cycle.

Project Description: To minimize cost, the project would include repairing the roof system to make it more weather resistant using a foam system that will integrate with the existing structure and equipment that is already in place.

Other Alternatives: No action

Existing Planning Mechanisms through which Action will be Implemented: Implementation and maintenance of the plan update is critical to the overall success of hazard mitigation planning.

Responsible Office: Los Rios Community College District-Facilities Maintenance

Priority (H, M, L): High

Cost Estimate: \$1.3 million

Potential Funding: Infrastructure dollars

Benefits (avoided Losses): Mitigate damage to multiple buildings at the Health & Education complex.

Schedule: 1-3 years

Action 2. ARC Drainage at Arcade Creek

Hazards Addressed: Localized flooding from Arcade Creek onto campus

Goals Addressed: 1, 2, 3

Issue/Background: On 12/1/2012, the water from Arcade Creek surpassed the bank flowing onto the south east end of American River College Campus creating damage to multiple building at the Health & Education complex. The recovery cost was \$122,671.44.

Project Description: Regrade the land to have the water flow back into the creek has already been completed. Local swell improved with recent program development for athletic fields.

Other Alternatives: Main storm drain extension around ARC stadium.

Existing Planning Mechanisms through which Action will be Implemented: Implementation and maintenance of the plan update is critical to the overall success of hazard mitigation planning.

Responsible Office: Los Rios Community College District-Facilities Maintenance

Priority (H, M, L): High

Cost Estimate: \$1.3 million

Potential Funding: Infrastructure dollars

Benefits (avoided Losses): Mitigate damage to multiple buildings at the Health & Education complex.

Schedule: 1-3 years

Action 3. Protect District Property

Hazards Addressed: Localized Flooding

Goals Addressed: 1, 2, 3

Issue/Background: Localized flooding is a threat for property damage to buildings, parking lots, and road closures. In addition, flooding on our property has the potential of limiting student access to campus buildings, attending classes, and displacing employees. Based on the severity of damage and the duration, the classes may be moved to other buildings, another campus or may be cancelled for the semester creating a hardship for the student's educational goals.

Project Description: Mitigation projects may be addressed during infrastructure improvements and construction projects by our Facilities Planning team as opportunities arise. For example, while improving athletic fields, we were able to add an improved storm water drain system project to prevent flooding from the local stream.

Other Alternatives:

Existing Planning Mechanism(s) through which Action Will Be Implemented: Through Capital Improvement planning, LRCCD would look for opportunities to improve against localized flood risk.

Responsible Office/Partners: Los Rios Community College District - Facilities Management

Project Priority: High

Cost Estimate: Varies

Benefits (Losses Avoided):

Potential Funding: Infrastructure dollars or mitigation grant

Timeline: When funding is available.