

Annex A City of Auburn

A.1 Introduction

This Annex details the hazard mitigation planning elements specific to the City of Auburn, 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 City. This Annex provides additional information specific to the City of Auburn, with a focus on providing additional details on the risk assessment and mitigation strategy for this community.

A.2 Planning Process

As described above, the City of Auburn 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 City 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 A-1. Additional details on plan participation and City representatives are included in Appendix A.

Table A-1 City of Auburn Planning Team

Name	Position/Title	How Participated
John Ruffcorn	Public Safety Director	Attended meetings. Provided updates to the past hazard identification, vulnerability and capability sections. Provided demographic data.
Reg Murray	Senior Planner	Provided updates to the past hazard identification, vulnerability and capability sections. Provided other data.
Edgar Martinez	Assistant Engineer	Provided updates to the past hazard identification, vulnerability and capability sections. Provided other data
Victor Pecoraro	Lieutenant	Attended meetings

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

Table A-2 2010 LHMP Incorporation

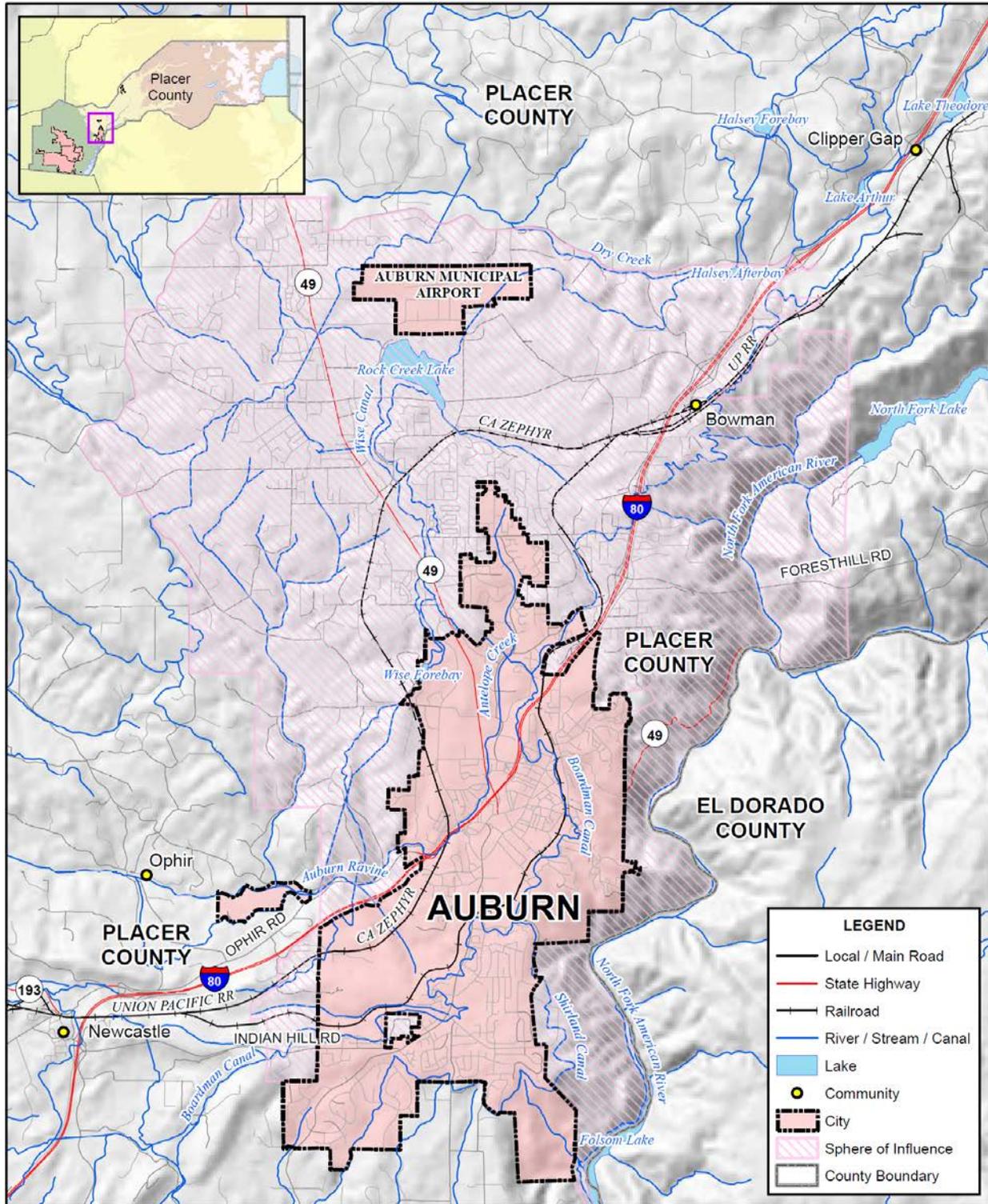
Jurisdiction	Planning Mechanism 2010 LHMP Was Incorporated/Implemented In. Details?
City of Auburn	The plan was incorporated into the City's Emergency Operations Plan, and it is also in the Emergency Operations Handbook.

Jurisdiction	Planning Mechanism 2010 LHMP Was Incorporated/Implemented In. Details?
	Although not completed after the 2010 plan, when the Safety Element of the General Plan is next updated, this 2016 LHMP Update will be incorporated into the Safety Element.

A.3 Community Profile

Figure A-1 displays a map and the location of the City of Auburn within Placer County.

Figure A-1 City of Auburn Base Map



0 1 2 Miles

Data Source: Placer County, CAL ATLAS; Map Date: 2015.



A.3.1. Geography and Climate

The City of Auburn is located on the western slope of the Sierra Nevada Range at elevations between 1,000 and 1,400 feet above mean sea level (msl). Auburn is the county seat of Placer County and is also located at the crossroads of I-80 and Highway 49. The City is about 7.5 square miles in area and rests near the confluence of the North and Middle Forks of the American River. Mountainous wilderness, canyons, and the western slope of the Sierra Nevada Range lie adjacent eastward; while gentle rolling foothills well-suited for agriculture lie to the west. The crest of the Sierra Nevada lies approximately 45 miles eastward and the Central Valley lies approximately 10 miles to the west.

Auburn consists of two distinct areas: the incorporated city and the greater Auburn area. Auburn’s average temperatures ranges from the high 80°F to mid-90°F during the summer to the mid 30°F to high 40°F during the winter. Auburn receives an average of 34.47 inches of rain and 1.2 inches of snow annually.

A.3.2. History

Auburn is well known for its California gold rush history. In 1849, a mining camp became officially known as Auburn and by 1850, Auburn’s population had reached 1,500 people. A Frenchman named Claude Chana first discovered gold in the Auburn Ravine in 1848. By 1849 the North Fork Dry Diggings had become a well-established mining camp. Later in the year, the camp was officially named Auburn. Because Auburn was a short distance from Sacramento, centrally located in the gold country, and located just below the snow line, it became known as the “jumping off” spot for the miners. By 1865, Auburn had developed into a permanent town, with the Central Pacific Railroad connecting people to the area. Auburn was first incorporated in 1860 and again in 1888. By 1900 the population of Auburn was just over 2,000.

A.3.3. Economy

The City’s economic base consists of retail sales and services; recreational and healthcare services; and light manufacturing. Auburn owns and operates the Auburn Municipal Airport. The city encourages industrial growth through its Airport Industrial Park and light industry in other parts of the City.

US Census estimates show economic characteristics for the City of Auburn. These are shown in Table A-3.

Table A-3 City of Auburn Civilian Employed Population 16 years and Over

Industry	Estimated Employment	Percent
Agriculture, forestry, fishing and hunting, and mining	55	0.9%
Construction	241	4.0%
Manufacturing	392	6.5%
Wholesale trade	147	2.4%
Retail trade	739	12.2%
Transportation and warehousing, and utilities	429	7.1%
Information	117	1.9%

Industry	Estimated Employment	Percent
Finance and insurance, and real estate and rental and leasing	351	5.8%
Professional, scientific, and management, and administrative and waste management services	946	15.6%
Educational services, and health care and social assistance	1536	25.3%
Arts, entertainment, and recreation, and accommodation and food services	357	5.9%
Other services, except public administration	373	6.1%
Public administration	392	6.5%

Source: US Census Bureau American Community Survey 2009-2013 Estimates

The largest employers within the City of Auburn include the County of Placer, Placer Union High School District, Auburn Union Elementary School District, and Pride Industries.

From its origins as a mining camp, Auburn has emerged as a community of strong historic character, cultural enrichment, economic diversity, and a destination point for outstanding outdoor recreation. Auburn’s historic culture is being sustained by way of its museums and antique stores and the preservation and renovation of its residences and commercial buildings. Four commercial districts provide a wide variety of shopping and dining experiences.

The nearby Auburn State Recreation Area (ASRA) and the American River Canyon support a diverse range of recreational activities from whitewater rafting and kayaking to fishing and hiking. Auburn is also home to many challenging sporting endurance events, including: Western States 100 mile Endurance Run/UltraMarathon; the Tevis Cup 100 mile equestrian ride; and the Rio Del Lago 100 mile endurance run.

A.3.4. Population

The California Department of Finance estimated the January 1, 2014 total population for the City of Auburn was 13,804.

A.4 Hazard Identification and Summary

Auburn’s planning team identified the hazards that affect the City and summarized their frequency of occurrence, spatial extent, potential magnitude, and significance specific to Auburn (see Table A-4). In the context of the plan’s planning area, there are no hazards that are unique to Auburn.

Table A-4 City of Auburn—Hazard Identification Table

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

A.5 Vulnerability Assessment

The intent of this section is to assess Auburn’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. In addition, although ranked as low significance by the community, the 100-year flood hazard is also included in the below analysis. For more information about how hazards affect the County as a whole, see Chapter 4 Risk Assessment in the main plan.

A.5.1. Assets at Risk

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

Assets at Risk

The following data from the Placer County Assessor’s Office is based on the 2015 Assessor’s data. The methodology used to derive property values is the same as in Section 4.3.1 of the base plan. This data should only be used as a guideline to overall values in the County, as the information has some limitations. The most significant limitation is created by Proposition 13. Instead of adjusting property values annually, the values are not adjusted or assessed at fair market value until a property transfer occurs. As a result, overall value information is most likely low and does not reflect current market value of properties within the County. It is also important to note, in the event of a disaster, it is generally the value of the infrastructure or improvements to the land that is of concern or at risk. Generally, the land itself is not a loss. Table A-5 shows the 2015 Assessor’s values (e.g., the values at risk) broken down by property type for the City of Auburn.

Table A-5 City of Auburn – Total Assets at Risk by Property Use

Property Use	Parcels	Total Land Value	Improved Parcel Count	Improved Structure Value	Total Value
Agricultural	4	\$60,034	3	\$40,109	\$100,143
Commercial	1,132	\$84,745,719	360	\$150,926,737	\$235,672,456
Industrial	74	\$2,861,728	20	\$6,125,207	\$8,986,935
Institutional	65	\$4,357,808	24	\$38,520,513	\$42,878,321
Natural/Open	21	\$31,528	0	\$0	\$31,528
Residential	4,810	\$427,520,394	4,650	\$897,906,759	\$1,325,427,153
Total	6,106	\$519,577,211	5057	\$1,093,519,325	\$1,613,096,536

Source: Placer County 2015 Parcel/Assessor’s Data

Critical Facilities and Infrastructure

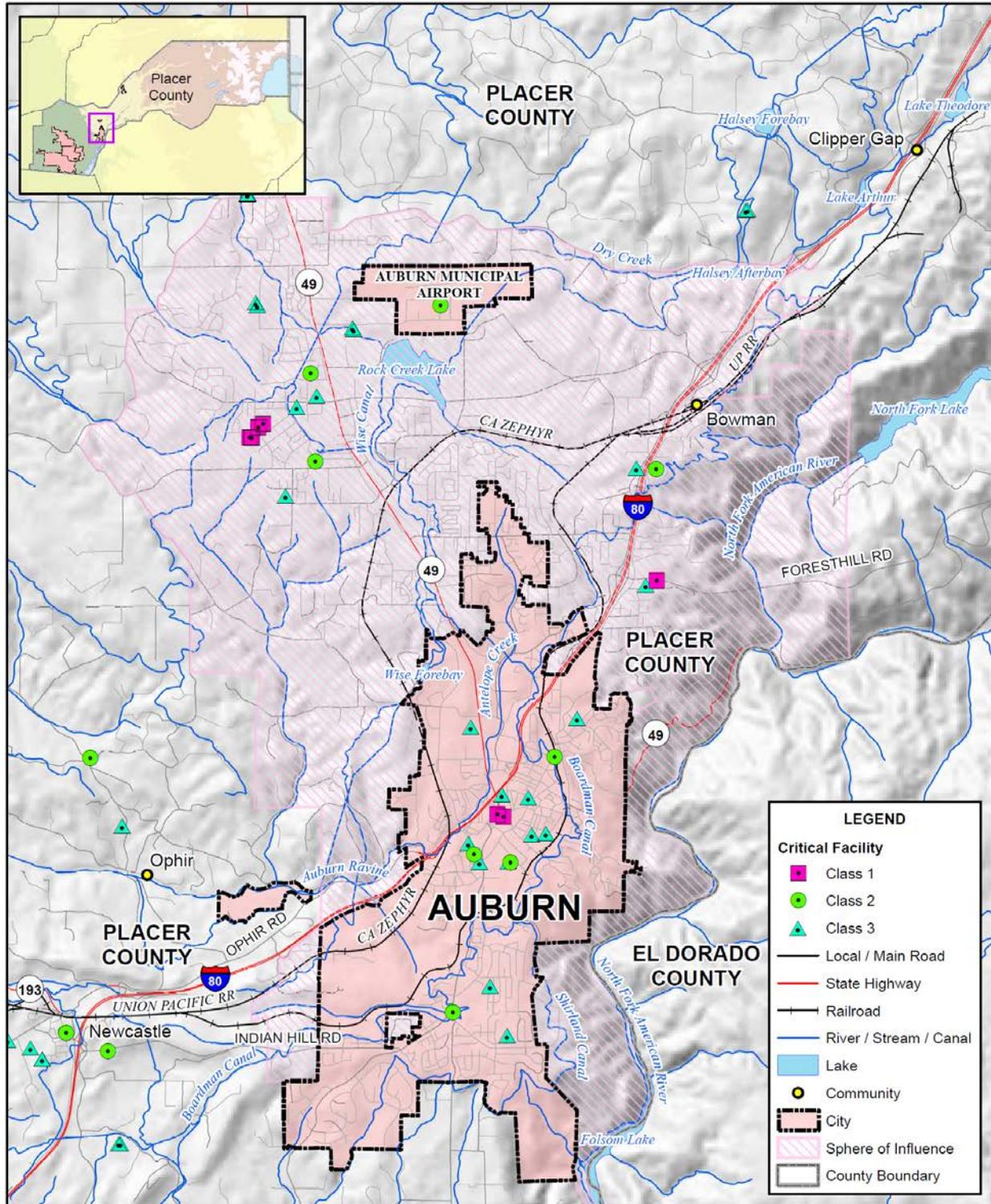
For purposes of this plan, a critical facility is defined as:

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 was refined by separating out three classes of critical facilities as further described in Section 4.3.1 of the base plan.

An inventory of critical facilities in the City of Auburn from Placer County GIS is shown on Figure A-2 and detailed in Table A-6. Details of critical facility definition, type, name, address, and jurisdiction by hazard zone are listed in Appendix F.

Figure A-2 City of Auburn – Critical Facilities



Foster
Morrison

0 1 2 Miles



Data Source: Placer County, CAL ATLAS; Map Date: 2015.

Table A-6 City of Auburn – Critical Facilities Inventory

Critical Facility Category	Facility Type	Facility Count
Class 1	Dispatch Center	1
	Emergency Operation Center	1
Class 2	Airport	1
	Fire Station	3
	National/Coast Guard	1
	Police Station	1
Class 3	Fairground	1
	Hall	5
	School	5
Total City of Auburn		19

Source: Placer County GIS

Natural Resources

The City of Auburn has a variety of natural resources of value to the community:

- Sensitive plant communities: Oak Woodland, Riparian, and Stream habitat.
- No vernal pools are known to exist within the City limits.
- Several sensitive status species with the potential to occur: California red-legged frog, Foothill yellow-legged frog, Cooper’s Hawk, sharp-skinned hawk, golden eagle, bald eagle, northern harrier, Black-Shouldered Kite, prairie falcon, long-eared owl, Pacific fisher, and valley elderberry longhorn beetle.

Historic and Cultural Resources

The City of Auburn has registered federal historic sites:

- Old Auburn Historic District – Roughly bounded by Maple, Commercial, Court, Washington, Lincoln, and Sacramento Streets

In addition to the registered sites, there are several assets within Auburn that define the community and represent the City’s history. Some of the historical sites of importance to Auburn are listed below.

- Auburn Joss House Museum
- Bernhard Museum Complex
- Downtown Auburn
- Historic Old Town Auburn
- Placer High School
- Placer County Museum

Growth and Development Trends

Between the 2000 and 2010 U.S. Census, the City of Auburn’s population grew from 12,462 to 13,330. California Department of Finance estimates for July 1, 2014 were 13,804. Auburn has seen slow and steady

growth. Auburn’s growth rate is significantly lower than Placer County’s growth. In comparison to other cities in the county, Auburn has not experienced the same growth and thus has been able to retain a small town atmosphere.

Development since 2010 Plan

The City searched through building permits issued from July 2010 through July 2015. The following was found:

- New Single Family – 42
- New Multi Family – 2
- New Commercial Buildings – 7

The City does not track building permits by hazard risk areas. However, since the entire City is in the High Fire Severity Zone, it is assumed that all of the developments above occurred in high fire risk areas. The City enforces the floodplain ordinance as well. If any development were to have occurred in the floodplain, it would have conformed to the elevation standards of the floodplain ordinance.

Given the wildfire risk within the City of Auburn, any new development since the 2010 plan would have increased the vulnerability of the community to additional loss during future fires. However, effective building codes and construction standards within the City will assist mitigating potential losses from any new development. With continued population growth, the City’s vulnerability to wildfire will likely continue to increase as well.

Future Development

The Sacramento Council on Governments (SACOG) modeled population projections for the City of Auburn and other areas of the region in 2012 for a Metropolitan Transportation Plan/Sustainable Communities Strategy report. This forecast uses a 2008 base year estimate with projections to 2020 and 2035 for population, housing units, households and employment. SACOG estimated the City population in 2020 and 2035 to be 14,099 and 16,560 respectively.

The 2013 to 2021 Housing Element identifies numerous areas within the City of Auburn that are in the planning stage or have been approved for development of new subdivisions. Table A-7 provides the number of lots, acreages, location, and status of residential subdivisions in the planning stages or approved by the city.

Table A-7 Auburn Residential Subdivision Status Listing

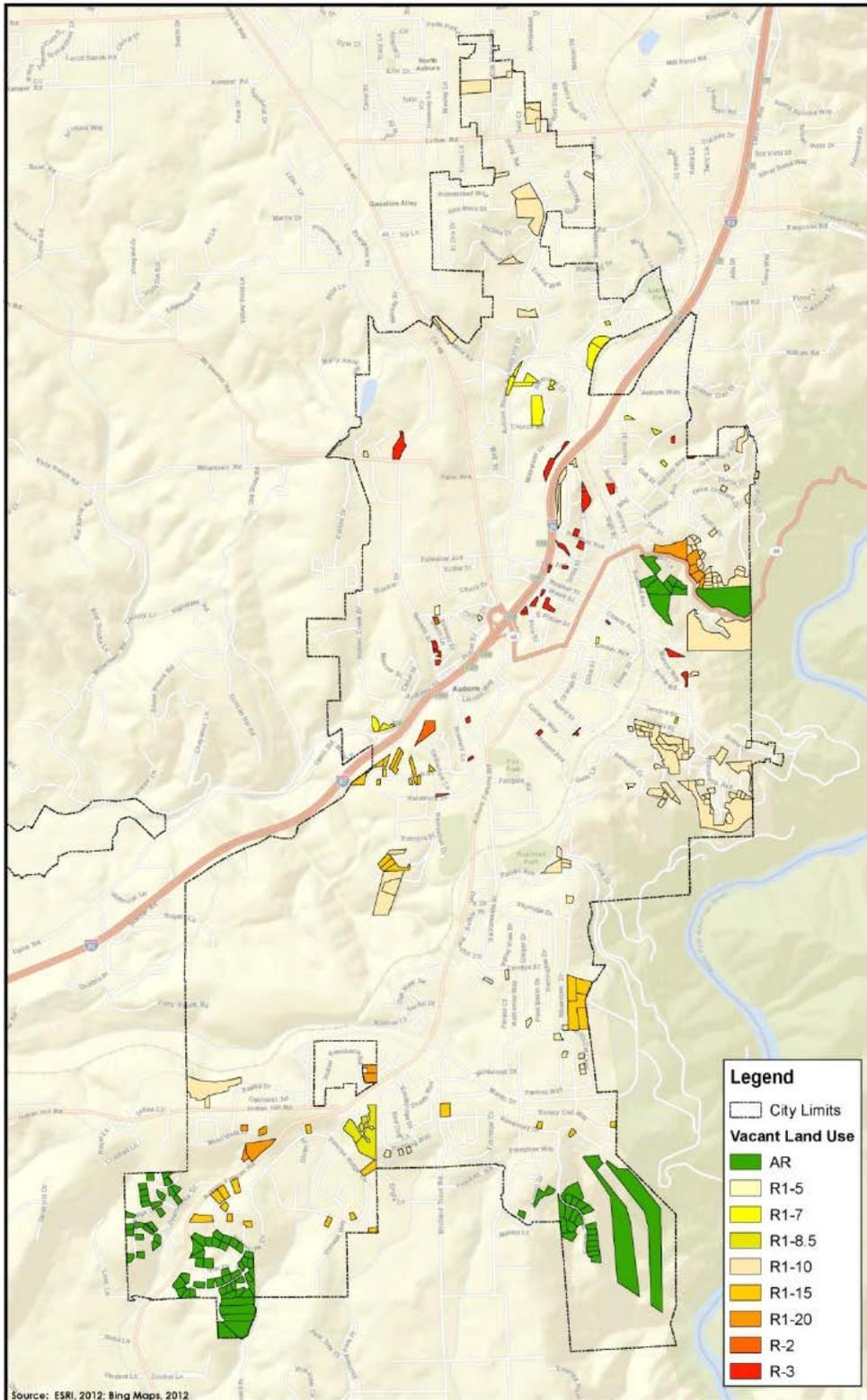
Subdivision	Lots/Units	Acres	Location	Status
Auburn Bluffs	29	9.6	East of Auburn Folsom Road at Indian Hill Road	Tentative map approved 1/15/2008
Auburn Bluffs Lot E (SUB 785)	20	15.5	East of Auburn Folsom Road, South of Sunrise Ridge CR	9 lots available

Subdivision	Lots/Units	Acres	Location	Status
Baltimore Ravine Specific Plan	±1200-1300	±264	East of Interstate 80; west of Auburn Folsom Road; north of UPRR	Specific Plan approved 2/20014, land use and zoning approved for Phase 1 (270 units)
Canyon Creek (SUB 03-2)	24	11	406 Maidu Drive	Tentative map approved
Canyon Ridge Lane (SUB 06-2)	6	7.2	143 Borland Ave	Tentative map approved
Canyon Rim Estates (SUB 02-3)	23	120	Southern Terminus of Eagles Nest	16 lots available
Diamond Ridge (SUB 760)	47	26.7	South of Indian Hill Rd, West of Santa Barbara Subdivision	1 lot available
Granite Bay Vista (SUB 758)	80	80	West of Auburn Folsom Rd, Immediately North of City Limits	27 lots available
Knollwood Lot Split (LS 04-1)	3	2.6	471 Knollwood Drive	3 lots available
Monticelo (SUB 751)	63	24	Riverview Dr, North of Maidu Dr	7 lots available
Southridge VI (SUB 781)	48	17.7	South End of Southridge Dr	3 lots available
Sunny Creek (SUB 06-1)	13	±4	1161 Oakridge Way	Tentative map approved
The Outlook @ Indian Hill (SUB 02-2)	70	70	East of Auburn Folsom, Immediately North of City Limits	38 lots available
Vienna Woods (SUB 04-4)	24	±6	585 Dairy Road	Tentative map approved
View Crest Estates (SUB 02-4)	7	5	South of Indian Hill, East of Diamond Ridge Subdivision	2 lots available
Whitehawk Meadows	18	10.2	West of Auburn Folsom Rd, directly opposite entry to Vintage Oaks	Tentative map approved
Woodland Estates (SUB 782)	34	16	West end of High St and Clark St	14 lots available
Multi-Family				
Tuscan Pals Condos	8	0.62	133 Electric Street	Tentative map approved
Wall Street Condos	30	2.03	580 Wall Street	Tentative map approved

Source: City of Auburn, 2012-2021 Housing Element

Most of the vacant parcels scattered throughout the City are surrounded by existing development and could be classified as infill. However, due to the topography of the City vacant land could possibly have constraints that might include limited access, wetlands, native trees, and geologic constraints. Figure A-3 illustrates the locations of available vacant land in the City.

Figure A-3 Vacant Land Inventory



Source: City of Auburn 2013-2021 Housing Element

The future housing needs for the City of Auburn will be provided through a combination of development in the City's numerous infill sites as well as the land provided in the Baltimore Ravine Specific Plan (BRSP). The City of Auburn estimates that there are an additional 338 acres of undeveloped residentially zoned infill land available within the city which can provide at least 900 units. In addition, the BRSP, a master planned community located in south Auburn, adopted in 2011 which meets all of the "by-right" requirements identified in program I of the 2008 Housing Element, provides a total of 725 units on 277 acres, including a minimum of 72 units affordable to very low-, low-, and moderate- income families consistent with the SACOG compact.

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 main plan.

A.5.2. Estimating Potential Losses

This section provides the vulnerability assessment, including any quantifiable loss estimates, for those hazards identified above in Table A-4 as high or medium significance hazards. Impacts of past events and vulnerability of the City 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 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, WUI areas, unreinforced masonry buildings, and buildings built prior to the introduction of modern building codes.

An estimate of the vulnerability of the City 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.

Drought and Water Shortage

Likelihood of Future Occurrence—Likely
Vulnerability—Medium

In 1988, 45 California counties experienced water shortages that adversely affected about 30 percent of the state's population, much of the dry farmed agriculture, and over 40 percent of the irrigated agriculture. Fish

and wildlife resources suffered, recreational use of lakes and rivers decreased, forestry losses and fires increased, and hydroelectric power production decreased. Since 1976, Auburn has experienced one federal declaration for drought and two local drought emergencies within Placer County. During this time, there was one U.S. Department of Agriculture declaration for crop losses associated with drought.

Governor Brown declared a drought state of emergency for California on January 17, 2014. On April 25, 2014 governor brown issued a proclamation on the continuation of the drought emergency.

This executive order strengthened the state's ability to manage water and habitat effectively in drought conditions and called for all Californians to redouble their efforts to conserve water. According to the U.S. drought monitor, most of inland California is in d4-exceptional drought with d3-extreme drought over the extreme northern Sacramento Valley. The drought classifications are due in large part to the precipitation deficit, low reservoir levels and local impacts.

Governor Brown has ordered mandatory water reductions of 25 percent in cities and towns across the state. This is the first time in state history that a governor has implemented such reductions.

Future Development

As the population in the area continues to grow, so will the demand for water. Water shortages in the future may be worsened by drought, as the City relies on surface water for its water source. Increased planning will be needed to account for population growth and increased water demands.

Earthquake

Likelihood of Future Occurrence—Occasional

Vulnerability—Medium

Placer County is traversed by a series of northwest trending-faults that are related to the Sierra Nevada uplift. According to the Safety Element of Auburn's General Plan, the City of Auburn is located in a seismically active region, and there is a high potential that the area will be subject to at least moderate earthquake shaking one or more times over the next century. It states further that the closest identified 'potentially active' faults are the Bear Mountain and the Melones Faults, which are situated approximately three to four miles westerly and easterly from Auburn respectively. Earthquakes on these faults would have the greatest potential for damaging buildings in Auburn, especially the unreinforced masonry structures in the older part of the city and structures built before 1960 without adequate anchorage of framing and foundations. According to the City, there are 29 buildings that are known to be constructed of unreinforced masonry.

The closest identified active fault is the Cleveland Hills fault, situated approximately 36 miles northwesterly of Auburn. It was the source of the 1975 Oroville earthquake (Richter Magnitude: 5.7). Another potential earthquake source is the Midland Fault Zone to the west, where an 1892 earthquake centered between Vacaville and Winters caused minor damage in nearby Lincoln.

Additionally, Auburn may experience minor ground shaking from distant major to great earthquakes on faults to the west and east. For example, to the west, both the San Andreas Fault (source of the 8.0 estimated

Richter magnitude San Francisco earthquake that damaged Sacramento in 1906) and the closer Hayward fault have the potential for experiencing major to great events. To the east in Nevada, the several faults associated with a series of earthquakes in 1954, especially the major (7.1 Richter magnitude) December 16, 1954 Fairview Peak event (about 100 miles east of Carson City), could cause minor ground shaking in Auburn.

Future Development

The City enforces the state building code, which mandates construction techniques that minimize seismic hazards. Future development in the City is subject to these building codes.

Flood

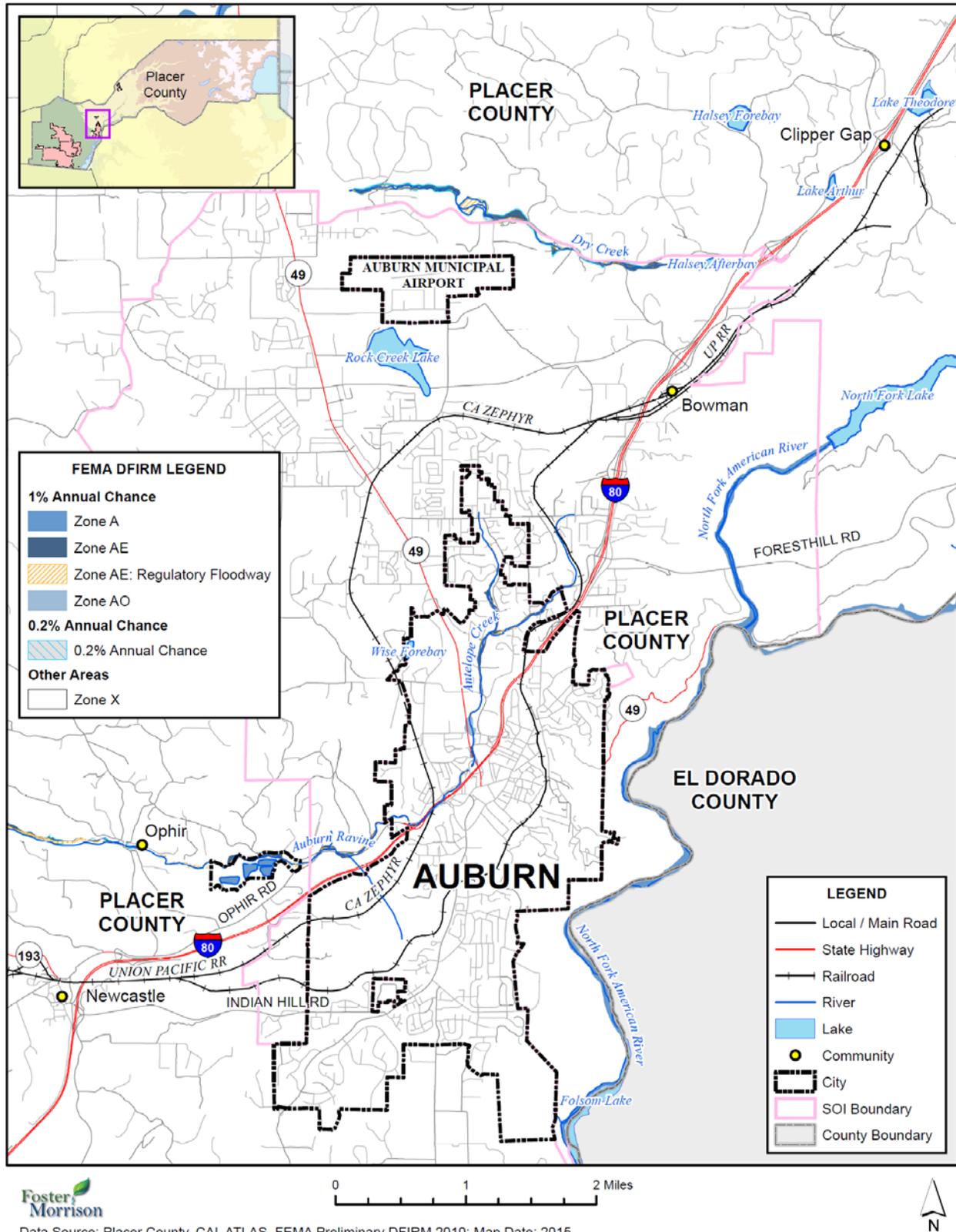
Likelihood of Future Occurrence—Unlikely
Vulnerability—Low

Although ranked as a low significance hazard by the City, due to its significance in the County and in the State of California, flood vulnerability for Auburn is included here. Auburn is traversed by several stream systems and is at risk to both the 100-year flood as well as to localized stormwater flooding. According to the Safety Element of Auburn's General Plan, the average annual rainfall totals 35 inches, and although no major flooding is expected in the planning area, intermittent flooding and sheet wash occur along major drainage channels and adjoining areas on scattered sites. Areas with flood hazards are the natural drainage channels of the Auburn Ravine, Dutch Ravine and Rock Creek, and the tunnel section of the Auburn Ravine under Old Town. Other flood hazard areas include the numerous under-sized bridges and culverts within the Auburn/Bowman Area.

As previously described in Section 4.2.11 of the main plan, the Placer County Planning Area and the City of Auburn have been subject to historical flooding. Within the City of Auburn, much of the flood damage occurs as a result of localized stormwater flooding, with limited flood damage occurring in the 100-year and greater floodplains. Most recently, flooding occurred in December 2005/January 2006 as a result of heavy stormwater runoff caused by severe winter storms. Although actual damages were minimal, the storms impacted transit on public roads and caused some business closures due to limited access. Stormwater infrastructure also sustained limited damage.

A very small portion of the City is located inside of the 100 year flood zone as defined by the Federal Emergency Management Agency (FEMA). This is seen in Figure A-4.

Figure A-4 City of Auburn – FEMA DFIRM Flood Zones



Values at Risk

GIS was used to determine the possible impacts of flooding within the City of Auburn. The methodology described in Section 4.3.7 of the base plan was followed in determining structures and values at risk to the 1% (100-year) and 0.2% (500-year) annual chance flood event. Table A-8 shows the property use, improved parcel count, improved values, estimated contents, total values and estimated loss of parcels that fall in a floodplain in the City.

Table A-8 City of Auburn – Count and Improved Value by Property Use and Detailed Flood Zone

Flood Zone	Property Use	Total Parcel Count	Total Land Value	Improved Parcel Count	Total Improved Value	Total Value*
A	Agricultural	0	\$0	0	\$0	\$0
	Commercial	0	\$0	0	\$0	\$0
	Industrial	3	\$0	0	\$0	\$0
	Institutional	0	\$0	0	\$0	\$0
	Natural/Open	0	\$0	0	\$0	\$0
	Residential	0	\$0	0	\$0	\$0
	Total Zone A		3	\$0	0	\$0
AE	Agricultural	0	\$0	0	\$0	\$0
	Commercial	13	\$394,948	0	\$0	\$394,948
	Industrial	5	\$0	0	\$0	\$0
	Institutional	0	\$0	0	\$0	\$0
	Natural / Open	1	\$0	0	\$0	\$0
	Residential	13	\$734,451	13	\$1,341,290	\$2,075,741
	Total Zone AE		32	\$1,129,399	13	\$1,341,290
AO	Agricultural	0	\$0	0	\$0	\$0
	Commercial	6	\$2,066,120	4	\$3,724,425	\$5,790,545
	Industrial	0	\$0	0	\$0	\$0
	Institutional	0	\$0	0	\$0	\$0
	Natural / Open	1	\$0	0	\$0	\$0
	Residential	1	\$47,270	1	\$241,611	\$288,881
	Total Zone AO		8	\$2,113,390	5	\$3,966,036
Shaded X	Agricultural	0	\$0	0	\$0	\$0
	Commercial	0	\$0	0	\$0	\$0
	Industrial	0	\$0	0	\$0	\$0

Flood Zone	Property Use	Total Parcel Count	Total Land Value	Improved Parcel Count	Total Improved Value	Total Value*
	Institutional	0	\$0	0	\$0	\$0
	Natural / Open	0	\$0	0	\$0	\$0
	Residential	0	\$0	0	\$0	\$0
	Total Shaded X	0	\$0	0	\$0	\$0
X	Agricultural	4	\$60,034	3	\$40,109	\$100,143
	Commercial	1,113	\$82,284,651	356	\$147,202,312	\$229,486,963
	Industrial	66	\$2,861,728	20	\$6,125,207	\$8,986,935
	Institutional	65	\$4,357,808	24	\$38,520,513	\$42,878,321
	Natural/Open	19	\$31,528	0	\$0	\$31,528
	Residential	4,796	\$426,738,673	4,636	\$896,323,858	\$1,323,062,531
	Total Zone X	6,063	\$516,334,422	5,039	\$1,088,211,999	\$1,604,546,421
Grand Totals		6,106	519,577,211	5,057	1,093,519,325	1,613,096,536

Source: FEMA DFIRM, Placer County 2015 Parcel/Assessor's Data

Table A-9 summarizes Table A-8 above and shows City of Auburn loss estimates and shows improved values at risk by FEMA 1% and 0.2% annual chance flood zones. As shown in this table, there is no 500-year flood risk in the City.

Table A-9 City of Auburn – Flood Loss Summary

Jurisdiction	Flood Zone	Improved Parcel Count	Total Improved Value	Estimated Contents Value	Total Improved/Contents Value	Loss Estimate	Loss Ratio
Auburn	1%	18	\$5,307,326	\$4,515,876	\$9,823,202	\$1,964,640	0.12%
	0.2%	0	\$0	\$0	\$0	\$0	0.00%

Source: FEMA DFIRM, Placer County 2015 Parcel/Assessor's Data

According to Table A-8 and Table A-9, the City of Auburn has 18 improved parcels and \$9,823,202 of structure and contents value in the 1% annual chance floodplain. These values can be refined a step further. Applying the 20 percent damage factor as previously described in Section 4.3.7 of the base plan, there is a 1% chance in any given year of a flood event causing roughly \$1,964,640 in damage in the City of Auburn. A loss ratio of 0.12% indicates that losses in Auburn to flood would be relatively minor, as less than an eighth of a percent of the total values in the City would be damaged.

Flooded Acres

Also of interest is the land area affected by the various flood zones. The following is an analysis of flooded acres in the City in comparison to total area within the City limits. The same methodology, as discussed in Section 4.3.7 of the base plan, was used for the City of Auburn as well as for the County as a whole. Table

A-10 represents a detailed and summary analysis of total acres for each FEMA DFIRM flood zone in the City.

Table A-10 City of Auburn – Flooded Acres

Flood Zone	Property Use	Total Flooded Acres	Improved Flooded Acres	% of Improved Flooded Acres
A	Agricultural	0	0	0.0%
	Commercial	0	0	0.0%
	Industrial	51.75	0	0.0%
	Institutional	0	0	0.0%
	Natural/Open	0	0	0.0%
	Residential	0	0	0.0%
AE	Agricultural	0	0	0.0%
	Commercial	9.40	0	0.0%
	Industrial	0.45	0	0.0%
	Institutional	0	0	0.0%
	Natural/Open	0.37	0	0.0%
	Residential	5.02	5.02	100.0%
AO	Agricultural	0	0	0.0%
	Commercial	5.39	4.88	90.5%
	Industrial	0	0	0.0%
	Institutional	0	0	0.0%
	Natural/Open	0.07	0	0.0%
	Residential	0.25	0.25	100.0%
Total 1%		72.71	10.15	14.0%
Shaded X	Agricultural	0	0	0.0%
	Commercial	0	0	0.0%
	Industrial	0	0	0.0%
	Institutional	0	0	0.0%
	Natural/Open	0	0	0.0%
	Residential	0	0	0.0%
Total 0.2%		0	0	0.0%

Source: FEMA DFIRM, Placer County 2015 Parcel/Assessor's Data

Population at Risk

The DFIRM flood zones were overlaid on the parcel layer. Those residential parcel centroids that intersect the severity zones were counted and multiplied by the 2010 Census Bureau average household factors for Auburn. According to this analysis, there is a total population of 32 residents of the City at risk to flooding, all in the 1% annual chance floodplain. This is shown in Table A-11.

Table A-11 City of Auburn – Count of Improved Residential Parcels and Population by Flood Zone

Flood Zone	Improved Residential Parcels	Population*
A	0	0
AE	13	30
AO	1	2
Total 1% Annual Chance	14	32
Shaded X (0.2% Annual Chance)	0	0
D	0	0

Source: FEMA DFIRM, Placer County 2015 Parcel/Assessor’s Data, US Census Bureau

* Average household populations from the 2010 US Census were used: Auburn– 2.27.

Critical Facilities at Risk

There are no critical facilities at risk in the City of Auburn in the flood zones.

Insurance Coverage, Claims Paid, and Repetitive Losses

The City of Auburn joined the National Flood Insurance Program (NFIP) on December 23, 1983. The City does not participate in CRS program. NFIP data indicates that as of September 30, 2015, there were 21 flood insurance policies in force in the City with \$5,559,700 of coverage. Of the 21 policies, 18 were residential (single-family homes) and 3 were nonresidential; 9 of the policies were in A zones; the remaining 12 were in B, C, and X zones. The GIS parcel analysis detailed above identified 18 improved parcels in the 100-year flood zone. 9 policies for 18 improved parcels in the 100-year floodplain equates to insurance coverage of 50 percent.

There have been 24 historical claims for flood losses totaling \$607,083; all were located in B, C, or X zones. 23 of these were for pre-FIRM structures; 1 was for a post-FIRM structure. NFIP data further indicates that there are three repetitive loss (RL) buildings, with 2 RL buildings being insured. There have been a total of 12 RL losses, with 10 insured RL losses. 2 of the insured RL buildings has incurred 4 or more losses, making them Severe Repetitive Loss properties. All RL buildings are located outside of the 100- and 500-year floodplain in the B, C, or X zones. The RL properties are located in an older, built-out residential neighborhood with older infrastructure.

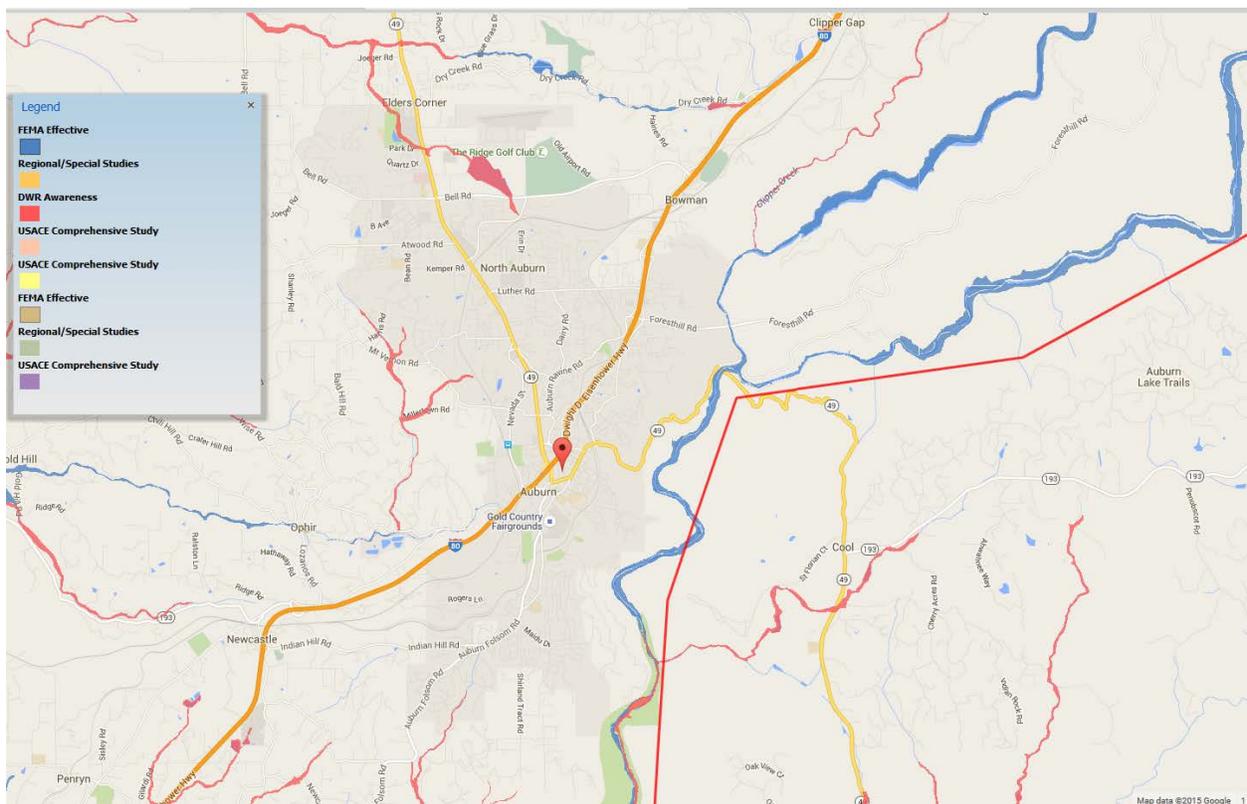
California Department of Water Resources Best Available Maps (BAM)

The FEMA regulatory maps provide just one perspective on flood risks in Placer County. Senate Bill 5 (SB 5), enacted in 2007, authorized the California DWR to develop the Best Available Maps (BAM) displaying 100- and 200-year floodplains for areas located within the Sacramento-San Joaquin (SAC-SJ) Valley watershed. SB 5 requires that these maps contain the best available information on flood hazards and be provided to cities and counties in the SAC-SJ Valley watershed. This effort was completed by DWR in 2008. DWR has expanded the BAM to cover all counties in the State and to include 500-year floodplains.

Different than the FEMA DFIRMs which have been prepared to support the NFIP and reflect only the 100-year event risk, the BAMs are provided for informational purposes and are intended to reflect current 100-, 200-, and 500-year event risks using the best available data. The 100-year floodplain limits on the BAM are a composite of multiple 100-year floodplain mapping sources. It is intended to show all currently identified areas at risk for a 100-year flood event, including FEMA’s 100-year floodplains. The BAM are comprised of different engineering studies performed by FEMA, Corps, and DWR for assessment of potential 100-, 200-, and 500-year floodplain areas. These studies are used for different planning and/or regulatory applications. They are for the same flood frequency, however, they may use varied analytical and quality control criteria depending on the study type requirements.

The value in the BAMs is that they provide a bigger picture view of potential flood risk to the City than that provided in the FEMA DFIRMs. This provides the community and residents with an additional tool for understanding potential flood hazards not currently mapped as a regulated floodplain. Improved awareness of flood risk can reduce exposure to flooding for new structures and promote increased protection for existing development. Informed land use planning will also assist in identifying levee maintenance needs and levels of protection. By including the FEMA 100-year floodplain, it also supports identification of the need and requirement for flood insurance. The BAM map for Auburn is shown in Figure A-5.

Figure A-5 City of Auburn Best Available Map



Source: California DWR

Future Development

The City enforces the floodplain ordinance. If any development is to occur in the floodplain, it would have to conform to the elevation standards of the floodplain ordinance. No development is expected in the floodplain in the future.

Flood: Localized Stormwater Flooding

Likelihood of Future Occurrence–Likely

Vulnerability–High

Flooding and other issues caused by severe weather events, primarily heavy rains and thunderstorms, can often pose a risk to the community. Primary concerns include impacts to infrastructure that provides a means of ingress and egress throughout the community. Table A-12 identifies known and past occurrences of such areas and the associated problems encountered. This list is an initial inventory of key problem areas and is not intended to be a complete inventory of all problems and locations associated with severe weather events and localized flooding in the City of Auburn.

Table A-12 City of Auburn’s Road List of Localized Flooding Problem Areas

Road Name	Flooding	Pavement Deterioration	Washout	High Water	Landslide/ Mudslide	Debris	Downed Trees
Auburn Ravine Rd.	X	X	X	X		X	X
Dairy Rd.	X	X	X	X	X	X	X
Auburn Folsom	X	X	X	X	X	X	X
Old Town	X			X			
Pine Street	X			X		X	
Foresthill Ave	X	X		X		X	
Brook-Shields	X	X		X		X	
Oakwood Dr.	X			X		X	
Nevada-Andrews St.	X			X		X	
Placer St.	X		X	X		X	X
E. Lincoln Way-Alta Vista School Area	X			X		X	
Upper Sacramento St.	X			X		X	
Sutton Place	X			X		X	
Agard Street	X			X		X	
Gold Street	X			X		X	

Source: City of Auburn

Future Development

Future development in the City will add more impervious surfaces and need to drain those waters. The City will need to be proactive to ensure that increased development has proper siting and drainage for

stormwaters. The risk of localized flooding to future development can also be minimized by accurate recordkeeping of repetitive localized storm activity. Mitigating the root causes of the localized stormwater flooding will reduce future risks of losses.

Severe Weather: Extreme Heat

Likelihood of Future Occurrence–Likely

Vulnerability–High

Extreme heat does occur on occasion resulting in the facilitation of “cooling centers” as set forth in the Placer County Heat Emergency Plan. The fairgrounds and Auburn-Placer Library located within the City are identified “cooling centers”. From late spring through fall, it is not unusual for temperatures to exceed 90°F and higher. The following highlights were taken from the Auburn Weather Station for the period of record from 1905 to 2014:

Record daily extremes include:

- May – 102°F (1910)
- June – 110°F (1925)
- July – 113°F (1972)
- August – 111°F (1978)
- September – 109°F (1950)
- October – 104°F (1928)

Average number of days in a month exceeding 90°F:

- April - .1 days
- May – 2.9 days
- June – 10.7 days
- July – 22.5 days
- August – 20.8 days
- September – 11.2 days
- October – 2.1 days

This equates to an average of 70.3 days annually in excess of 90°F.

Future Development

Vulnerability to extreme heat will increase as the average age of the population in each City shifts. Greater numbers of future senior citizens will result from the large number of baby boomers in the planning area. The elderly are more at risk to the effects of extreme heat, especially those without proper air conditioning. However, many of the residents of the City are accustomed to living with extreme heat and take precautions to guard against the threat of extreme heat.

Severe Weather: Freeze and Snow

Likelihood of Future Occurrence–Likely

Vulnerability–High

In the past the City of Auburn has experienced severe cold/freeze temperatures over several consecutive days. Impact to such cold temperatures has resulted in damage to such infrastructure as; domestic water pipes, irrigation systems, unprotected fire protection systems (fire sprinklers) and surface icing on streets and walkways. From late fall through spring it is not unusual for temperatures go below 32°F. The following highlights were taken from the Auburn Weather Station for the period of record from 1905 to 2014.

Record daily extremes include:

- October – 26°F (1922)
- November – 20°F (1931)
- December– 16°F (1972)
- January – 17°F (1930)
- February – 21°F (1962)
- March – 20°F (1938)
- April – 25°F (1929)
- May - 25°F (1933)
- June - 30°F (1905)

Average number of days in a month falling below 32°F:

- October – .1 days
- November – 1.2 days
- December – 7.5 days
- January – 9.1 days
- February – 3.7 days
- March – 1.8 days
- April - .5 days

This equates to an average of 24 days annually below 32°F.

Future Development

Like extreme heat, vulnerability to freeze will increase as the average age of the population in the City shifts. Greater numbers of future senior citizens will result from the large number of baby boomers in the City. The elderly are more at risk to the effects of freeze. However, many of the residents of the City are accustomed to living with freeze and take precautions to guard against the threat of freeze and severe cold.

Severe Weather: Heavy Rain/Thunderstorm/Hail/Lightning

Likelihood of Future Occurrence–Likely

Vulnerability–High

According to historical hazard data, severe weather is an annual occurrence in the City of Auburn. Damage and disaster declarations related to severe weather have occurred and will continue to occur in the future. Heavy rain and thunderstorms are the most frequent type of severe weather occurrence in the area. Wind and lightning often accompany these storms and have caused damage in the past. Problems associated with the primary effects of severe weather include flooding, pavement deterioration, washouts, high water

crossings, landslide/mudslides, debris flows, and downed trees. Table A.11 presented above in the discussion of the flood hazard details those areas within the City that are most often affected during these heavy storm events.

Future Development

The City enforces the state building code and other ordinances, which regulate construction techniques that minimize damage from heavy storms and rain. Future development in the City is subject to these building codes. New critical facilities such as communications towers should be built to withstand hail damage, lightning, and heavy rains.

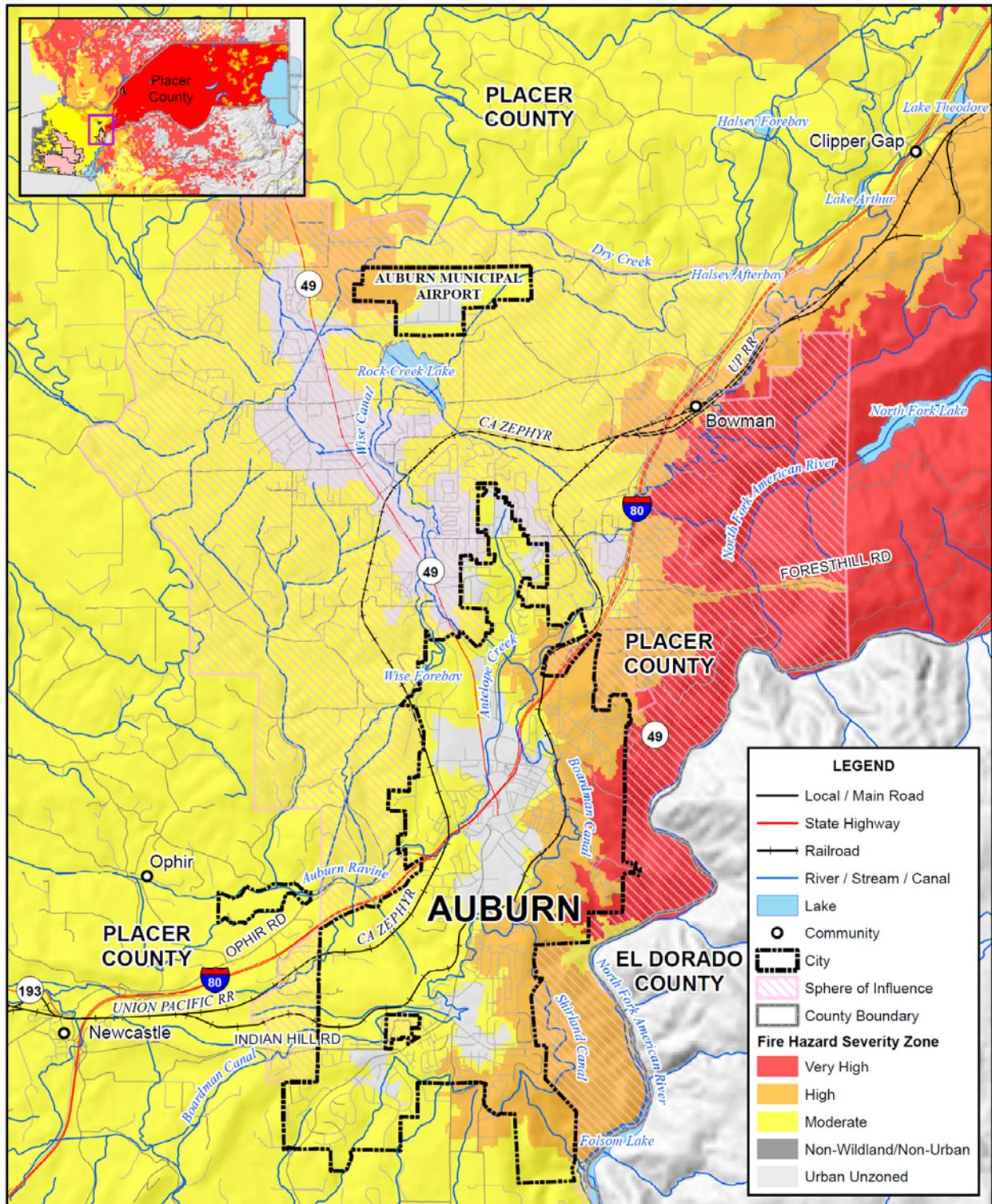
Wildfire

Likelihood of Future Occurrence–Likely
Vulnerability–High

Three types of fires are of concern to the City of Auburn: wildland, wildland urban interface, and, to a lesser extent, structural fires. According to the Safety Element of Auburn’s General Plan, wildland and urban interface fires have occurred close to or encroached into the City, especially in the heavily fueled areas to the east and south. Urban structural fires have been due largely to human accidents, with are the older buildings in the City business districts the most vulnerable.

Following the methodology described in Section 4.3.2 Vulnerability of Placer County to specific hazards, a wildfire map for the City of Auburn was created (see Figure A-6). Wildfire threat within the city ranges from moderate to very high. The highest threat occurs along the eastern edge of the city.

Figure A-6 City of Auburn's Fire Severity Zones



Data Source: Placer County, CAL FIRE SRA (14_2) 11/2007, LRA 12/2008, FRA/LRA 9/2007 DRAFT, CAL ATLAS; Map Date: 2015.



Values at Risk

Analysis results for Auburn are shown in Table A-13, which summarizes total parcel counts, improved parcel counts and their structure values by occupancy type as well as the percentage of parcels affected by fire.

Table A-13 City of Auburn – Count and Value of Parcels by Property Use and Fire Severity Zone

Fire Severity Zone	Property Use	Total Parcel Count	Total Land Value	Improved Parcel Count	Improved Value	Total Value*	% of Affected Parcels to Total
Very High	Agricultural	0	\$0	0	\$0	\$0	0.0%
	Commercial	165	\$3,260,288	4	\$122,584	\$3,382,872	1.1%
	Industrial	10	\$761,753	7	\$1,085,318	\$1,847,071	35.0%
	Institutional	1	\$81,660	1	\$693,426	\$775,086	4.2%
	Natural/Open Space	8	\$0	0	\$0	\$0	0.0%
	Residential	537	\$41,172,581	530	\$86,277,012	\$127,449,593	11.4%
	Total	721	\$45,276,282	542	\$88,178,340	\$133,454,622	10.7%
High	Agricultural	0	\$0	0	\$0	\$0	0.0%
	Commercial	158	\$5,665,030	16	\$3,893,512	\$9,558,542	4.4%
	Industrial	12	\$394,070	3	\$633,685	\$1,027,755	15.0%
	Institutional	14	\$245,764	3	\$2,562,827	\$2,808,591	12.5%
	Natural/Open Space	3	\$0	0	\$0	\$0	0.0%
	Residential	1,323	\$102,498,748	1,284	\$211,421,718	\$313,920,466	27.6%
	Total	1,510	\$108,803,612	1,306	\$218,511,742	\$327,315,354	25.8%
Moderate	Agricultural	3	\$50,997	2	\$23,156	\$74,153	66.7%
	Commercial	424	\$32,667,992	115	\$56,785,973	\$89,453,965	31.9%
	Industrial	37	\$830,736	5	\$1,079,346	\$1,910,082	25.0%
	Institutional	16	\$1,550,187	7	\$16,080,356	\$17,630,543	29.2%
	Natural/Open Space	7	\$31,528	0	\$0	\$31,528	0.0%
	Residential	2,236	\$216,926,532	2,130	\$453,876,256	\$670,802,788	45.8%
	Total	2,723	\$252,057,972	2,259	\$527,845,087	\$779,903,059	44.7%
Urban Unzoned	Agricultural	1	\$9,037	1	\$16,953	\$25,990	33.3%
	Commercial	385	\$43,152,409	225	\$90,124,668	\$133,277,077	62.5%

Fire Severity Zone	Property Use	Total Parcel Count	Total Land Value	Improved Parcel Count	Improved Value	Total Value*	% of Affected Parcels to Total
	Industrial	15	\$875,169	5	\$3,326,858	\$4,202,027	25.0%
	Institutional	34	\$2,480,197	13	\$19,183,904	\$21,664,101	54.2%
	Natural/Open Space	3	\$0	0	\$0	\$0	0.0%
	Residential	714	\$66,922,533	706	\$146,331,773	\$213,254,306	15.2%
	Total	1,152	\$113,439,345	950	\$258,984,156	\$372,423,501	18.8%
Non-Wildland/Non-Urban	Agricultural	0	\$0	0	\$0	\$0	0.0%
	Commercial	0	\$0	0	\$0	\$0	0.0%
	Industrial	0	\$0	0	\$0	\$0	0.0%
	Institutional	0	\$0	0	\$0	\$0	0.0%
	Natural/Open Space	0	\$0	0	\$0	\$0	0.0%
	Residential	0	\$0	0	\$0	\$0	0.0%
	Total	0	\$0	0	\$0	\$0	0.0%
	Grand Total	6,106	\$519,577,211	5,057	\$1,093,519,325	\$1,613,096,536	100.0%

Source: Placer County 2015 Parcel/Assessor's Data, CAL FIRE

*Land and structure values

Population at Risk

The Fire Severity Zone dataset was overlaid on the parcel layer. Those residential parcel centroids that intersect the severity zones were counted and multiplied by the 2010 Census Bureau average household factors for each jurisdiction and unincorporated area. Results were tabulated by jurisdiction. According to this analysis, there is a total population of 8,953 residents of Auburn at risk to moderate or higher wildfire risk. This is shown in Table A-14.

Table A-14 City of Auburn – Count of Improved Residential Parcels and Population by Fire Severity Zone

Fire Severity Zone	Improved Residential Parcels	Population*
Very High	530	1,203
High	1,284	2,915
Moderate	2,130	4,835
Urban Unzoned	706	1,603
Non-Wildland/Urban	0	0
None	0	0
Total	4,650	10,556

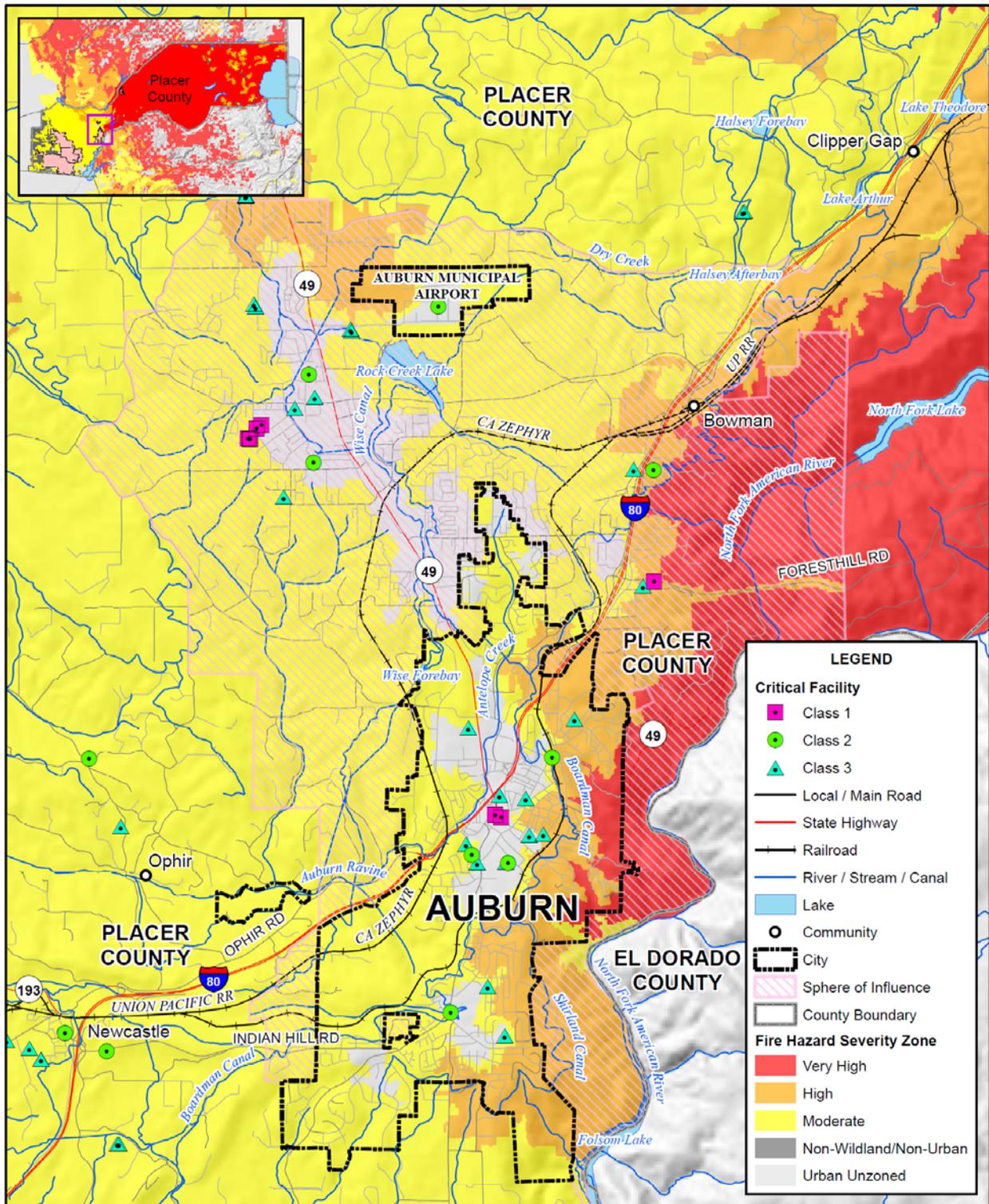
Source: Placer County 2015 Parcel/Assessor's Data, CAL FIRE

* Average household populations for Auburn (2.27) from the 2010 US Census were used

Critical Facilities at Risk

Wildfire analysis was performed on the critical facility inventory in Placer County and all jurisdictions. GIS was used to determine whether the facility locations intersect a fire severity zone provided by CAL FIRE, and if so, which zone it intersects. There are seven facilities in the moderate or higher fire severity zone in the City. These are shown in Figure A-7 and detailed in Table A-15. Details of critical facility definition, type, name and address and jurisdiction by fire severity zone are listed in Appendix F.

Figure A-7 City of Auburn – Critical Facilities in the Fire Severity Zone



0 1 2 Miles



Data Source: Placer County, CAL FIRE SRA (14_2) 11/2007, LRA 12/2008, FRA/LRA 9/2007 DRAFT, CAL ATLAS; Map Date: 2015.



Table A-15 City of Auburn – Critical Facilities in the Fire Severity Zone

Fire Hazard Severity Zone	Critical Facility Class	Facility Type	Facility Count
Very High	Class 1		-
	Class 2		-
	Class 3		-
		Total Very High	0
High	Class 1		-
	Class 2		-
	Class 3	School	2
		Total High	2
Moderate	Class 1		-
	Class 2	Fire Station	2
	Class 3	Hall	3
		Total Moderate	5
Non-Wildland/Non-Urban	Class 1		-
	Class 2		-
	Class 3		-
		Total Non-Wildland/Non-Urban	0
Urban Unzoned	Class 1	Dispatch Center	1
		Emergency Operation Center	1
	Class 2	Airport	1
		Fire Station	1
		National/Coast Guard	1
		Police Station	1
	Class 3	Fairground	1
		Hall	2
		School	3
		Total Urban Unzoned	12
Total			19

Source: CAL FIRE, Placer County GIS

Future Development

Development may occur in the moderate or higher wildfire severity areas; however, City ordinances for building in these areas are enforced.

A.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.

A.6.1. Regulatory Mitigation Capabilities

Table A-16 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 City of Auburn.

Table A-16 City of Auburn'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	
Capital Improvements Plan	Y	
Economic Development Plan	Y	
Local Emergency Operations Plan	Y	
Continuity of Operations Plan		
Transportation Plan		
Stormwater Management Plan/Program	Y	
Engineering Studies for Streams		
Community Wildfire Protection Plan		
Other special plans (e.g., brownfields redevelopment, disaster recovery, coastal zone management, climate change adaptation)	Y	Included in EOP
Building Code, Permitting, and Inspections	Y/N	Are codes adequately enforced?
Building Code	Y	Version/Year: 2013 CBC
Building Code Effectiveness Grading Schedule (BCEGS) Score	N	Score:
Fire department ISO rating:	Y	Rating: 4
Site plan review requirements	Y	Performed by each City department

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	
Subdivision ordinance		Y	
Floodplain ordinance		Y	
Natural hazard specific ordinance (stormwater, steep slope, wildfire)		Y	Fire Safe Standards in the WUI (Bates Bill, AB 337). Includes Class A Roofing Standards
Flood insurance rate maps		Y	
Elevation Certificates		Y	Integrated with GIS
Acquisition of land for open space and public recreation uses			
Erosion or sediment control program		Y	
Other			
How can these capabilities be expanded and improved to reduce risk?			

Source: City of Auburn

The City of Auburn General Plan Program, 1993

The City of Auburn General Plan Program serves as the blueprint for future growth and development and provides comprehensive planning for the future. It encompasses what the City is now, and what it intends to be, and provides the overall framework of how to achieve this future condition (see the discussion in Section 4.3.1 Growth and Development Trends).

The General Plan includes a Safety Element that focuses on safety issues to be considered in planning for the present and future development of the Auburn Planning Area. Identified hazards include wildfire, geologic/seismic, flooding, and other natural and man-made hazards. Mitigation-related goals, are presented below.

Safety Element Goals	
Goal 1	Protect the citizens and visitors of the Auburn area from loss of life while protecting property and watershed resources from unwanted fires through preplanning, education, fire defense improvements, and fire suppression.
Goal 2	Protect the lives and property of the citizens of the Auburn area from unacceptable risk resulting from flood hazards.
Goal 3	Minimize hazards to public health, safety, and welfare resulting from natural and man-made hazards.
Goal 4	Protect all residents from hazardous materials and the hazards associated with transport of such materials.
Goal 5	Maintain and enhance City emergency services.

City of Auburn Emergency Operations Plan

The City of Auburn Emergency Operations Plan (EOP) addresses the planned response for the City of Auburn to emergencies associated with disasters, technological incidents, or other dangerous conditions created by either man or nature. It provides an overview of operational concepts, identifies components of the City emergency management organization, and describes the overall responsibilities of local, state, and federal entities. The Emergency Operations Plan includes such plans as: Terrorism Contingency Plan, Airport Response Plan, Hazardous Materials Response Plan, Wildfire Response Plan, Community Wildfire Protection Plan, Greater Auburn Area Fire Safe Council Strategic Fire Safe Plan, I-80 Transportation Infrastructure Contingency Plan, Heat Emergency Plan, Wastewater Treatment Plant Emergency Response Plan, and Stormwater Pollution Prevention Plan (3 separate plans).

A.6.2. Administrative/Technical Mitigation Capabilities

Table A-17 identifies the City department(s) responsible for activities related to mitigation and loss prevention in Auburn.

Table A-17 City of Auburn’s Administrative and Technical Mitigation Capabilities

Administration	Y/N	Describe capability Is coordination effective?
Planning Commission	Y	
Mitigation Planning Committee	N	
Maintenance programs to reduce risk (e.g., tree trimming, clearing drainage systems)		
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	Y FT	
Floodplain Administrator	Y FT	
Emergency Manager	Y FT	
Community Planner	Y FT	
Civil Engineer	Y FT	
GIS Coordinator		
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	Police Dispatch and Administrative Services, ESC
Hazard data and information		
Grant writing	Y	
Hazus analysis	N	
Other		
How can these capabilities be expanded and improved to reduce risk?		

Source: City of Auburn

A.6.3. Fiscal Mitigation Capabilities

Table A-18 identifies financial tools or resources that the City could potentially use to help fund mitigation activities.

Table A-18 City of Auburn’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	
Authority to levy taxes for specific purposes	Y	
Fees for water, sewer, gas, or electric services	Y	
Impact fees for new development	Y	
Storm water utility fee		
Incur debt through general obligation bonds and/or special tax bonds	Y	
Incur debt through private activities	Y	
Community Development Block Grant	Y	
Other federal funding programs		
State funding programs		
Other		
How can these capabilities be expanded and improved to reduce risk?		

Source: City of Auburn

A.6.4. Mitigation Education, Outreach, and Partnerships

Table A-19 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 A-19 City of Auburn’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.	Y	Numerous service clubs, Police volunteers, fire department volunteers, neighborhood watch
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Y	
Natural disaster or safety related school programs	Y	
StormReady certification	N	
Firewise Communities certification	Y	
Public-private partnership initiatives addressing disaster-related issues	N	
Other		
How can these capabilities be expanded and improved to reduce risk?		

The City of Auburn has Public Awareness and information programs continually throughout the year specific to emergency preparedness that include: “Open Houses”, media publications, community events; “Town Hall Meetings,” Fairs, “Fire Prevention Week,” and “Family Night Out.”

A.6.5. Other Mitigation Efforts

The City of Auburn has many other ongoing mitigation efforts that include the following:

Code Adoption

- Adopted the 2013 California Building Code, Mechanical Code, Electrical Code, Plumbing Code, 2013 International Existing Building Code, and 2012 International Property Maintenance Code
- Adopted the 2013 California Fire Code

Municipal Code

- Amended to include Code adoption(s) of which included:

- ✓ Class A Roofing Standards
- ✓ Fire Hazard Severity Zones
- ✓ Fire Safe Standards
- ✓ Fire Sprinklers
- The City of Auburn has instituted new fire safe and building requirements in the City. Materials such as checklists, FAQ's, and Conditions and Requirements for Development, are made available to the public through website access and hand-outs at City facilities.
- The "Shaded Fuel Break" fuel modification project is implemented and continually evaluated as described in the 2015 Shaded Fuel Break Project, American River Canyon Implementation Program.
- "Fire Plans for Development" are required for all new development within the City of Auburn. Such fire plans address the mitigation measures implemented to reduce potential damage and threat of wildfire. In addition, the fire plan describes the long term application and implementation of such measures that include responsibilities, funding, and evaluation.
- Annually, physical inspections are made by fire department personnel for defensible space and fuel modification on residences throughout the City of Auburn. Specific areas are concentrated on each year.
- Development and implementation of the Stormwater Treatment Plan continues.
- The Greater Auburn Area Fire Safe Council was enhanced/expanded to include surrounding fire districts and areas of wildfire concern.
- The Greater Auburn Area Fire Safe Council was instrumental in developing the Greater Auburn Area Fire Safe Plan.
- The Greater Auburn Area Fire Safe Council participated in the development of the Community Wildfire Protection Plan.
- The City of Auburn is signatory and participates in the Western Placer County Fire Chief's Automatic Response Agreement and Operations Plan for Placer County.
- Several existing "open space" areas within the City of Auburn have been "fire planned" that includes fuel modification projects to reduce the exposure of wildfire.
- Prior to the storm season, physical inspections of waterways and the storm drain system are completed and then cleaned and cleared as necessary
- Prior to a storm warning, storm drains and waterways are inspected and cleaned as necessary
- Prior to a storm warning, Public Works crews prepare sand bags in preparation for possible flooding activities

A.7 Mitigation Strategy

A.7.1. Mitigation Goals and Objectives

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

A.7.2. NFIP Mitigation Strategy

The City of Auburn joined the National Flood Insurance Program (NFIP) on December 23, 1983. As a participant of the NFIP, the City of Auburn has administered floodplain management regulations that meet the minimum requirements of the NFIP. The management program objective is to protect people and property within the City. The City of Auburn will continue to comply with the requirements of the NFIP in the future.

In addition, the City of Auburn actively participates with the County of Placer to address local NFIP issues through a regional approach. Many of the program activities are the same for the City of Auburn as for Placer County since participation at the County level includes all local jurisdictions. An elected official of the City of Auburn is a designated representative on the Placer County Flood Control District Board.

The City's regulatory activities apply to existing and new development areas of the City; implementing flood protection measures for existing structures and new development, and maintaining drainage systems. The goal of the program is to enhance public safety, and reduce impacts and losses while protecting the environment. The City's Municipal Code has a Flood Damage Prevention Section under the Zoning Ordinance that regulates construction in the floodplain. The City intends to continue to implement the ordinance and participate at the regional level with Placer County implementing appropriate measures to mitigate exposure and damages within designated flood prone areas.

The National Flood Insurance Program's (NFIP) Community Rating System (CRS) is a voluntary incentive program that recognizes and encourages community floodplain management activities that exceed the minimum NFIP requirements. As a result, flood insurance premium rates are discounted to reflect the reduced flood risk resulting from the community actions meeting the three goals of the CRS which are to reduce flood losses, facilitate accurate insurance rating, and promote the awareness of flood insurance. The City of Auburn is not a current participant in the CRS program.

A.7.3. Mitigation Actions

The planning team for the City of Auburn 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. Integrate Local Hazard Mitigation Plan into Safety Element of General Plan

Hazards Addressed: All hazards

Issue/Background: Local jurisdictional reimbursement for mitigation projects and cost recovery after a disaster is guided by Government Code Section 8685.9 (AB 2140). Specifically, this section requires that each jurisdiction adopt a local hazard mitigation plan (LHMP) in accordance with the federal Disaster Mitigation Act of 2000 as part of the Safety Element of its General Plan. Adoption of the LHMP into the Safety Element of the General Plan may be by reference or incorporation.

Other Alternatives: No action

Existing Planning Mechanisms through which Action will be Implemented: Safety Element of General Plan

Responsible Office: City of Auburn Planning Department

Priority (H, M, L): High

Cost Estimate: Jurisdictional board/staff time

Potential Funding: Local budgets

Benefits (avoided Losses): Incorporation of an adopted LHMP into the Safety Element of the General Plan will help jurisdictions maximize the cost recovery potential following a disaster.

Schedule: As soon as possible

Action 1. Lincoln Basin (Downtown) Drainage Infrastructure

Hazards Addressed: Flooding

Issue/Background Statement: The Lincoln Basin drainage infrastructure project began out of evidence that the large metal drainage pipe running through downtown Auburn begun to fail along portions of its length. The Lincoln Basin drainage system collects from two different watershed basins. Currently the watershed collects from the Lincoln Basin which includes Electric Street and Hoffman Avenue and flows into a storm drain pipe. The water then connects to the Brewery Lane Basin drainage system in Old Town Auburn. The drainage infrastructure is estimated to be over 100 years old. The water from Electric Street and Lincoln Way travel in 36" – 48" corrugated metal pipe (CMP) that has deteriorated in places along Lincoln Way for approximately ¾ of a mile. Many buildings were built directly on top of the storm drain infrastructure and the City expects some possible depressions in parking lots and possible building subsidence due to the deterioration of the pipe and the back fill collapsing in.

The City of Auburn has responded to some isolated failures with the most recent occurring January 2007 at the Auburn Journal building along Lincoln Way. The other most significant isolated failure was on East Placer Street in January 1995 when a 42" CMP storm drain collapsed when a garbage truck fell through the pavement.

Other Alternatives: Don't fully implement the replacement of the failing infrastructure and continue only to do spot repairs as needed.

Existing Planning Mechanisms through which Action Will be Implemented: Identified in past budget proposals but not funded. This item has been brought to delegates in Washington D.C. in an attempt to secure funding.

Responsible Office: Department of Public Works and Planning

Priority (H, M, L): High

Cost Estimate: This project is estimated at approximately \$2,000,000 to study the site and replace the necessary infrastructure. There is no funding dedicated for this project, all funding will come from the general fund and generated sources. Grant funding can provide a valuable source of funding for this program.

Benefits (Losses Avoided): Reduction of flood related damage and structural damage to historical building in Auburn. It is estimated that this project could eliminate millions of dollars worth of damage from a collapse of the pipe or a storm system with significant rainfall.

Potential Funding: Will need to seek assistance through either grant or public funding. Current repair(s) funded through General Fund revenues. Transportation Development Act Fund and General Fund Revenues.

Schedule: Identification of project only at this time. Currently awaiting funding source.

Action 2. *Creek and Stream Cleaning and Maintenance Program.*

Hazards Addressed: Flooding

Issue/Background Statement: Within the City of Auburn exist numerous small creeks and seasonal stream areas serving as a means of natural water drainage during periods of precipitation. Some of these creeks and streams are prone to overflow due to increased capacity needed at peak times and therefore pose risk of flooding and damage to property; both private and public. A recommended mitigation measure to potential flooding in these areas is to establish an initial treatment of cleaning the creeks and streams by way of removing overgrown vegetation and debris. In addition, establish an annual maintenance procedure prioritizing the most prone areas where additional work is completed annually to eliminate localized flooding.

Other Alternatives: Rely on existing procedures of clean-up only after such a flooding occasion occurs.

Existing Planning Mechanisms through which Action Will be Implemented: Flood Management and identification as in the Storm Water Plan.

Responsible Office: Department of Public Works and Planning

Priority (H, M, L): High

Cost Estimate: Unable to determine, will depend on analysis of personnel and equipment needed. Initial treatment to be where most cost will occur. Ongoing maintenance can be established through budget funding.

Benefits (Losses Avoided): Mitigation of potential flooding causing damage to persons and property; both private and public.

Potential Funding: Grant funding, budget funding. Transportation Development Act Fund and General Fund Revenues.

Schedule: Stormwater maintenance is performed on critical areas annually.

Action 3. *Implementation of Storm Water Pollution Prevention Plan.*

Hazards Addressed: Flooding and localized stormwater flooding

Issue/Background: The City of Auburn Public Works Department adopted an ordinance imposing limitations and procedures regarding storm water treatment and incidents affecting storm water run-off facilities. This was a mandated program by the Federal EPA. The plan was assembled and approved according to EPA recommendations.

Other Alternatives: Do not impose additional safety measures in such areas. Failure to comply with Federal mandate.

Existing Planning Mechanisms through which Action Will be Implemented:

Responsible Office: Planning and Public Works Department

Priority (H, M, L): High

Cost Estimate: Undergoing analysis of projected costs to implement all phases of the program. It is estimated that approximately \$100,000 each year is required to fully implement the plan for successful results.

Benefits (Losses Avoided): Reduction of natural and environmental hazards to waterways and areas within the City and surrounding regional waterways.

Potential Funding: Grant funding can provide a valuable source of funding for this program and General Fund revenues upon availability.

Schedule: Plan completed, implementation phase in progress.

Action 4. Electric Street Diversion Project

Hazards Addressed: Flooding and localized stormwater flooding

Issue/Background: The City of Auburn Public Works Department is in process of developing and implementing a project to assist with the diversion of storm water run-off to alternate locations. This diversion project consists of infrastructure in place to reduce run-off to the historical section of Auburn causing potential flood related damages.

Other Alternatives: Do not conduct project. Continue damage repair when occurs.

Existing Planning Mechanisms through which Action Will be Implemented:

Responsible Office: Planning and Public Works Department

Priority (H, M, L): High

Cost Estimate: This project is estimated at approximately \$2,000,000

Benefits (Losses Avoided): Reduction of flood related damage to historical buildings in Auburn. It is estimated that this project can eliminate up to \$15,000,000 worth of damage from a storm system with significant rainfall.

Potential Funding: There is no funding dedicated for this project, all funding will come from general funding and generated sources. Grant funding can provide a valuable source of funding for this program.

Schedule: Identification of project only at this time. Awaiting funding source.

Action 5. *Old Town Auburn Storm Drain System*

Hazards Addressed: Flooding and localized stormwater flooding

Issue/Background: The storm drain system under the historic section of Old Town Auburn is comprised of a number of tunnels and channels directing run-off water to a local waterway. Most all this system is directly under historic buildings of the town. Several sections of the system are original and dating back to as many as 100 years. Significant rainfall can cause temporary flooding and cause erosion to this older drainage system. The system itself needs to be evaluated for future repair/replacement, or other in an effort to eliminate potential flooding which can result in the loss of historical buildings.

Other Alternatives: Do not evaluate system.

Existing Planning Mechanisms through which Action Will be Implemented:

Responsible Office: Planning and Public Works Department

Priority (H, M, L): High

Cost Estimate: It is estimated that \$50,000 is required to conduct a full assessment and develop a plan that would identify required mitigation measures. It would be anticipated this assessment and plan development would provide mitigation/preparation in the event of a 100-year flood event.

Benefits (Losses Avoided): Reduction of flood related damage to historical buildings in Auburn. It is estimated that this project can eliminate up to \$500,000 worth of damage from a storm system with significant rainfall.

Potential Funding: Transportation Development Act Funds and General Fund Revenues upon availability.

Schedule: It is undetermined at this time the cost benefit. It would be anticipated that such an assessment would identify such benefit.

Action 6. *American River Canyon Shaded Fuel Break*

Hazard Addressed: Wildfire

Issue/Background Statement: The City of Auburn is identified as a “Community at Risk” in the National Fire Plan. The fuel break is intended to provide a means of community protection from wildfire, enhance

watersheds, support wildlife habitat, preserve natural and cultural resources, and maintain recreational opportunities. Maintenance and growth of the fuel break is necessary for success.

Other Alternatives: No action – which will increase fire danger.

Existing Planning Mechanisms through which Action Will be Implemented: There is a current 2015/2016 Shaded Fuel Break Work Plan that needs to be updated with funding annually. Each agency recognizes the limited resources they have to fulfill agency missions. This plan is intended to capture resources that may be available to allocate specifically towards the American River Canyon Shaded Fuel. In no form does this plan constitute any agency commitment of such resources when resources are not available and or deemed vital to fulfill other agency missions and priorities.

Responsible Office: City of Auburn, California State Parks, US Bureau of Reclamation, Placer Land Trust

Priority (H, M, L): High

Cost Estimate: Approximately \$1,000,000 has been spent on completing this project, and an additional \$50,000-\$100,000 is needed every year to maintain the project.

Benefits (Losses Avoided): Potential non-loss of structures (valued in the millions) and wildland/wildlife/

Potential Funding: Sierra Conservancy Grant

Schedule: Annual and ongoing.

Action 7. Community Education on Wildfire

Hazards Addressed: Reduce damage caused by wildfire by identifying public agency resources allocated to enhancement and maintenance of the American River Canyon Shaded Fuel Break; a natural vegetation fuels reduction project.

Issue/Background: Prevention efforts in the American River Canyon and the City of Auburn are intended to provide a means of protection to the Auburn community from the disaster of wildfire, preserve our natural and cultural resources, enhance our watershed, support wildlife habitat, and maintain recreational opportunities to the pristine American River, Auburn State Recreation Area, and U.S. Bureau of Reclamation lands in and around the City of Auburn.

Other Alternatives: At this time, there are no other alternative resources to complete this project.

Existing Planning Mechanism(s) through which Action Will Be Implemented: The Greater Auburn Area Fire Safe Council (GAAFSC) has developed a program that provides education to the citizens of the community about wildfire devastation and responsibilities of the homeowner in creating a fire safe area around the home. The focus of this issue the GAAFSC is intending to convey is that wildfire and prevention is everyone's responsibility, not just the fire department or governmental agencies.

Responsible Office/Partners: Greater Auburn Area Fire Safe Council

Project Priority: High

Cost Estimate: \$5000.00 per year

Benefits (Losses Avoided): Educating the citizens of the community in the understanding of the importance in reducing potential fire damage due to wildfire and motivating individuals to take action will reduce the possibility of wildfire destruction and lessen the damages of those fires that do occur. A very small investment in education can result in the protection of a large value of resources.

Potential Funding: Grants

Timeline: On going

Action 8. Residential Home Inspections for Compliance of Fire Safe Standards; Defensible Space.

Hazards Addressed: Reduce damage caused by wildfire by inspecting private property and providing the owners with suggestions that will create defensible space.

Issue/Background: The City of Auburn Fire Department personnel routinely inspect residential homes; approximately 40 each year, and perform on-site inspections with the property owner to create defensible space and other precautions to prevent loss due to wildfire. The state of California LE-38 inspection form is used to identify needed actions. The program is based on educating citizens about the need to make the residence fire safe. These inspections occur in the Very High Fire Severity Hazard Zones and Wildland Urban Interface Zones within the City of Auburn.

Other Alternatives: At this time, there are no other safe alternative resources to complete this project.

Existing Planning Mechanism(s) through which Action Will Be Implemented: This project is identified in the Community Wildfire Protection Plan, Local Hazard Mitigation Plan, and recognized by the Greater Auburn Area Fire Safe Council as a priority project.

Responsible Office/Partners: Auburn Fire Department-Auburn Public Safety

Project Priority: High

Cost Estimate: Currently, all costs are incurred in the fire department budget. At an estimated one hour per home inspection, at a burdened rate of \$150 per hour for an engine company to do the inspection, the cost is \$ 150 per home, for a total of \$6000 per year. Grant funding would allow a greater number of homes to be inspected each year.

Benefits (Losses Avoided): This project reduces potential losses from wildfire. Using an average value of a home in the City of Auburn of \$378,100, the value of 40 homes is \$15,124,000. The \$6000 for the inspections represents a fraction of values protected.

Potential Funding: Grants

Timeline: Ongoing

Action 9. Maintenance of the Private Lands Portion of the Shaded Fuel Break Along the Rim of the American River Canyon and the Auburn State Recreation Area (ASRA).

Hazards Addressed: Wildfire

Issue/Background Statement: The completion of the private lands portion (within the City of Auburn) of a multi-jurisdiction shaded fuel break on public/private lands along the interface of the American River Canyon and the City of Auburn, described in its own Recommended Mitigation Action Form, is only useful as long as the vegetation is continually managed.

Other Alternatives: To let the vegetation in the fuel break regrow, this will eliminate the fuel break as a viable project in 5 -10 years.

Existing Planning Mechanisms through which Action Will be Implemented: This project is identified in the CWPP, Local Hazard Mitigation Plan, Cal Fire Nevada-Placer-Yuba Unit Wildfire Protection Plan, and recognized by the Greater Auburn Area Fire Safe Council as a priority project.

Responsible Office: City of Auburn Fire and landowners in the project area.

Priority (H, M, L): High

Cost Estimate: Average costs per acre have varied from \$500 to \$9,000. Overall costs will depend on fuels, topography, maintenance needed. It is estimated that approximately 40-50 parcels of approximately 60 to 70 acres need annual maintenance. This use of the Placer County Chipper Program and can greatly reduce the maintenance costs.

Benefits (Losses Avoided): Without maintenance, the \$1.1 billion in resources protected by the fuel break would again be exposed to a higher risk of wildfire damage and loss.

Potential Funding: Grant funding for ground work, the Placer County Chipper Program, donated labor, homeowner contributions, serve as the basis for this project.

Schedule: Private land maintenance would follow the same schedule as for the Public lands within the project area. Depending on fuels, topography, and vegetation growth, complete maintenance is required every 2 to 3 years to keep the integrity of the project.