Annex A
City of Marysville

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Acronyms

Acronym	Definition
AFB	Air Force Base
ARC	American Red Cross
BVID	Browns Valley Irrigation District
CalTrans	California Department of Transportation
CDF	California Department of Forestry and Fire Protection (CalFire)
CEPA	California Environmental Policy Act
CFR	Code of Federal Regulations
CUPA	Certified Unified Program Agency
DMA	Disaster Mitigation Act
DOHFPD	Dobbins-Oregon House Fire Protection District
DOT	Direct Observed Therapy
DWR	Department of Water Resources
EOC	Emergency Operations Center
FEMA	Federal Emergency Management Agency
GIS	Geographic Information Systems
HAZUS	Hazards U.S.
HMGP	Hazard Mitigation Grant Program
LAFCO	Local Agency Formation Commission
LHMP	Local Hazard Mitigation Plan
MFD	Marysville Fire Department
MJP	Multi-Jurisdictional Plan
MSVL	Marysville
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
OES	Office of Emergency Services
PD	Police Department
PDM	Pre-Disaster Mitigation
PG&E	Pacific Gas and Electric
P.L.	Public Law
Prop 1E	Disaster Preparedness and Flood Prevention Bond Fund
Prop 40	California Clean Water, Clean Air, Safe Neighborhood Parks, and Coastal Protection Act of 2002
Prop 50	The Water Security, Clean Drinking Water, Coastal and Beach Protection Act of 2002
Prop 84	California Clean Water, Parks, and Coastal Protection Act
RD	Reclamation District
SACOG	Sacramento Area Council of Governments
SFHA	Special Flood Hazard Area
SPRR	Southern Pacific Railroad
SRFCP	Sacramento River Flood Control Project
STAPLEE	Social Technical Administrative Political Legal Economic Environmental
TRLIA	Three Rivers Levee Improvement Authority
USACE	United States Army Corps of Engineers
USAF	United States Air Force
USFS	United States Forest Service
WPRR	Willamette and Pacific
YCWA	Yuba County Water Agency

Forward

The City of Marysville Multi-Hazard Mitigation Plan Annex was prepared and funded as a component of the Yuba County Multi-Jurisdictional Multi-Hazard Mitigation Plan (Yuba County Plan) and is supplemental to the Yuba County Plan. The project was funded by the Department of Homeland Security, Federal Emergency Management Agency (FEMA) Pre-Disaster Mitigation Program.

The purpose of the Plan is to identify and prepare for disasters and emergencies, and to prioritize effective mitigation strategies to prevent loss of life and reduce damage to property and the environment. The development of a county-wide plan provided the City of Marysville with an opportunity to collaborate with and support local agencies and special districts for the development of comprehensive hazard mitigation planning for all local entities in the County of Yuba.

In early 2004, the California Governor's Office of Emergency Services (OES) notified all California local governments of the new requirements regarding hazard mitigation project funding and the changes in the federal law regarding hazard mitigation planning. The Disaster Mitigation Act of 2000 (DMA 2000) amended the Robert T. Stafford Disaster Relief and Emergency Services Act (Stafford Act) which is a source of funding for disaster assistance available to local governments. Two provisions of DMA 2000 were to establish a national program for pre-disaster mitigation and to require local governments, including special districts, to have a local hazard mitigation plan to be eligible to receive assistance from the Stafford Act mitigation programs. Rules and regulations codifying this Act establish the minimum hazard mitigation requirements for States, Tribes, and local entities and require that a jurisdiction must have a federally approved Local Hazard Mitigation Plan to apply for and receive mitigation assistance for any federally declared disaster after November 1, 2004.

The Yuba County Plan and the local annexes were developed to meet DMA 2000 requirements and enabled local governmental agencies and special districts in the County to develop hazard mitigation plans to qualify for grant funds available from FEMA. The Yuba County Plan is a multi-jurisdictional plan which was jointly prepared and developed by stakeholders representing 32 federal, state and local governmental agencies or special districts. The County of Yuba serves as the lead agency responsible for the plan development and preparation for the Yuba County Operational Area.

The City of Marysville Hazard Mitigation Plan (City Plan) was developed for the City and is an annex to the Yuba County Multi-Jurisdictional, Multi-Hazard Mitigation Plan. Yuba County Hazard Mitigation staff provided resources and technical services to coordinate the development of the City Plan, providing assistance in research and the writing of the City Plan in cooperation with the City Hazard Mitigation Planning Committee.

The City Plan follows the same organizational structure of the County Plan and contains all required plan elements including a description of the planning process, local capabilities, risk assessment, and mitigation strategies with an implementation plan.

Utilizing the risk assessment developed for the County Plan, the City of Marysville Planning Committee identified the hazards that posed the greatest risk to their community. Only those hazards ranked as a high priority hazard are included in this City Plan. Each of the high priority hazards is summarized by its history of occurrence and the probability and location of future events. Vulnerability and loss estimates address the impact of the high priority hazards on City of Marysville assets. This community-specific risk assessment provides the basis for the mitigation strategies selected by the City of Marysville Planning Committee for inclusion in the City Plan.

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Title 44 Part 201 Mitigation Planning in the CFR defines a "local government" as "any county, municipality, city, town, township, public authority, school district, special district, intrastate district, council of governments (regardless of whether the council of governments is incorporated as a nonprofit corporation under State law), regional or interstate government entity, or agency or instrumentality of a local government; any Indian tribe or authorized tribal organization, or Alaska Native village or organization; and any rural community, unincorporated town or village, or other public entity."

The City of Marysville and Stakeholders participating in this project benefited from the information sharing, collaboration and training provided in this multi-jurisdictional planning process. The planning process supported enhanced emergency management and mitigation projects.

The benefits developing a multi-hazard mitigation plan annex for the City of Marysville included:

- Technical assistance and resources for collaboration among the private and public sector partners at all levels of government participating in hazard mitigation;
- Research regarding the enabling legislation or statute, government code or rule for participating jurisdictions;
- Identification of inventory, city assets and critical infrastructure vulnerable to hazards;
- Hazard identification, vulnerability and risk assessment for comprehensive planning;
- Identification of mitigation measures to address hazards that affect the city and multiple jurisdictions;
- Leveraging individual capabilities, sharing costs and resources through collaboration to prevent the duplication of efforts;
- External discipline and guidance provided through the planning process;
- Prioritizing mitigation actions and projects for comprehensive planning and maintenance.

1 The City of Marysville

The City of Marysville lies in California's Central Valley approximately 40 miles north of the California state capital in Sacramento where State Highways 70 and 20 intersect. Considered the gateway to the historic Mother Lode, it sits at the confluence of the Feather and Yuba Rivers.

Marysville serves as the county seat for Yuba County, which was recognized as the fastest growing county in the State of California in 2006. The City is the hub of business and industry in the County, housing critical infrastructure and essential services such as hospital and medical care, headquarters for the Yuba County local government, courts, school district administration, utilities and CalTrans Region 3. There is a well-established medical community that includes a hospital, medical center and a state-of-the-art cancer facility in the City. The City's residential population was 12,268 at the 2000 Census. The influx of workers from both outside the City and outside the County more than doubles the number people in Marysville's daily population.

The City was established as a critical location on roads, rivers, streams and railroad for those in search of the precious gold buried in the foothills and waterways. As a result of fire and redevelopment, many buildings from Marysville's heyday have been lost over the years. Those that survive are a constant reminder of Marysville's golden history and proof that Marysville is still the "Gateway to the Gold Fields". They attract tourists who want to see examples of the Gold Rush town's architecture and rich cultural heritage.

Figure 1-1 City of Marysville

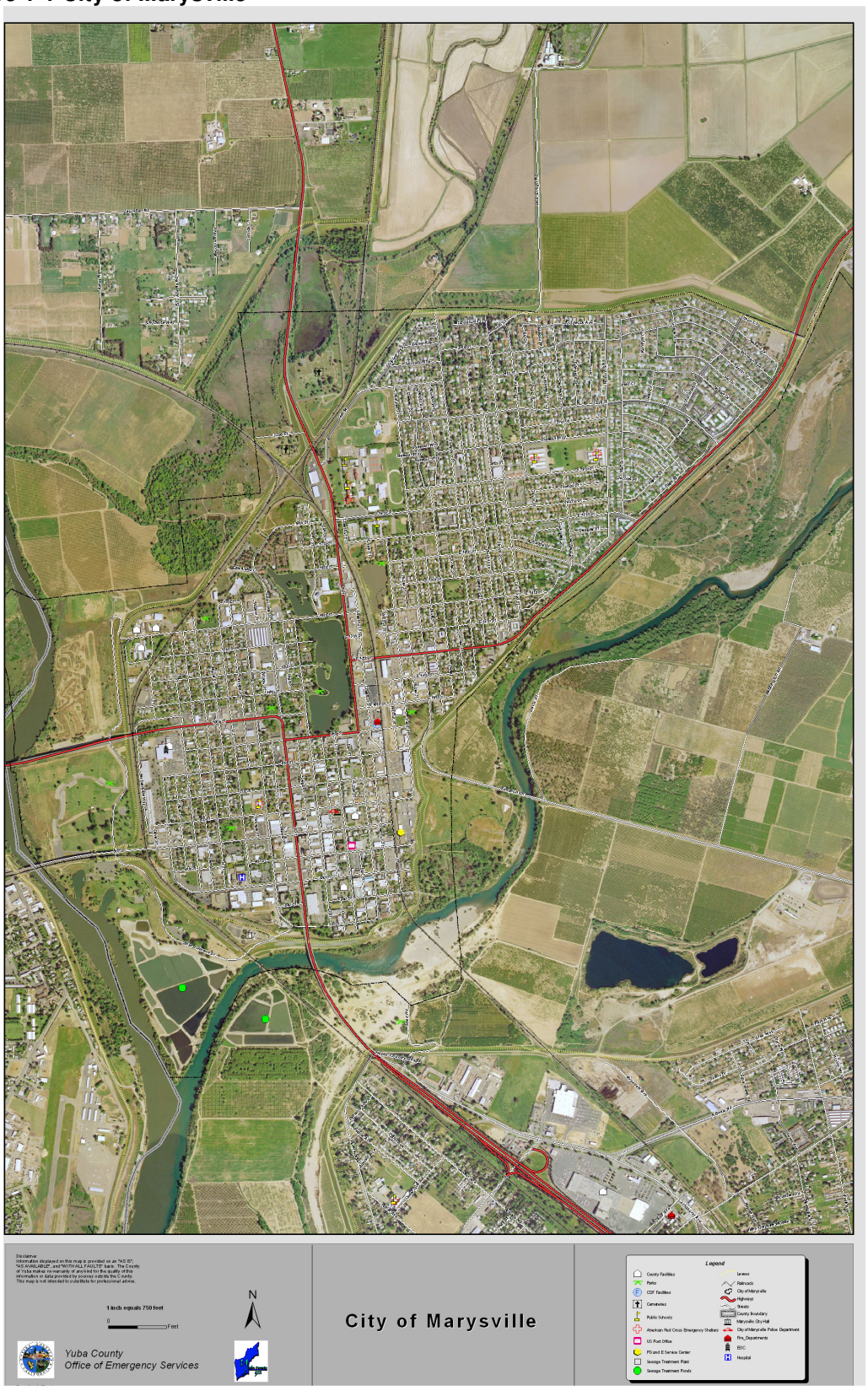
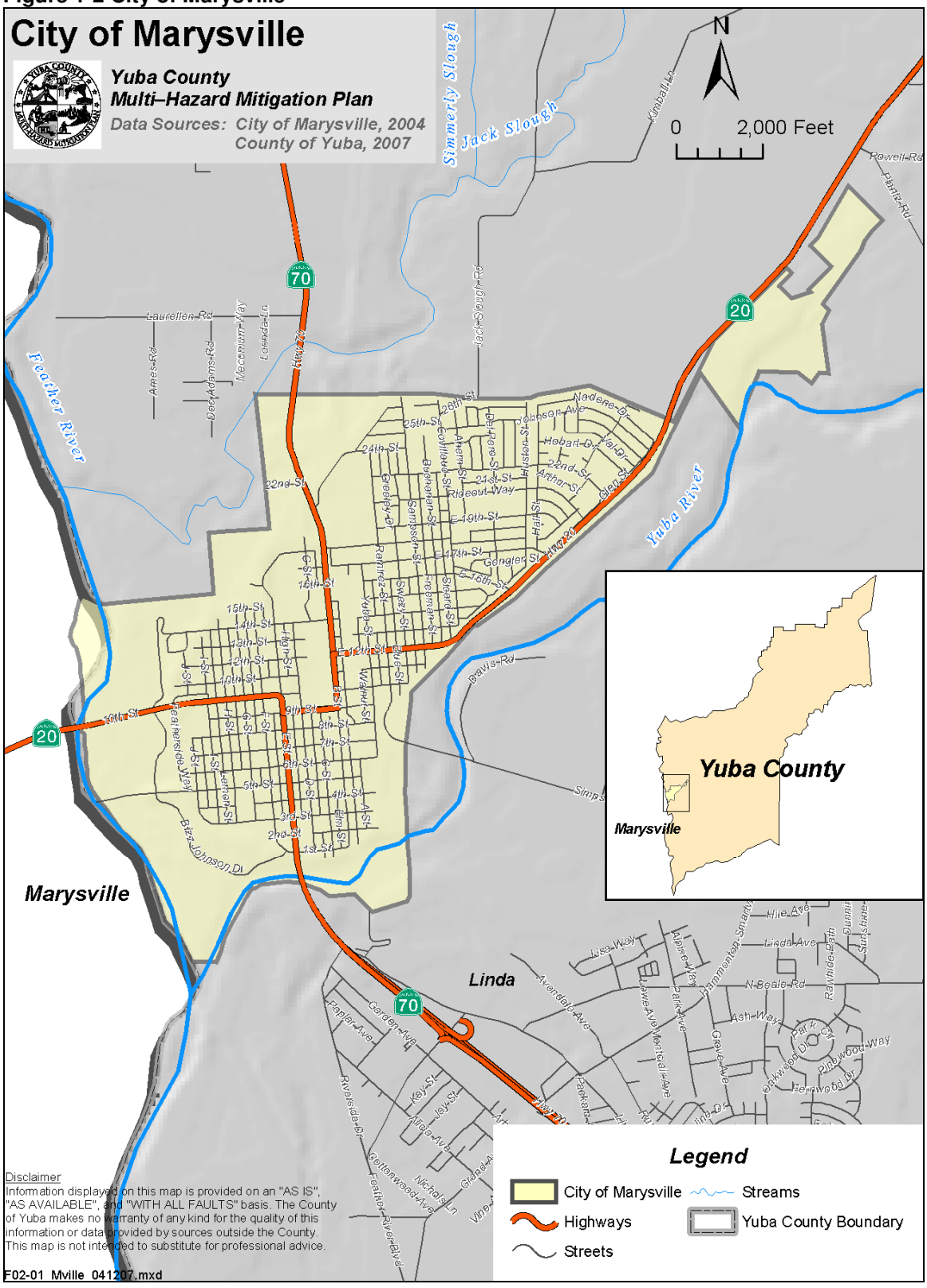


Figure 1-2 City of Marysville



D Street, Marysville

Marysville History

The Marysville area was part of John Sutter's Mexican land grant known as New Helvetia. Theodore Cordua, a Mexican citizen originally from Germany, built a rancho on land leased from Sutter in 1842. He raised livestock and built a home and an adobe trading post that sold goods to trappers and early settlers. Cordua, who named his settlement New Mecklenburg after his native town, secured more land from the Mexican government in 1844.

The location of the ranch was central to the riverboats and wagons heading to the goldfields during the Gold Rush. The ranch became a final port for riverboats from San Francisco and Sacramento bringing supplies and passengers, hence the name "Gateway to the Gold Fields". In 1850 a surveyor was commissioned by the landowners to create a plan for the town. As the plans were drawn, newcomers arrived as did property deeds and land purchases for the vibrant, growing town. The city government was established and the name "Marysville" was chosen for Covillaud's wife, Mary Murphy, a survivor of the ill-fated Donner Party.

The City of Marysville, established in 1850 and incorporated by the State legislature in 1851, is one of California's original charter cities. As permanent buildings replaced the tent city, Marysville became the third largest city in California by 1852. The once quiet township boasted a population of nearly 10,000 by 1853 and schools and churches were founded to support the ever-growing community. The Chinese began to refer to Marysville as the Third City because it was the third city they came to after San Francisco and Sacramento during the Gold rush.

The City of Marysville became a bustling town as businesses were established to supporting the miners and prospectors. Beautiful brick buildings and majestic homes were erected and today are still standing as monuments of a robust time in history. In 1857, over $10 million in gold was shipped from Marysville's banks to the U.S. Mint in San Francisco. But the golden era of the Gold Rush did not leave the City and the lands unscathed. Mining operations on the rivers, tributaries, and gold fields left sediment and debris with only a path to the Yuba, Feather and Bear Rivers. Little attention was paid to the impact downstream of the sediment that was occurring as a result of the mining operations. This activity and subsequent actions may have been one of the first human actions and land use policies to result in a flooding disaster.

Marysville Flood of 1853

Sediment from hydraulic mining on the Yuba River above Marysville raised the elevation of the riverbeds in the Feather and Yuba Rivers, which made Marysville vulnerable to flooding during winter storms and spring run-off. After the Great Flood of 1853 the City and the Marysville Levee Commission constructed a levee system with riverbed sediment that still protects the City today. The rising elevation of the riverbeds made the trips up the Feather River hard to navigate until riverboats and barges were unable to make the trip to the City of Marysville.

1955 Flood Surrounding the City of Marysville

The levee system was constructed to keep the flood water and sediment debris from impacting life in the City. This levee system constructed to provide protection for the residents of Marysville has not failed in over 150 years. The City has kept a constant vigil maintaining the structure that continues to provide protection from the seasonal flood waters that have dealt blows to the residents of the south county with levee failures in 1986 and 1997.

1.1 Purpose of the Plan

The Plan identifies and evaluates specific local hazard mitigation strategies to be considered by the City of Marysville and its planning support for those strategies developed by the Marysville Planning Committee.

The planning effort provided for the development of a comprehensive Multi-Hazard Mitigation Plan which required commitment and collaboration among Federal, State, and local agencies and the community. The partnerships established among stakeholders provided opportunities for the identification of resources, hazards, vulnerability, and potential risks to the City of Marysville. The collaboration provided an opportunity for stakeholders and the community to discuss and prioritize hazard mitigation strategies for the City.

The strategies presented are deemed appropriate and effective by recommendation of the Marysville Planning Committee, the Yuba County Hazard Mitigation Stakeholders, and individual local agencies, and private groups.

The impact on resources and cost of disasters has forced local governmental agencies to address disasters through pre-disaster planning and hazard mitigation projects to improve public safety. The impact of disasters in Yuba County is significant in the history of disasters in California. Recent disasters include the flood disasters due to levee failure in 1986 and 1997 as well as wildland fires in 1997 and 1999. The City of Marysville, although not directly impacted, provided emergency response and assistance to respond to all major disasters in the County.

The devastation resulting from the levee failures and floods of 1986 and 1997 resonated throughout the County and cities. Agencies and areas that did not sustain damage provided emergency support and assistance to the thousands of evacuees and emergency support personnel. The 1997 Flood forced the evacuation of over 30,000 people and was considered one of the largest evacuation efforts in the State of California. This mass evacuation of the valley included residents from the City of Marysville. The impact to the City and residents of Marysville was a reminder of the vulnerability and need for emergency planning and coordination among first responders and local emergency management.

The purpose of the City's hazard mitigation plan is to identify those hazards which affect the City and its constituents, identify the risks these hazards pose, and integrate hazard mitigation strategies into the activities and programs of the City to the extent practical. The Plan will assist the City and Yuba County in minimizing the damaging effects of future disasters and maintaining eligibility for certain hazard mitigation funds.

This Plan is intended to serve other purposes, including the following:

- **Enhance Public Awareness and Understanding** – to help City constituents better understand the natural and human-made hazards that threaten public health, safety, and welfare; economic vitality; and the operational capability of the City.

- **Promote Compliance with State and Federal Program Requirements** – to ensure that the City complies with laws and regulations that encourage or mandate special districts to develop comprehensive mitigation plans.

- **Enhance Local Policies for Hazard Mitigation Capability** – to provide the policy basis for mitigation actions that should be promulgated by the City to create a more disaster-resistant future.

- **Achieve Regulatory Compliance** – to qualify for many federal and state grant programs, the City must have an approved mitigation plan to receive a project grant. The City must have an approved plan by November 1, 2004 to be eligible for HMGP funding for Presidential declared disasters after this date. (Plans approved after November 1, 2004 will still make the City eligible to receive PDM and HMGP project grants).

1.2 Governing Body

The purpose of the City of Marysville is to be known as a community that exemplifies growth, harmony, and a safe, clean, small-town atmosphere with the development of business and industry associated with tourism for the creation of a unique historical environment.

"The city shall have the power to make and endorse all laws and regulations in respect to municipal affairs, subject only to such restrictions and limitations as may be provided in this Charter and in the Constitution of the State of California." (City of Marysville Charter, 2004)

The City of Marysville City Council consists of five members (Table 1-1), a mayor and four council members, duly elected by the qualified electors of the city. The council members are each elected to staggered four-year terms with elections held every two years. To be qualified, a candidate for council member must be an elector of the city at the time of filing their nomination papers. To become an elector of the City of Marysville a person must be:

- A resident of Marysville;
- A citizen of the United States;
- A resident of California;
- At least 18 years of age as of the day of the next election;
- Not in prison or on parole for the conviction of a felony; and
- Not deemed by an appropriate court to be mentally incompetent.

Table 1–1 Marysville City Council

Office Held	Official
Mayor	Bill Harris
Vice-Mayor	Christina Billeci
Councilmember	Benjamin Wirtschafter
Councilmember	Jim Kitchen
Councilmember	Michael Selvidge

Once elected the council members must vote when they are present unless they are legally disqualified. The mayor is the presiding officer of the Council, possesses one vote and possesses no veto power. The vice mayor is appointed by the mayor from the City Council for a term of one year. The vice mayor is appointed by the mayor from the City Council for a term of one year. The Council appoints all subordinate officers of the City by majority vote, to serve at their pleasure. "Neither the mayor nor any other member of the council nor any official or employee of the city shall be interested in any contract to which the city is a party as prescribed by any law." (City of Marysville Charter, 2004)

Day-to-day activities in the City of Marysville are managed by City Manager.

1.3 Demographics

The City of Marysville has a population of 12,268 people, according to the 2000 U.S. Census. Marysville has a population density of 3,352.7 people per square mile. There are 4,999 housing units in the City resulting in a housing density of 1,365.8 housing units per square mile. (U.S. Census 2000) Due to the geographic constraints of the rivers and the levee system surrounding the City, the City of Marysville's population has remained relatively constant while the rest of Yuba County has seen an increase. Marysville's population increased 2.47% from 1990 to 2005, with an annual rate of increase of only 0.18%. (California Department of Finance, 2005)

Table 1–2 Yuba County Population trends

Population Trends			
Area	**Population**		**1993 to 2003 Increase**
	1993	**2003**	
Wheatland	1,800	2,700	900
Marysville	12,400	12,500	100
Unincorporated	47,100	47,700	600
Total County	**61,300**	**62,900**	**1,600**

U.S. Census, 2000 and Calif. Dept. of Finance, 2005

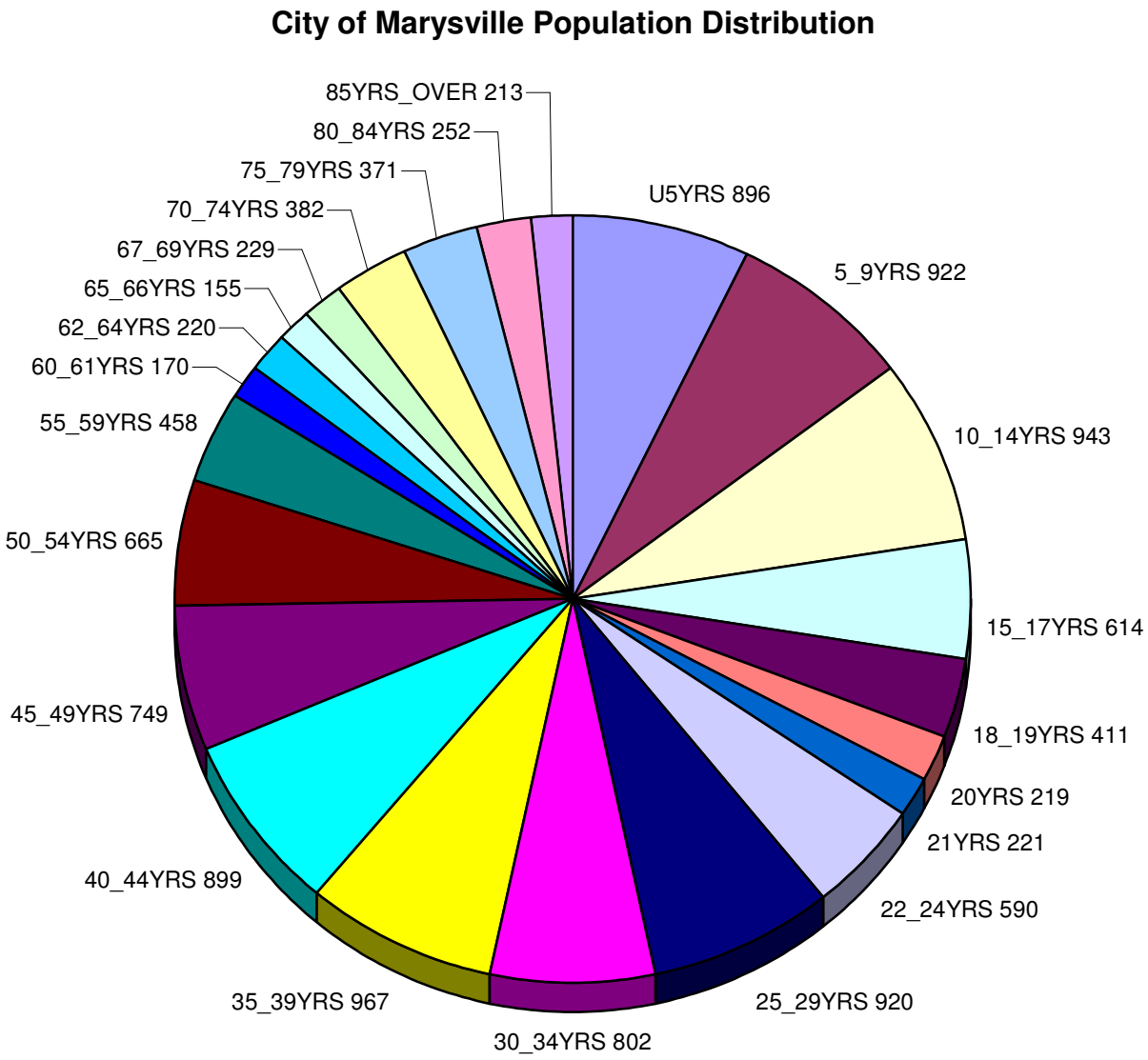
The racial makeup of the city is 70.95% White, 4.80% African American, 2.30% Native American, 5.99% Asian, 0.19% Pacific Islander, 10.10% from other races, and 5.67% from two or more races. 17.54% of the population is Hispanic or Latino of any race.

The City's population (Figure 1-X) is spread out with 27.5% under the age of 18, 11.7% from 18 to 24, 29.2% from 25 to 44, 18.4% from 45 to 64, and 13.1% who are 65 years or older. The median age is 32 years.

The median income for a household in the City is $28,494, and the median income for a family is $33,474. Males have a median income of $27,630 versus $20,240 for females. The per capita income is $15,315. 18.9% of the population and 15.2% of families are below the poverty line. Out of the total population, 26.9% of those under the age of 18 and 7.4% of those 65 and older are living below the poverty line.

Marysville has the rich heritage and tradition of the United States Military as Beale Air Force Base calls Marysville home, although the base is located to the east of the city boundaries. Many of the streets in Marysville were dedicated to the men and women from Beale Air Force Base (AFB) who made significant contributions to their country, the City and the community.

Figure 1-3 City of Marysville Population Distribution



1.4 Geography

The City of Marysville, the county seat of Yuba County, is located in California's Central Valley, approximately 40 miles north of the state capital in Sacramento. The City has a total area of 3.6 square miles, 3.5 of which is land and 0.1 of which is water. It is located at 39° 8' 58" N, 121°35' 8" W. The City of Yuba City, in Sutter County, is Marysville's neighbor to the west, across the Feather River. Marysville is only two hours away from San Francisco to the west and Lake Tahoe to the east.

The City of Marysville is located at the confluence of the Yuba and Feather Rivers. The City, an urban area of approximately 1,500 acres, is ringed by 7.5 miles of levee along the south bank of the Jack and Simmerly Sloughs, the east bank of the Feather River, and the north bank of the Yuba River.

With an average elevation of 65 feet above sea level, the City is essentially flat, except for natural drainage that has changed with development and the levee construction. The soil is predominantly alluvial. It includes a mix of loam, clay and sand, according to the *Soil Survey of Yuba County, California*, published by the United States Department of Agriculture and the Natural Resources Conservation Service.

A one-time swamp was converted into a scenic lake in the north central part of the town and named Ellis Lake after the financier, W. T. Ellis, a town merchant around 1900. Ellis Lake still serves as a detention pond for drainage water that is pumped into the rivers during sustained periods of precipitation.

1.5 Climate

Marysville has a Mediterranean climate with typically mild winters and warm to hot summers. The usual rainy season stretches from November to May with the bulk of the annual average total rainfall of 22.8 inches in December, January and February. The average maximum January temperature is 54 degrees, while the average high temperature in July is 96.3 degrees. Freezing temperatures and snow are rare, but in December 1873, snow fell to a depth of one foot on the streets of Marysville. (Thompson & West, 1879; transcribed by Hahn & Sedler, 2003)

The climate for Marysville is moderate with no real extremes during the year. Temperatures rarely go below freezing or over 100 degrees.

- Marysville average annual rainfall is 22.33 inches per year
- Marysville average temperature is 62.1 degrees F.
- The average winter temperature is 45.4 degrees F.
- The average spring temperature is 60.2 degrees F.
- The average summer temperature is 78.8 degrees F.
- The average fall temperature is 64.1 degrees F.

1.6 Areas of Historic or Environmental Significance

The City of Marysville was established in 1850 as a critical location on roads, rivers, streams, and railroad for those in search of the precious gold buried in the foothills and waterways. By 1853, it had become a bustling town of nearly 10,000 with businesses established to support the miners and prospectors. As a result of fire and redevelopment, many buildings from Marysville's heyday have been lost over the years. Those that survive are a constant reminder of Marysville's golden history and proof that Marysville is still the "Gateway to the Gold Fields". They attract tourists who want to see examples of the Gold Rush town's architecture and rich cultural heritage.

The architectural design and period influence seen in historic buildings remaining in Marysville reflect the French colonial design, which was introduced to the City in the early 1850's. Many historical buildings and structures were lost to floods, fires, and redevelopment projects. The aging infrastructure of this once booming City has been the focus of improvement projects and community concerns. The historic buildings provide a constant reminder to residents and visitors of Marysville's golden history as the "Gateway to the Gold Fields."

Bok Kai Temple, next to Yuba River Levee

A historic landmark in the City of Marysville, the Bok Kai Temple was constructed in 1869 facing the Yuba River. The one story brick Temple is significant as an example of the important contributions of Chinese immigrants to Marysville and Yuba County. The Bok Kai Temple is constructed of materials that have suffered from aging and minimal maintenance. Many artifacts dating back to the early 1800's are part of the historic significance and the daily use as a Temple since 1880.

The significance of the Bok Kai Temple still resonates in the community with the annual Bok Kai Parade, banquets and festivities surrounding Chinese ceremonies. Restoration of the Temple and artifacts has been a long standing project of the City of Marysville, Friends of the Bok Kai Temple, and the community. Efforts to secure funding for restoration and maintenance of the Temple have been undertaken for this aging historical Chinese temple which is part of Marysville's history.

Marysville Arches:
The original arches were constructed at seven locations in the commercial district of Marysville in 1911 to support the overhead lines used for the electric trolley system. The arches were dismantled between 1924 and 1925 due to problems caused by lack of maintenance.

In 1925, one arch was donated to the Rio Linda Grange. The arch was repaired and placed in Rio Linda where it still stands. The City received a grant from Cal Trans and the California Transportation Commission and is in the process of bringing back the historic arches.

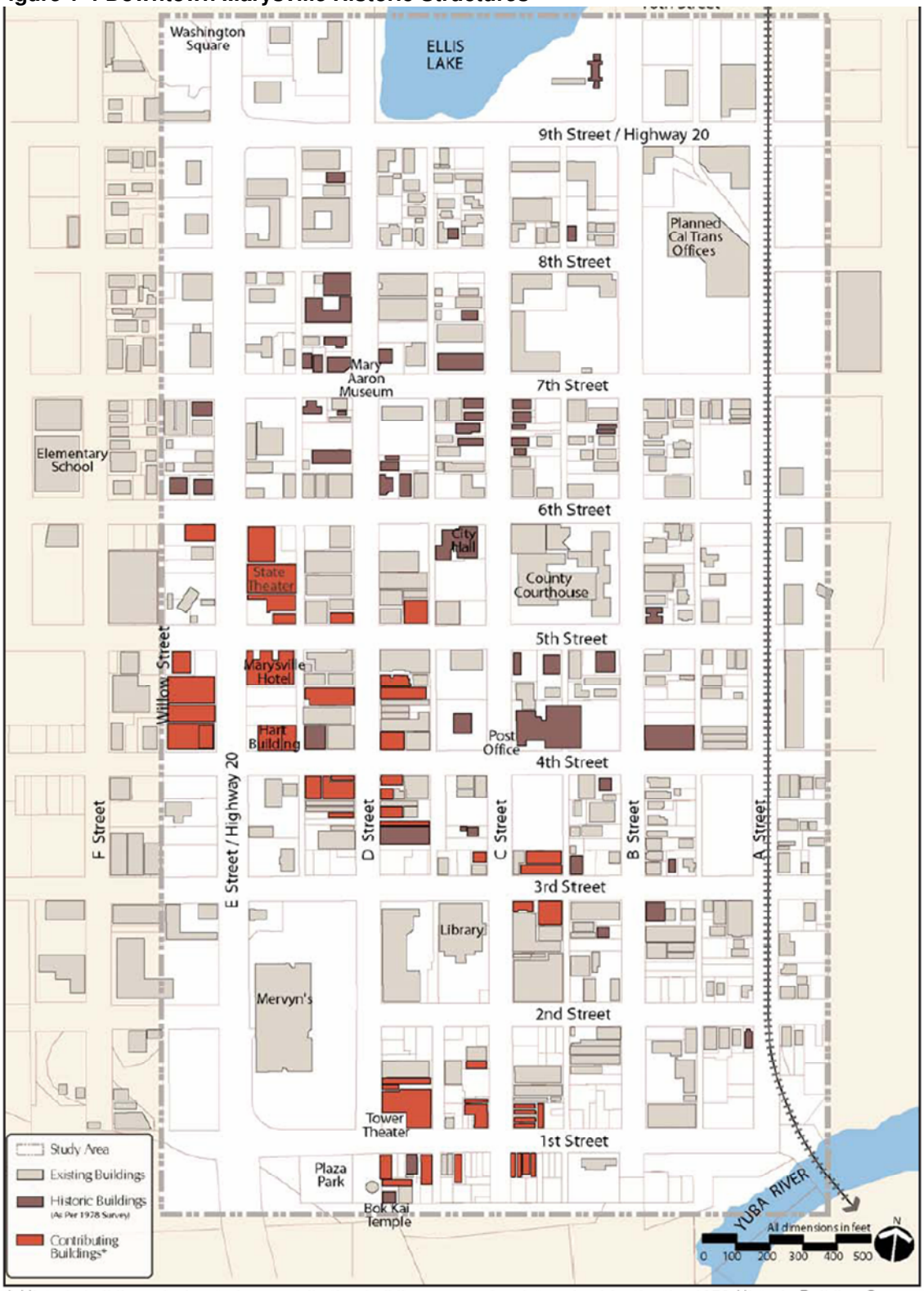
Marysville City Cemetery This gold-rush era cemetery is located on 13.24 acres at the north end of the City of Marysville. Established in 1850, it is the oldest city-owned cemetery west of the Rockies. This burial place of some 10,000 people is a state site of historical interest.

A registered historic site, many of the City's early historic residents are among the approximately 10,000 burials. The earliest burials were recorded in 1849. Among those buried there are Harriett Murphy Pike, who at age 21 was a member of the ill-fated Donner Party; Edward Duplex, the first African-American mayor (Wheatland) of a city on the Pacific Coast; and Charles Covillaud, the founder of Marysville.

The cemetery is surrounded by a wall or levee on three of its sides. After high water and vandalism damaged much of the cemetery, attempts to repair damage and restore the property have been made by citizens. Although there is clear evidence of extensive damage to the cemetery, many monuments and stones still stand. Many of the stones placed flat in the earth have been covered by the silt of numerous floods since the early 1800's. Eventually, those may be uncovered to reveal even more of the burial sites.

With but a handful of exceptions, the last burials here were in the late 1920's. The Marysville Cemetery Commission's role is that of advisor to the City of Marysville in regard to historic preservation and maintenance of this cemetery.

Figure 1-4 Downtown Marysville Historic Structures



* Historic buildings designated as contributing buildings were also determined by the the 1978 Historic Building Survey

Other historic sites include:

Decker–Jewett Bank (added 1999–Building–no. 76000543)

- 212 D St., Marysville
- Historic Significance: Event, Architecture Engineering
- Architectural Style: Classical Revival
- Area of Significance: Architecture, Economics
- Period of Significance: 1850–1874
- Owner: Private
- Historic Function: Commerce/Trade
- Historic Sub–function: Financial Institution
- Current Function: Commerce/Trade
- Current Sub–function: Restaurant

Ellis Building (added 1999–Building–no. 76000544

- Also known as Yamaha Building
- 100 D St., Marysville
- Historic Significance: Event, Architecture/Engineering
- Area of Significance: Architecture/Commerce
- Period of Significance: 1850–1874, 1875–1899
- Owner: Private
- Historic Function: Commerce/Trade
- Historic Sub–function: Business
- Current Function: Commerce/Trade
- Current Sub–function: Business

Forbes House (added 1978–Building–no. 78003508)

- 618 D St., Marysville
- Architectural Style: Italianate
- Owner: Private
- Current Function: Commerce/Trade
- Current Sub-function: Restaurant

Hart Building (added 1982–Building–no. 82002285)

- Also known as Brown Building; Nagler Building
- 423–425 4th St., Marysville
- Historic Significance: Event, Architecture/Engineering
- Architect, builder, or engineer: Dean & Dean
- Area of Significance: Architecture, Commerce
- Period of Significance: 1925–1949
- Owner: Private
- Historic Function: Commerce/Trade
- Historic Sub–function: Business, Professional
- Current Function: Commerce/Trade
- Current Sub–function: Business, Professional

Marysville Historic Commercial District (added 1999–District–no. 99000692)

- Roughly bounded by first, sixth, C, and E Sts., Marysville (230 acres, 59 buildings)
- Historic Significance: Event
- Area of Significance: Commerce
- Period of Significance: 1850–1874, 1875–1899, 1900–1924, 1925–1949
- Owner: Private, Local Government
- Historic Function: Commerce/Trade, Domestic
- Historic Sub–function: Business, Hotel, Specialty Store
- Current Function: Commerce/Trade
- Current Sub–function: Business, Restaurant, Specialty Store

Marysville Historic District

The historic buildings in this area are:

- Delta Building (1923)
- Hotel Marysville (1926)
- Kim Wing Building (1858)
- Marysville Water Company Building (1888) Italianate architecture
- Montgomery Ward Building (1929)
- Nakagawa Building (1857) Traditional Chinese design
- Regional Pacific Gas and Electric (PG&E) Headquarters Building(1927)
- Spring Hotel Building (1892)
- State Theater (1927) Spanish Colonial Revival
- Suey Sing Association Building (1862) Traditional Chinese design
- Tower Theater (1946) Streamline Moderne
- Traveler's Hotel (1912)
- Woolworth's (1937)
- 221 Third St (1915)
- 222 Third St (1880)
- 410–414 Fourth St (1925)
- 413–415 Fourth St (1941)
- 419 Fourth St (1921)
- 317–331 Fifth St (1902) Colonial Revival
- 401–407 Fifth St (1867)
- 512 Fifth St (1930)
- 227 C St (1880)
- 308 C St (1893)
- 317 D St (1880)
- 319–321 D St (1886)
- 320 D St (1884)
- 325 D St (1893)
- 326 330 D St (1888)
- 322 D St (1880)
- 401–405 D St (1900)
- 419 D St (1925)
- 421–423 D St (1925)
- 402–410 E St (1929)
- 420–422 E St (1929)
- 513 E St (1940)
- 525 E St (1947)
- 527–529 E St (1947)
- 223 First St (1888)
- 226 First St (1888)
- 230 First St (1860)
- 232 First St (1858)
- 310 First St (1860)
- 312 First St (1860e)
- 320 First St (1860) "Bordello" Building (bath house)
- 322 First St (1858)
- 330 First St (1854) (Silver Dollar Saloon)
- 25 C St (1860)
- 101 C St (1856)
- 103 C St (1858)
- 107 C St (1915)

- 112 C St (1858)
- 118 C St (1925)
- 7 D St (1887)
- 113 D St (1870)
- 115 D St (1870)

Warren P. Miller House (added 1998–Building–no. 98000225)

- Also known as Mary Aaron Museum
- 704 D St., Marysville
- Historic Significance: Architecture/Engineering, Person
- Architect, builder, or engineer: Warren P. Miller
- Architectural Style: Gothic Revival
- Historic Person: Warren P. Miller
- Significant Year: 1856
- Area of Significance: Architecture/Invention
- Period of Significance: 1850–1874
- Owner: Local Government
- Historic Function: Commerce/Trade, Domestic
- Historic Sub–function: Professional, Single Dwelling
- Current Function: Recreation and Culture
- Current Sub–function: Museum

Packard Library (added 1978–Building–no. 78000829)

- Also known as Marysville City Library
- 301 4th St., Marysville
- Historic Significance: Architecture/Engineering
- Architect, builder, or engineer: William Curlett
- Architectural Style: Italianate, Beaux Arts
- Area of Significance: Architecture
- Period of Significance: 1900–1924
- Owner: Local Government
- Historic Function: Education, Recreation and Culture
- Historic Sub–function: Library, Theater
- Current Function: Education, Recreation and Culture
- Current Sub–function: Library, Theater

Jose Manuel Ramirez House (added 1976–Building–no. 76000545)

- Also known as The W.T Ellis House, The Castle
- 220 5th St., Marysville
- Historic Significance: Event, Architecture/Engineering
- Architect, builder, or engineer: Jose Manuel Ramirez
- Architectural Style: Gothic Revival
- Area of Significance: Architecture, Exploration/Settlement
- Period of Significance: 1850–1874
- Owner: Private
- Historic Function: Domestic
- Historic Sub–function: Single Dwelling
- Current Function: Domestic
- Current Sub–function: Single Dwelling

US Post Office–Marysville Main (added 1985–Building–no. 85000143)

- Also known as Marysville Main Post Office
- 407 C St., Marysville
- Historic Significance: Architecture/Engineering
- Architect, builder, or engineer: James A. Wetmore
- Architectural Style: Other
- Area of Significance: Architecture, Art
- Period of Significance: 1925–1949
- Owner: Federal
- Historic Function: Government
- Historic Sub–function: Post Office
- Current Function: Government
- Current Sub–function: Post Office

(National Register of Historic Places)

2 Plan Adoption Process

DMA 2000 Requirements – Prerequisites
Adoption by the Local Governing Body **Requirement §201.6(c)(5)**: [The local hazard mitigation plan **shall** include] documentation that the plan was formally adopted by the governing body of the jurisdiction requesting approval of the plan (e.g., City Council, County Commissioner, Tribal Council).
For multi-jurisdictional plans, each participating jurisdiction must provide supporting documentation, such as a letter of adoption, that the MJP, and the jurisdiction's "annex" has been formally adopted as their own LHMP.

The City of Marysville formally adopted the Yuba County Multi-Jurisdictional Multi-Hazard Mitigation Plan and Annex A – City of Marysville as its local hazard mitigation plan (LHMP) on September 11, 2007. Resolution 2007-81, adopting the Yuba County Plan and Marysville Annex was passed by a 5-0 vote with 0 abstentions at the regular meeting of the Marysville City Council. The meeting was publicly noticed and the public was given the opportunity to comment on the agenda item prior to adoption.

2.1 Documentation of Marysville Adoption of the LHMP

Document 2-1 City of Marysville Resolution of Adoption

RESOLUTION NO. 2007-81

A RESOLUTION OF THE MARYSVILLE CITY COUNCIL
ADOPTING THE YUBA COUNTY MULTI-JURISDICTIONAL
MULTI-HAZARD MITIGATION PLAN AND
ANNEX A - THE CITY OF MARYSVILLE

WHEREAS, at a Special Meeting of the Council of the City of Marysville, State of California, held on the 11th day of September, 2007.

WHEREAS, The City of Marysville, as part of the Yuba County Hazard Mitigation Project, has developed a Hazard Mitigation Plan by identifying hazards and potential mitigation projects and working with stakeholders; and

WHEREAS, P.L. 106-390, the Disaster Mitigation Act of 2000, amended the Stafford Disaster Relief and Emergency Assistance Act to require hazard mitigation planning; and

WHEREAS, a Federal Emergency Management Agency (FEMA) approved Multi-Hazard Mitigation Plan must be adopted by the local governmental agency as a requirement and as a condition of funding for disaster mitigation funds after November 1, 2004; and

WHEREAS, The City of Marysville fully participated in the Yuba County Hazard Mitigation Planning process consistent with the federally-prescribed planning process for the development of this Multi-Hazard Mitigation Plan; and

WHEREAS, the California Governor's Office of Emergency Services and the FEMA Region IX have reviewed and approved the "Yuba County Multi-Jurisdictional Multi-Hazard Mitigation Plan," contingent upon this official adoption by the Marysville City Council.

NOW, THEREFORE, BE IT RESOLVED that I, Mayor Bill D. Harris, and the City Council of the City of Marysville, on behalf of the citizens of the City of Marysville, do hereby adopt the Yuba County Multi-Hazard Mitigation Plan and the City of Marysville Hazard Mitigation Plan Annex as an official plan; and

BE IT FURTHER RESOLVED, the City of Marysville will submit the Adoption Resolution to the Federal Emergency Management Agency, Region IX, for approval of the Yuba County Multi-Hazard Mitigation Plan.

I HEREBY CERTIFY that the foregoing Resolution was duly and regularly introduced and adopted by the Council of the City of Marysville, County of Yuba, State of California, on the 11th day of September, 2007, by the following vote:

AYES: Benjamin Wirtschafter, Michael Selvidge, Jim Kitchen, Christina Billeci, and Bill Harris

NOES: None

ABSENT: None

ABSTAIN: None

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official seal of said City this 11th day of September, 2007.

Bill D. Harris
Mayor

ATTEST:

Billie J. Fangman
City Clerk

The foregoing instrument is a correct copy of the original on file in this office.

ATTEST:
City Clerk of the City of Marysville, California

DEPUTY CLERK

3 Planning Process

DMA 2000 Requirements – Prerequisites
Adoption by the Local Governing Body **Requirement §201.6(a)(3)**: Multi-jurisdictional plans (e.g., watershed plans) may be accepted, as appropriate, as long as each jurisdiction has participated in the process.
The MJP must document EACH jurisdiction's participation OR the participating jurisdiction must include this information in EACH jurisdiction's annex to the MJP.

The City of Marysville planning process was conducted as part of the Yuba County Hazard Mitigation Project and involved the collaboration of numerous governmental entities and state and federal agencies. This section describes the planning process from the perspective of the City of Marysville and includes descriptions and accounts of planning meetings that the City participated in or conducted in the planning process. In addition to these meetings, information gathered throughout the course of the project by and for other special districts within Yuba County was incorporated into the Marysville annex where appropriate. For a complete description of the planning process undertaken by the Yuba County Hazard Mitigation Project, see Section Two of the Yuba County Multi-Jurisdictional Multi-Hazard Mitigation Plan

3.1 Documentation of the Planning Process

Table 3–1 City of Marysville Mitigation Planning Timeline

Mitigation Planning Timeline	
Organize Resources	July 2004 – June 2007
Assess Risks	September 2004 – December 2006
Develop Goals	April 2005 – February 2006
Plan writing, development, and review	December 2006 – July 2007
Plan Adoption	September 2007

Table 3-1 reflects that the development of the hazard mitigation plan was an ongoing process and did not necessarily follow a linear pattern. The risk assessment, after being largely completed in 2005, was reassessed following the winter storm event of 2006. The plan writing, development and review included opportunities for the public to provide comments. The process for creating the Marysville Annex was part of the Yuba County Multi-Hazard Mitigation Project.

An open public involvement process is essential to the development of an effective plan. Through the Yuba County Mitigation Project and planning committee meetings, the planning process included an opportunity for the public to comment on the plan during the drafting stage and prior to plan approval; opportunity for neighboring entities, and other interested parties, to be involved in the planning process; and the review and incorporation, if appropriate, of existing plans, studies, reports, and technical information. Each step in the planning process was built upon the previous step, providing a high level of assurance that the mitigation actions proposed by the participants and the priorities of implementation are valid.

The plan annex identifies and evaluates specific local hazard mitigation strategies to be considered by the City and its planning support for those strategies developed by the Committee. The strategies presented are deemed appropriate and effective by recommendation of the Marysville Hazard Mitigation Planning Committee and individual local agencies and private groups.

3.1.1 Description of Participation by the City of Marysville

The City of Marysville was invited to participate in the development of the Yuba County Hazard Mitigation Project as a multi-jurisdictional partner. The first planning meeting was held on July 15, 2004, when County Administrator Charles Kent McClain and Project Director Patricia Beecham met with City Department Heads and elected city officials at their regular weekly meeting. Information regarding the DMA 2000 requirements and the hazard mitigation process were discussed. The invitation to participate in the countywide planning process and plan development was extended to city representatives. A follow-up meeting between representatives of Yuba County and the Marysville Police Department was held to establish what information would be needed from the City in order to develop their plan.

The City of Marysville was invited to participate as a Stakeholder in the Yuba County Multi-Hazard Mitigation Project. The City participated in the Project Kick-off on August 13, 2004 and met with stakeholders representing federal, state and local resource agencies involved in hazard mitigation projects. City staff attended Stakeholder Planning Committee meetings and community workshops. The copies of FEMA's How-to Guides for mitigation planning were obtained to aid in the planning process and local plan development. The City was represented by numerous departments and served as an active participant in Stakeholder Planning Committee meetings throughout the county wide planning process. City sub-committees provided specific information and performed specific tasks to support the planning process such as the identification of critical assets and infrastructure.

On October 4, 2005, the Marysville City Council formally adopted a resolution of support for the Yuba County Hazard Mitigation Project and the City's participation in the development of the County Plan and the Marysville Plan Annex (Document 3-1).

The City of Marysville Hazard Mitigation Planning Committee consisted of the following representatives:

- Joe Hernandez, Marysville Fire Chief
- Stephen Casey, Marysville City Manager
- Dave Lamon, Marysville Public Works Director
- Dixon Coulter, Marysville Chief Financial Officer
- Seth Merewitz, Marysville City Attorney
- Jack Beecham, Marysville Chief of Police
- Lt. Mike Kostas, Marysville Police Department
- Sgt. John Osborn, Marysville Police Department
- Yuba County Hazard Mitigation Project Staff
  Patricia Beecham, Project Director
  Andrew Vodden
  Stacey Brucker,
  David Slayter
  Janice Rhodd
  ShirLee Belisle
  Pat Camarena

Representatives from the City regularly met with Yuba County hazard mitigation staff throughout the planning process to research, identify resources and collaborate on development and writing of the Yuba County and Marysville hazard mitigation plans. County staff provided technical assistance and plan writing for the City. The City representatives participated in the planning process by providing information unique and specific to the City, in addition to information of benefit to the writing of the Yuba County Plan. The result of these meetings provided a

comprehensive picture of the hazards and risks facing the City, the vulnerability of assets, and identification of effective mitigation strategies to address potential hazards through partnerships created through the planning process. The outcome of this collaboration provided for the development of the Marysville Plan Annex, a functional hazard mitigation plan which is a component of the County Plan. Table 3-2 provides a summary of the planning meetings held for the Marysville Plan Annex.

Table 3-3 provides a listing of the City's participation in Yuba County's Stakeholder meetings held over a period of two years. Participation in stakeholder meetings provided technical and program information for the development of the local plan and the collaboration required for development of a comprehensive County-wide mitigation plan. The meetings shown in this table provide summaries of those meetings at which Marysville participated.

An effort to encourage public participation and promote awareness of hazard mitigation was undertaken through the City participation at all Community Workshops and Fairs held in Marysville. Presentations and participation at Stakeholder Meetings supported collaboration and increased awareness of hazards and impacts for all participants which proved valuable in prioritizing mitigation actions and projects.

Document 3-1 City of Marysville Resolution of Support

RESOLUTION NO. 2005- 73

RESOLUTION AUTHORIZING CITY STAFF TO ENTER INTO A COOPERATIVE RELATIONSHIP WITH YUBA COUNTY TO DEVELOP A FEDERALLY APPROVED COMPREHENSIVE COUNTY-WIDE MULTI-HAZARD MITIGATION PLAN

At a regular meeting of the Council of the City of Marysville, State of California, held on the 4th day of October, 2005.

WHEREAS, the City of Marysville wishes to develop a federally approved and comprehensive Multi-Hazard Mitigation Plan.

WHEREAS, the City of Marysville desires to enter into a cooperative relationship with the County of Yuba by identifying hazards and potential mitigation projects in order to develop a comprehensive county-wide Multi-Hazard Mitigation Plan to meet federal requirements for mitigation planning.

WHEREAS, P.L. 106-390, the Disaster Mitigation Act of 2000, amended the Stafford Disaster Relief and Emergency Assistance Act to require hazard mitigation planning.

WHEREAS, local governments and governmental entities are required to have a federally approved hazard mitigation plan to be eligible for disaster mitigation funding, for any disaster declared after November 1, 2004, and the County of Yuba is developing a county-wide multi-hazard mitigation plan.

NOW, THEREFORE, BE IT RESOLVED, the City of Marysville agrees to enter a cooperative relationship, and provide support towards the development of the Yuba County Multi-Hazard Mitigation Plan.

* * * * * *

I HEREBY CERTIFY that the foregoing resolution was duly and regularly introduced and adopted by the Council of the City of Marysville, County of Yuba, State of California, on the 4th day of October, 2005, by the following vote:

AYES: Jerry Crippen, Benjamin Wirtschafter, Jim Kitchen, Christina Billeci, and Bill Harris

NOES: None

ABSENT: None

ABSTAIN: None

The foregoing instrument is a correct copy of the original on file in this office.

ATTEST: Billie J. Fangmon

City Clerk of the City of Marysville, California

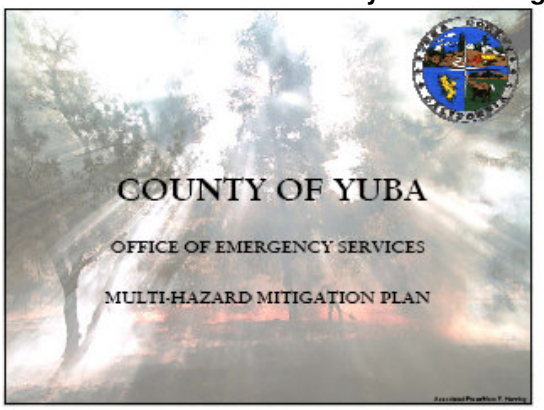
DEPUTY CLERK

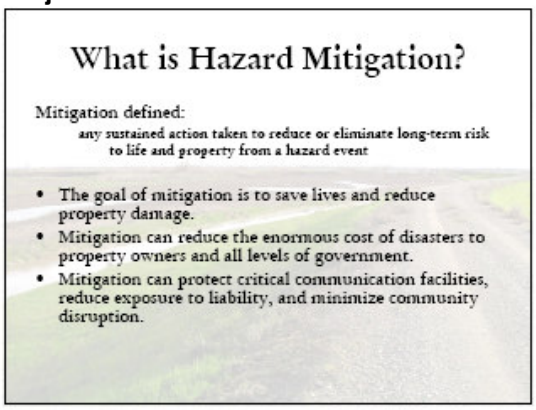
IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official seal of said City this 4th day of October, 2005.

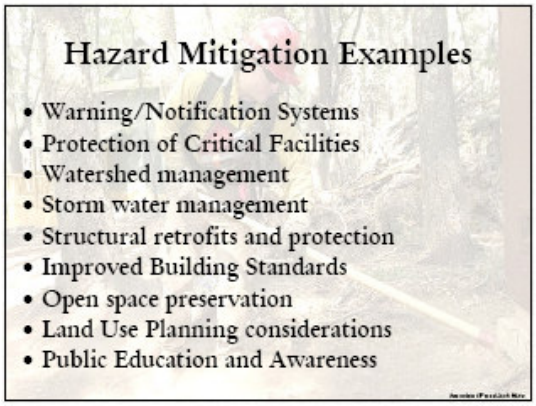
Billie J. Fangmon

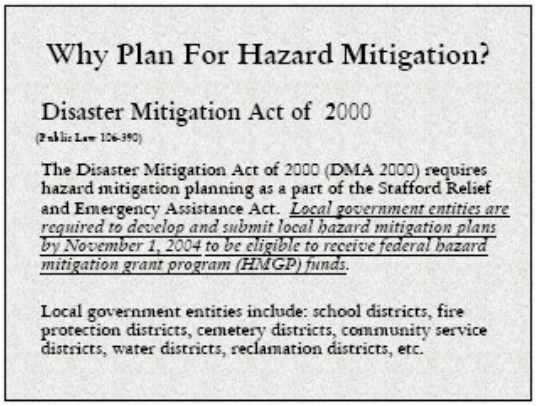
City Clerk

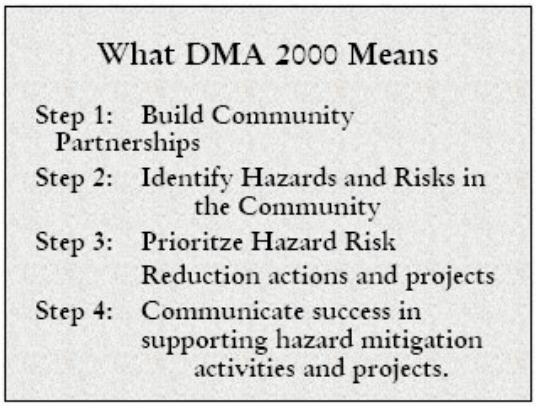
Presentation 3-1 Yuba County Hazard Mitigation Project

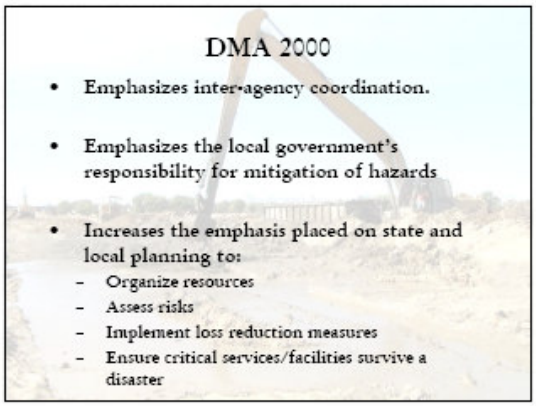












Why Think About Hazard Mitigation?

- Potential impacts include:
  - Physical damage to buildings/infrastructure
  - Economic impacts
  - Casualties / Physical harm to people
- Examples of potential impacts:
  - Loss of life
  - Destruction of property
  - Disruption of basic services
  - Economic recession
  - Blight

Hazard Identification

- Identify the hazards that can affect your community:

Fire	Flood
Winter Storms	Traffic/accidents
Power Outage	Terrorism
Railroad Crossings	School Violence

Hazard Identification

The 1986 Linda levee failure on the Yuba River resulted in:

- 10,700 acres flooded
- 3,000 homes damaged or destroyed
- $93,000,000 in property damage
- One death

Hazard Identification

The 1997 levee failure on the Feather River resulted in:

- 16,000 acres flooded
- 1,300 homes damaged
- Over 100,000 people evacuated – the largest evacuation in California history

Hazard Identification

Damages from the 1997 Williams Fire:

- 5,743 acres burned
- $19,066,237 in damages
  - 91 residential buildings
  - 6 commercial buildings
  - 136 out buildings
  - 184 vehicles

Hazard Identification

Damages from the 1999 Pendola Fire:

- 11,725 acres burned
- $2,686,190 in damages
  - 14 residential buildings
  - 3 commercial buildings
  - 65 out buildings
  - 41 vehicles

Risk Assessment

- Once hazards have been identified, a risk assessment can be performed.
- A complete risk assessment will include:
  - Estimate of damage to buildings and critical facilities
  - Economic loss resulting from hazard events
  - Number of people affected

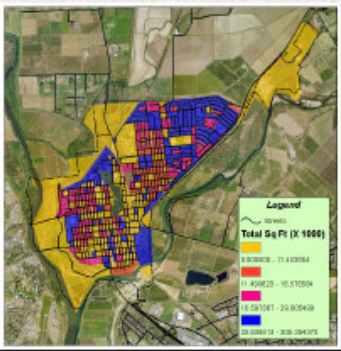
Resource Identification

- A key part of risk assessment is resource identification, which includes:
  - Type and Number of Structures
  - Population
  - Evacuation/Transportation Resources
  - Critical Buildings and Facilities
  - Determine Replacement Values – Structure and Contents
  - Determine Functional Use Value for Critical Facilities

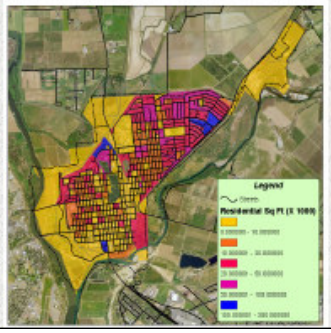
From Risk to Prevention - Mitigation Measures

- Public education and awareness
- Potential property protection
- Natural resource protection
- Structural improvements
- Maintenance and review

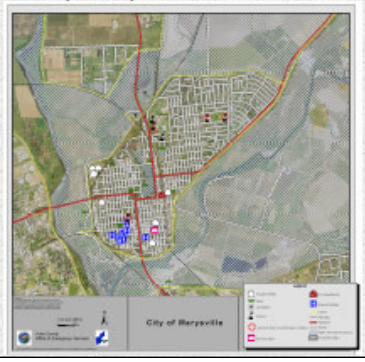
Total Sq Ft by Census Block
(Census 2000)



Residential Sq Ft by Census Block
(Census 2000)



City of Marysville Critical Facilities



CalTrans Yuba County Assets

• Roads:	$359 million
• Bridges:	$113 million
• Facilities:	$107 million
• Equipment:	$ 12 million
Total	$591 million

*approximate replacement costs

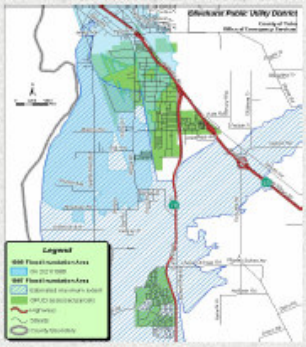
State Highways

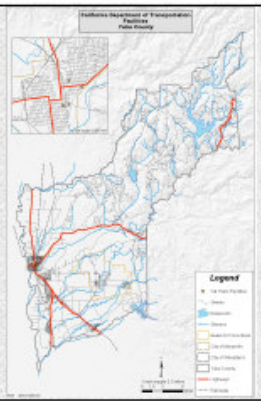
- SH 20 Flooding
  - 1997 at Meridian
- SH 70 Flooding
  - 1986 from E Street Bridge to SH 65
  - 1997 from McGowan Parkway to County line
- SH 65 Flooding
  - 1997 Inundation area on both sides of Hwy, from McGowan Parkway to Forty Mile Road

CalTrans Critical Facilities in Yuba County

• District Office	$68 million
• Sign yard and 12th Street	$15 million
• Equipment Shop	$15 million
• Maintenance Station	$ 7 million
• Warehouse	$ 7 million
Total:	$107 million

*replacement value





Yuba County Hazard Mitigation Grant Projects

COUNTY	OES #	FEMA #	Project Type	Project Title	Obligated
Yuba, County of	69	1044-16	Road Control	South Olivehurst Detention Basin	$1,419,105.00
Yuba, County of	69	1044-17	Road Control	Olivehurst Interceptor	$1,999,116.00
Yuba, County of	31	1203-34	Road Control	Broadway Culvert Replacement Project	$75,009.00
Yuba, County of	58	1203-33	Road Control	Improvement on Clark Lateral and Clark Slough	$533,759.00
Yuba, County of	72	1203-35	Elevation	Residential Elevation Project #2 – Mage Ave.	$197,509.00
Marysville , City of	195	1203-36	Acquisition	Acquisition of Hollywood Trailer Park	$99,605.00
Yuba, County of	PL99	FMA96	Planning	FMA Planning Grant	$9,500.00
Yuba, County of	PL98	FMA99	Planning	FMA Planning Grant	$24,909.00
Yuba, County of	PL94	PDM00-PDMC-PL-09	Planning/ Mapping	Multi-Hazard Mitigation Plan	$1,102,500.00
				Total	$5,489,897.00

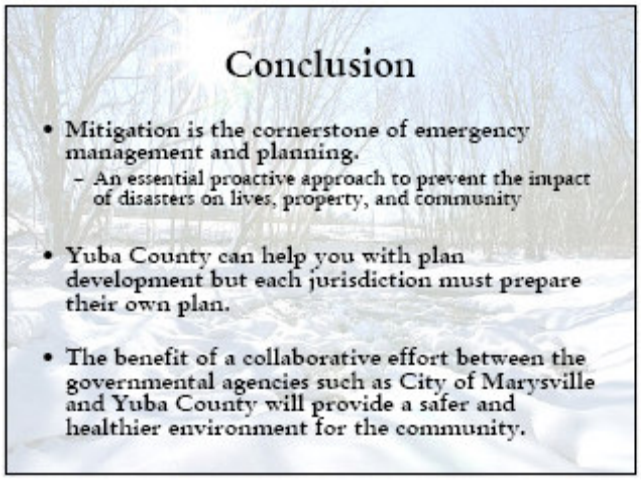

Conclusion
• Mitigation is the cornerstone of emergency management and planning.
– An essential proactive approach to prevent the impact of disasters on lives, property, and community
• Yuba County can help you with plan development but each jurisdiction must prepare their own plan.
• The benefit of a collaborative effort between the governmental agencies such as City of Marysville and Yuba County will provide a safer and healthier environment for the community.

Table 3–2 Summary of the City of Marysville Planning Meetings

Meeting Date	Meeting Summary
July 15, 2004	PDM Project manager and county CAO met with the City of Marysville (MSVL) to present the PDM project outline, and invite the City to participate in the plan development and discuss DMA 2000 requirements
July 20, 2004	A Marysville Police Dept. representative met with staff per the request of the City to participate in plan development. Information needed for the plan was requested by the staff and additional meeting dates were set for plan development.
August 15, 2004	Staff met with City to discuss plan and receive information about identified hazards. Set priorities and begin to develop mitigation goals.
November 11, 2004	City has been working to gather information about identified hazards and risks and met to discuss additional needs.
November 24, 2004	The staff and city representative met to discuss the Union Pacific Railroad with RR rep. Don Snow. Don provided information about the railroad cargo and response to emergencies should they occur in the city.
March 15, 2005	PDM staff met with Mike Kostas to work on the development of the city plan. Hazard identification, prioritization and impact to the city.
June 1, 2005	The City requested assistance with the risk assessment and hazard vulnerability. PDM staff requested documentation from State OES to assist in developing a Plan for the City. The City requested clarification regarding how being part of the plan would help them receive FEMA money. With limited resources the City will support the planning effort by participating in stakeholders and providing needed information if the Plan will enable grant opportunities.
June 15, 2005	City of Marysville Staff Meeting to provide update on County planning process with power point presentation on the benefit and necessity of being part of the planning process and plan development. The City will continue to supply information and participate in the planning process.
June 20, 2005	Marysville Police Dept. met to discuss and provide information about the department for plan development, meeting mitigation goals and discuss mitigation projects.
September 9, 2005	City of Marysville Fire Chief met to update staff on the plan progress and possible mitigation projects. Will meet again to provide requested information.
September 12, 2005	City of Marysville Fire Chief met to provide requested information about critical infrastructure and discuss the city's vulnerability and risk associated with identified hazards.
October 11, 2005	City working to provide input and discuss vulnerability and risk assessment.
November 16, 2005	City of Marysville, review of city departments and information that has been provided and what is still needed.
November 21, 2005	A map of the city's critical infrastructure was given to the planning committee, with a request to update, particularly location of city owned pumping stations. Possible mitigation projects were discussed, the current pressing need is for a new wastewater treatment plant outside of the 100 year floodplain.

Meeting Date	Meeting Summary
March 16, 2006	The City of Marysville reported that they have been gathering information and input from the city departments and local residents to review and discuss identified hazards and possible mitigation strategies.
July 20, 2006	Staff and city met with Union Pacific to further discuss the city's risk and vulnerability associated with the RR through the city. Review of trains, cargos and pipelines along right-of-ways and possible risks to surrounding population and businesses.
September 26, 2006	City of Marysville met with staff to review status of the draft plan for Marysville. Marysville will review plan and get back to staff next month.
December 12, 2006	Marysville Fire Chief met to discuss the fire portion of the draft plan and make suggestions.
December 27, 2006	Marysville Police Department (PD) met with staff to discuss the law enforcement aspect of the draft plan.
February 5, 2007	Marysville PD met with Hazard Mitigation staff to provide updates to existing City maps.
February 22, 2007	City of Marysville met to work on suggested changes to the draft plan.

Table 3–3 City of Marysville attendance at Yuba County Stakeholders Meetings

Meeting Date	Description	Mitigation Actions Discussed

December 14, 2004	Presentations at this meeting included:
	• A meeting overview by Glenn Nader of the Yuba Watershed Protection & Fire Safe Council
	• An introduction to DMA 2000 and the Yuba County Hazard Mitigation Project
	• A presentation by hazard mitigation staff on how to conduct a risk assessment and the role of the Hazards U.S. (HAZUS) Geographic Information Systems (GIS) software in addressing all hazards and establishing a process to identify and assess risks, as well as prioritizing activities to reduce damage to property and prevent loss of life from natural and man-made disasters.
	• A discussion of funding for FEMA fiscal year 2004/2005 competitive Pre-Disaster Mitigation Grant Projects and its availability to fund hazard mitigation plans and projects
	• A roundtable discussion on
	  ○ Inter-agency communication and coordination
	  ○ Identifying hazards and risks
	  ○ Databases and resource information
	  ○ Studies and projects
	• Potential hazard mitigation projects
	Following the presentations and discussions, subcommittee work groups for communication, fire planning, and flood planning were formed
		• Evacuation plan for Woodleaf –Eddie Ramirez United States Forest Service (USFS)
		• Resources Disaster Response Gary Taft, United States Air Force (USAF) Beale, identify resources for community
		• develop lines of communication with the communities and agencies surrounding Beale
		• ID card or a placard – Chuck Thomas- PG&E issued in emergencies
		• Agency Representation at the Incident Command Post- Kavanagh, California Department of Forestry and Fire Protection (CDF)
		• Identify representatives, phone numbers from each agency
		• Central database for information, see what is going on— rerouting of traffic, first responders know which way to go
		• Incident Command Center- two laptops for accessing web sites loaded and ready to go with information… looking ahead at fuel loads, CalTrans road closures, etc.
		• Reverse 911
		• Computer access to current Information
		• Automatic Vehicle location system for Sheriff Patrol cars
		• Upgrade early warning system
		• Marysville Joint Union School District footpath for evacuation of Yuba Feather School to USFS station

Annex A
City of Marysville

Meeting Date	Description	Mitigation Actions Discussed
January 11, 2005	Presentations at this meeting included: • An overview of the DMA 2000 process and each agency's role and responsibilities as outlined by the Act • An introduction to HAZUS GIS software and how it is used to identify and assess risks, prioritize activities to reduce damage to property, and prevent loss of life from natural and man-made disasters • A discussion of the FEMA Fiscal Year (FY) 2004/2005 competitive pre-disaster mitigation grant program and possible projects to apply for funding • A workshop on multi-hazard mitigation risk assessment using worksheets for the FEMA How-To Guide #2. The Emergency Response and Communication, Fire Planning, and Flood Planning committee work groups met following the presentations.	• Levee improvement projects-Yuba County Water Agency (YCWA) • Coordinated releases for Bullards Bar and Oroville Dams-YCWA • Identify shelter facilities in the event of an evacuation • Develop Public Awareness information for the South County • Stakeholder information, knowledge, resources added to HAZUS data • Earthquake retrofitting of the Courthouse • Schools defensible space and sprinkler systems • CalTrans-coordinate emergency response and identify available resources • Strengthen Marysville Levees to protect critical assets • Identify an alternate County Emergency Operations Center (EOC) • Fire Station and evacuation center in Hallwood
February 8, 2005	The meeting began with an overview of DMA 2000 and the Yuba County Hazard Mitigation Project. The group then broke into workshops. Session one included workshops on: • Developing School Hazard Mitigation Plans • Developing Local Hazard Mitigation Plans with an emphasis on fire districts and special districts • State, City, and County Agencies The second session included workshops on: • Developing a communication plan • Developing an evacuation plan • Updating HAZUS GIS/Risk Assessment Inventory	• Coordinate fuel reduction-Fire Safe • American Red Cross (ARC)-Update facilities information

Meeting Date	Description	Mitigation Actions Discussed
March 8, 2005	Presentations at this meeting included: • An overview of the DMA 2000 process • A status report on the efforts by Yuba County Hazard Mitigation Staff to identify and assess risks, prioritize activities to reduce damage to property and prevent loss of life from natural and man-made disasters using FEMA's HAZUS GIS software • A report on the hazard mitigation event and agency meeting calendar • A presentation by the Yuba County Water Agency soliciting input for the development of the YCWA Multi-Hazard Mitigation Plan The Emergency Response and Communication, Fire Planning, and Flood Planning committee work groups met following the presentations. A Plan Development Assistance Workshop on Resource Identification and Risk Assessment using worksheets from FEMA How-To Guide #2.	• Yuba College as Alternate EOC • Access through southwest corner of Beale for evacuation • Sheriff's Dept.-Countywide communications plan • Dobbins-Oregon House Fire Protection District (DOHFPD)-Listing private water sources to be used in fire fighting • Proper fittings to access water • Evacuation Routes for DOHFPD
July 12, 2005	Presentations at this meeting included: • An overview of the Yuba County Hazard Mitigation Project and progress on the County Plan • An overview of the Yuba Watershed Protection & Fire Safe Council's planning process and collaboration with resource agencies to identify community fire prevention strategies and support the Yuba County Project • A report on the capabilities of GIS for fire mapping, mitigation strategies, and projects. A summary of GIS project work and fire hazard models • An overview of the mission of Beale Air Force Base and its current efforts including planning, exercises, anti-terrorism efforts, and coordination of resources to support local community mitigation efforts and projects. • Planning for an evening workshop to allow the community the opportunity to provide input to stakeholders The Emergency Response and Communication, Fire Planning, and Flood Preparedness committee work groups met following the presentations.	• Fire Mitigation: Water hookups • Marking water sources on mail boxes • Signage

Annex A
City of Marysville

Meeting Date	Description	Mitigation Actions Discussed
August 24, 2005	Presentations at this meeting included: • Planning updates from the Dobbins Oregon House Fire Protection District and Wheatland Elementary School District • A presentation from the Yuba County Health and Human Services Department on public health preparedness planning • A discussion on risk assessment and ranking priorities The meeting was continued to a special evening Stakeholder meeting designed to share information regarding successful mitigation planning efforts and project information to the public. Recognition of the efforts of Stakeholders representing federal, state, and local agencies in the planning process and in mitigating damage and impact from natural and man-made disasters. The meeting included presentations from: • Three Rivers Levee Improvement Authority – an update on South Yuba County levee projects • Yuba County Water Agency – update on Hazard Mitigation Planning • Yuba County Health & Human Services Department – Public Health & Safety • Pacific Gas & Electric Company – What You Should Know About Power Interruptions • American Red Cross, Three Rivers Chapter – The American Red Cross in Your Community • Yuba Watershed Protection & Fire Safe Council – Fire Prevention & Mitigation in Yuba County	• Three Rivers Levee Improvement Authority (TRLIA)- levee improvements • YCWA- power interruptions • Partnership with county and agencies to produce one packet/document that's universal preparedness for consumers • ARC-partnership with PG&E for disaster preparedness • ARC- coordination with local responders to provide emergency care for families with home fires

Annex A
City of Marysville

Meeting Date	Description	Mitigation Actions Discussed
September 13, 2005	Presentations at this meeting included: • An overview of the August 24 community meeting • An update on hazard mitigation plans • A presentation from the Yuba County Office of Emergency Services on the efforts being made by Yuba County to assist in the Hurricane Katrina fallout • An update from Martha Griese, CEO of the American Red Cross Three Rivers Chapter on the efforts of ARC to assist in the aftermath of Hurricane Katrina • A workshop discussion of the Yuba County Hazard Mitigation Project and risk assessment/ranking priorities	• Community Wildfire Protection Plan • Beale as a secure staging area in combination with Beale • ARC- system for screening volunteers • Browns Valley Irrigation District (BVID)- leaves clogging water delivery system • BVID clearing ditches for water delivery/creating a fire break • PG&E power lines as fuel breaks • Health and Human Services- special needs populations sheltering • Accurate maps for first responders
October 11, 2005	Presentations at this meeting included: • Updates from the Dobbins Oregon House Fire Protection District, Yuba County Water Agency, and Reclamation District 784 on their progress towards completion of local hazard mitigation plans • Updates from the Yuba County Office of Emergency Services and American Red Cross Three Rivers Chapter on Hurricanes Katrina and Rita • A review of risk assessment/ranking of priorities and a discussion of potential mitigation projects • A discussion of evacuation routes for high hazard areas with Yuba County Undersheriff Steve Durfor and Yuba Watershed Protection and Fire Safe Council Coordinator Glenn Nader	• Reclamation District (RD) 784-elevate pumps above flood line • Uri Mountain evacuation • Fuel treatment along roadways • Fuel breaks around communities • Public Works- fuel breaks, line of sight and better evacuation corridors • Woodleaf fuel reduction • Possible safe zones in the foothills • Sheriff mobile mapping capability • Special needs data bank and ID cards • Photo ID cards for all disaster personnel • Recruitment of Health professionals and provide ID cards

Meeting Date	Description	Mitigation Actions Discussed
November 8, 2005	Presentations at this meeting included: • A project overview and plan updates from Yuba County and special districts • A Three Rivers Levee Improvement Authority levee project update from Assistant County Administrator Randy Margo • An update on fire mitigation planning from Glenn Nader of the Yuba Watershed Protection & Fire Safe Council and hazard mitigation staff • An update on hazard analysis and risk assessment • An update on special district plan development • A discussion of potential mitigation projects • A discussion of evacuation planning moderated by Yuba County Undersheriff Steve Durfor and Yuba County Health Officer Dr. Joe Cassady	• Sheriff- Communications enhancements to improve emergency command vehicle
January 10, 2006	Presentations at this meeting included: • A project overview and reports on agency and special district progress on the hazard mitigation process • A status report on the damage sustained during the 2006 winter storm event • A presentation from the Yuba County Water Agency on the damage YCWA sustained as a result of the 2006 winter storm event • A workshop discussion of potential hazard mitigation projects	

Meeting Date	Description	Mitigation Actions Discussed
October 12, 2006	Presentations at this meeting included: • A roundtable discussion moderated by Yuba County Supervisor Mary Jane Griego on the Yuba County Hazard Mitigation Project • An update from the Yuba County Health and Human Services Department on their ongoing public safety plans The meeting was continued to a special evening Stakeholder meeting designed to share information regarding successful mitigation planning efforts and project information to the public. Recognition of the efforts of Stakeholders representing federal, state, and local agencies in the planning process and in mitigating damage and impact from natural and man-made disasters. The meeting included: • Awards given to members of the Yuba County Sheriff's Department in honor of their efforts to save lives during a structure fire in the City of Marysville, the Trauma Intervention Program for aiding those displaced by the fire, the Yuba Watershed Protection & Fire Safe Council for its efforts in hazard mitigation planning, and Greg Crompton for his efforts in hazard mitigation planning • A presentation from Matt Furtado, Yuba County Fire Planner, on fire mitigation and safety • A report on the Yuba Watershed Protection & Fire Safe Council's chipping program • An overview of the Yuba County Hazard Mitigation Project • An update on the Federal Emergency Management Agency (FEMA) flood mapping process • A presentation from the Yuba County Water Agency on its Forecasted-Coordinated Operations project • A report from the Three Rivers Levee Improvement Authority on the current status of the levee improvement projects	• Certified Unified Program Agency (CUPA), monthly data updates needed • Data base for special needs population tracing • Evacuation planning

Meeting Date	Description	Mitigation Actions Discussed
January 9, 2007	Presentations at this meeting included: • A report on the efforts of the Yuba County Office of Emergency Services • An update on the South Yuba County levee projects by the Three Rivers Levee Improvement Authority • A report and presentation to the Stakeholders group regarding the Yuba County Municipal Services Review being undertaken by the Local Agency Formation Commission (LAFCO) for collaboration with the mitigation project and review process	•

3.2 Local Capabilities Assessment

DMA 2000 Requirements – Planning Process
Local Capabilities Assessment **Requirement §201.4(c) (3) (ii)**: Of the Federal Register Interim Final Rule 44CFR Parts 201 and 206 states "[The **State** mitigation strategy **shall** include] a general description and analysis of the effectiveness of local mitigation policies, programs, and capabilities.
Element A. Does the plan provide a description of the human and technical resources available within this jurisdiction to engage in a mitigation planning process and to develop a local hazard mitigation plan? B. Does the plan list local mitigation financial resources and funding sources (such as taxes, fees, assessments, or fines) which affect or promote mitigation within the reporting jurisdiction? C. Does the plan list local ordinance which affects or promotes disaster mitigation, preparedness, response or recovery within the reporting jurisdiction? D. Does the plan describe the details of in-progress, ongoing, or completed mitigation projects and programs within the reporting jurisdiction?

Funding for the Yuba County Hazard Mitigation Project and the Marysville LHMP came as a result of a FEMA PDM grant. The Yuba County Hazard Mitigation Project provided technical assistance in developing the Marysville plan annex. The capability of Marysville to continue to participate in mitigation planning and the identification an implementation of mitigation projects is discussed in this section.

3.2.1 Local Human and Technical Resources

The City of Marysville availed itself of the opportunity to participate in the development of a comprehensive regional hazard mitigation planning process through the Yuba County Hazard Mitigation Project. The County provided the support and technical assistance in the planning process and for the local capabilities assessment for the City as a participating local government in the Yuba County Multi-Jurisdictional Multi Hazard Mitigation Plan.

The City's participation in the planning process included attending the stakeholders meetings, having representatives attending the Yuba County Plan public meetings, identifying and prioritizing local hazards, identifying jurisdictional assets, and having a designated contact person. In addition, the City formed its own local hazard mitigation planning committee. The City's local hazard mitigation planning committee included the City Manager, Fire Chief, Chief of Police, Public Works Director, Administrative Services Director, and the Director of Community Development. The City Attorney provided legal counsel and technical expertise.

Table 3–4 City of Marysville Technical Capacity

Position	Y/N	Department/Agency
Planner(s) or engineer(s) with knowledge of land development and land management practices	Y	Community Development – Planning Division; General Plan
Engineer(s) or professional(s) trained in construction practices related to buildings and/or infrastructure	Y	Community Development – Building Division; Code Enforcement
Planners or Engineer(s) with an understanding of natural and/or human–caused hazards	Y	Community Development – Planning Division
Floodplain manager	Y	Public Works
Surveyors	Y	Public Works
Staff with education or expertise to assess the community's vulnerability to hazards	Y	Public Works, Police, Fire, Community Development
Personnel skilled in GIS and/or HAZUS	Y	Public Works
Scientists familiar with the hazards of the community	N	Contract Services as Required
Emergency manager	Y	City Administration, Police, Fire
Grant writers	Y	Administration, Police

3.2.2 Local Mitigation Funding Sources

The City of Marysville has the following funding sources which can be used for hazard mitigation purposes:

- City general fund
- Excise taxes
- Development impact fees
- Levee maintenance fees
- Fire mitigation fees on new structures and insulation
- Fire inspection fee on new businesses.

Table 3–5 City of Marysville Fiscal Resources

Financial Resources	Y/N	Comments
Community Development Block Grants	Y	Community Development
Capital improvements project funding	Y	
Authority to levy taxes or assessments for specific purposes	Y	Fire Protection Assessment
Fees for water, sewer, gas, or electric service	Y	
Impact fees for homebuyers or developers for new developments/homes	Y	Fire Mitigation Fees
Incur debt through general obligation bonds	Y	
Incur debt through special tax and revenue bonds	Y	Requires 218 vote
Incur debt through private activity bonds	Y	
Withhold spending in hazard-prone areas	Y	

3.2.3 Local Ordinances & Regulations

Document 3-2 City of Marysville Floodplain Management Ordinance

TITLE 20 FLOODPLAIN MANAGEMENT

CHAPTER 20.04 GENERAL PROVISIONS

20.04.010 Statutory authorization.

The legislature of the state of California has in Government Code Sections 65302, 65560, and 65800 conferred upon local government units authority to adopt regulations designated to promote the public health, safety, and general welfare of its citizenry. Therefore, the city council of the city does ordain as follows. (Ord. 1278 § 2 (part), 2002).

20.04.020 Findings.

(a) The flood hazard areas of the city are subject to periodic inundation which results in loss of life and property, health, and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety and general welfare.

(b) The flood losses are caused by the cumulative effect of obstructions in areas of special flood hazards which increase flood heights and velocities, and when inadequately anchored, damage uses in other areas. Uses that are inadequately flood-proofed, elevated or otherwise protected from flood damage also contribute to the flood loss. (Ord. 1278 § 2 (part), 2002).

20.04.030 Purpose.

It is the purpose of this title to promote the public health, safety and general welfare, and to minimize public and private losses due to flood conditions in specific areas by provisions designed:

(1) To protect human life and health;

(2) To minimize expenditure of public money for costly flood-control projects;

(3) To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;

(4) To minimize prolonged business interruptions;

(5) To minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in areas of special flood hazard;

(6) To help maintain a stable tax base by providing for the second use and development of areas of special flood hazard so as to minimize future flood blight areas;

(7) To insure that potential buyers are notified that property is in an area of special flood hazard; and

(8) To insure that those who occupy the areas of special flood hazard assume responsibility for their actions. (Ord. 1278 § 2 (part), 2002).

20.04.040 Contents.

In order to accomplish its purposes, this title includes methods and provisions for:

(1) Restricting or prohibiting uses which are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or flood heights or velocities;

(2) Requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;

(3) Controlling the alteration of natural floodplains, stream channels, and natural protective barriers, which help accommodate or channel floodwaters;

(4) Controlling filling, grading, dredging and other development which may increase flood damage; and

(5) Preventing or regulating the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards in other areas. (Ord. 1278 § 2 (part), 2002).

20.04.050 Definitions.

Unless specifically defined in this section, words or phrases used in this title shall be interpreted so as to give them the meaning they have in common usage and to give this title its most reasonable application.

(1) "Appeal" means a request for a review of the flood plain administrator's interpretation of any provision of this title or a request for a variance.

(2) "Area of shallow flooding" means a designated AO, AH, or VO zone on the flood insurance rate map

(FIRM). The base flood depths range from one to three feet; a clearly defined channel does not exist, the path of flooding is unpredictable and indeterminate; and velocity flow may be evident.

(3) "Area of Special Flood Hazard" — See "Special flood hazard area."

(4) "Base flood" means the flood having a one percent chance of being equaled or exceeded in any given year (also called the "one-hundred-year flood").

(5) "Basement" means any area of the building having its flood subgrade (below ground level) on all sides.

(6) "Breakaway walls" means any type of walls, whether solid or lattice, and whether constructed of concrete, masonry, wood, metal, plastic or any other suitable building material which is not part of the structural support of the building and which is designed to break away under abnormally high tides or wave action without causing any damage to the structural integrity of the building on which they are used or any buildings to which they might be carried by floodwaters. A breakaway wall shall have a safe design loading resistance of not less than ten and no more than twenty pounds per square foot. Use of breakaway walls must be certified by a registered engineer or architect and shall meet the following conditions:

(A) Breakaway wall collapse shall result from a waterload less than that which would occur during the base flood; and

(B) The elevated portion of the building shall not incur any structural damage due to the effects of wind and water loads acting simultaneously in the event of the base flood.

(7) "Development" means any man-made change to improved or unimproved real estate, including, but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations, or storage of equipment or materials.

(8) "Existing manufactured home park or subdivision" means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed before the effective date of the floodplain management regulations adopted by a community.

(9) "Expansion to an existing manufactured home park or subdivision" means the preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads).

(10) "Flood boundary" and "floodway map" mean the official map on which the Federal Emergency Management Agency or Federal Insurance Administration has delineated both the areas of flood hazard and the floodway.

(11) "Flood insurance rate map (FIRM)" means the official map on which the Federal Emergency Management Agency or the Federal Insurance Administration has delineated both the areas of special flood hazards and the risk premium zones applicable to the community.

(12) "Flood insurance study" means the official report provided by the Federal Insurance Administration that includes flood profiles, the FIRM, the flood boundary and floodway map, and the water surface elevation of the base flood.

(13) "Flood" or "flooding" means a general and temporary condition of partial or complete inundation of normally dry land areas from (1) the overflow or floodwaters, (2) the unusual and rapid accumulation or runoff of surface waters from any source, and/or (3) the collapse or subsidence of land along the shore of a lake or other body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly caused by an unusually high water level in a natural body of water, accompanied by a severe storm, or by an unanticipated force of nature, such as a flash flood or an abnormal tidal surge, or by some similarly unusual and unforeseeable event which results in flooding as defined in this definition.

(14) "Floodplain management" means the operation of an overall program of corrective and preventive measures for reducing flood damage, including, but not limited to, emergency preparedness plans, flood-control works and floodplain management regulations.

(15) "Floodplain management regulations" means zoning ordinances, subdivision regulations, building codes, health regulations, special purpose ordinances (such as floodplain ordinance, grading ordinance, and erosion control ordinance) and other applications of police power. The term describes such state or local regulations in any combination thereof, which provide standards for the purpose of flood damage prevention and reduction.

(16) "Floodplain" or "flood-prone area" means any land area susceptible to being inundated by water from any source (see definition of "flooding").

(17) "Floodproofing" means any combination of structural and nonstructural additions, changes, or adjustments to structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures and their contents.

(18) "Floodway" means the channel of a river of other watercourse and the adjacent land areas that must be re-

served in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot. Also referred to as "regulatory floodway".

(19) "Functionally dependent use" means a use which cannot perform its intended purposes unless it is located or carried out in close proximity to water. The term includes only docking facilities, port facilities that are necessary for the loading and unloading of cargo or passengers, and ship building and ship repair facilities, but does not include long-term storage or related manufacturing facilities.

(20) "Highest adjacent grade" means the highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.

(21) "Lowest floor" means the lowest floor of the lowest enclosed area, including basement.

(A) An unfinished or flood resistant enclosure below the lowest floor that is usable solely for parking of vehicles, building access or storage in an area other than a basement area, is not considered a building's lowest floor provided it conforms to applicable non-elevation design requirements, including, but not limited to:

(i) The wet floodproofing standard in Section 20.12.040(d),

(ii) The anchoring standards in Section 20.12.020,

(iii) The construction materials and methods standards in Section 20.12.130, and

(iv) The standards for utilities in Section 20.12.050.

(B) For residential structures, all subgrade enclosed areas are prohibited as they are considered to be basements. This prohibition includes below-grade garages and storage areas.

(22) "Manufactured home" means a structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when attached to the required utilities. The term "manufactured home" does not include a "recreational vehicle".

(23) "Manufactured home park or subdivision means a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for sale or rent.

(24) "Mean sea level" means, for purposes of the National Flood Insurance Program, the National Geodetic Vertical Datum (NGVD) of 1929 or other datum, to which base flood elevations shown on a community's flood insurance rate map are referenced.

(25) "New construction" means, for floodplain management purposes, structures for which the start of construction commenced on or after the effective date of a floodplain management regulation adopted by this community and includes any subsequent improvements to such structures.

(26) "New manufactured home park or subdivision" means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed on or after the effective date of floodplain management regulations adopted by this community.

(27) "One-hundred-year flood" or "100-year flood" means a flood which has a one percent annual probability of being equaled or exceeded. It is identical to the "base flood", which will be the term used throughout this title.

(28) "Person" means an individual or his agent, firm, partnership, association or corporation, or agent of the aforementioned groups, or this state or its agencies or political subdivisions.

(29) "Recreational vehicle" means a vehicle which is

(A) Built on a single chassis;

(B) Four hundred square feet or less when measured at the largest horizontal projection;

(C) Designed to be self-propelled or permanently towable by a light-duty truck; and

(D) Designed primarily not for use as a permanent dwelling but as a temporary living quarters for recreational, camping, travel, or seasonal use.

(30) "Remedy a violation" means to bring the structure or other development into compliance with state or local floodplain management regulations, or, if this is not possible, to reduce the impacts of its noncompliance. Ways that impacts may be reduced include protecting the structure or other affected development from flood damages, implementing the enforcement provisions of the ordinance or otherwise deterring future similar violations, or reducing federal financial exposure with regard to the structure or other development.

(31) "Riverine" means relating to, formed by, or resembling a river (including tributaries), stream, brook, etc.

(32) "Special flood hazard area (SFHA)" means an area having special flood or flood-related erosion hazards, and shown on a FHBM or FIRM as zone A, AO, A1-30, AE, A99, or AH.

(33) "Start of construction" includes substantial improvement, and other proposed new development, and means that date the building permit was issued, provided the actual start of construction, repair, reconstruction, placement, or other improvement was within one hundred eighty days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement

of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling nor does it include the installation of streets and/or walkways, nor does it include excavation for a basement, footings, piers, or foundations or the erection of temporary forms, nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

(34) "Structure" means a walled and roofed building, including a gas or liquid storage tank, that is principally above ground, as well as a manufactured home.

(35) "Substantial damage" means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed fifty percent of the market value of the structure before the damage occurred.

(36) "Substantial improvement" means any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds fifty percent of the market value of the structure either:

(A) Before the improvement or repair is started, or

(B) If the structure has been damaged, and is being restored, before the damage occurred.

For the purposes of this definition, substantial improvement is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration effects the external dimensions of the structure. The term does not, however, include either:

(A) Any project for improvement of a structure to comply with existing state or local health, sanitary or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions; or

(B) Any alteration of a structure listed on the National Register of Historic Places or a State Inventory of Historic Places, provided that the alteration will not preclude the structure's continued designation as a historic structure.

(37) "Variance" means a grant of relief from the requirements of this title which permits construction in a manner that would otherwise be prohibited by this title.

(38) "Violation" means the failure of a structure or other development to be fully compliant with the community's floodplain management regulations. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required in this title is presumed to be in violation until such time as that documentation is provided. (Ord. 1278 § 2 (part), 2002).

20.04.060 Applicability.

This title shall apply to all areas of special flood hazards within the jurisdiction of the city. (Ord. 1278 § 2 (part), 2002).

20.04.070 Basis for establishing the areas of special flood hazard.

The areas of special flood hazard and areas of mudslide (i.e., mudflow) hazards identified by the Federal Emergency Management Agency or the Federal Insurance Administration in a scientific and engineering report entitled "Flood Insurance Study for the City of Marysville" dated August 10, 1982, with an accompanying flood insurance rate map is adopted by reference and declared to be a part of this title. This flood insurance study is on file at Marysville City Hall, 526 C Street, Marysville. This flood insurance study is the minimum area of applicability of this title and may be supplemented by studies for other areas which allow implementation of this title and which are recommended to the city council by the floodplain administrator. (Ord. 1278 § 2 (part), 2002).

20.04.080 Compliance.

No structure or land shall hereafter be constructed, located, extended, converted, or altered without full compliance with the terms of this title and other applicable regulations. Violations of the provisions of this title by failure to comply with any of its requirements (including violations of conditions and safeguards established in connection with conditions) shall constitute a misdemeanor. Nothing herein shall prevent the city council from taking such lawful action as is necessary to prevent or remedy any violation. (Ord. 1278 § 2 (part), 2002).

20.04.090 Abrogation and greater restrictions.

This title is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this title and another ordinance, easement, covenant, or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail. (Ord. 1278 § 2 (part), 2002).

20.04.100 Interpretation.

In the interpretation and application of this title, all provisions shall be:

(1) Considered as minimum requirements;

(2) Liberally construed in favor of the governing body; and

(3) Deemed neither to limit nor repeal any other powers granted under state statues. (Ord. 1278 § 2 (part), 2002).

20.04.110 Warning and disclaimer of liability.

The degree of flood protection required by this title is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by man-made or natural causes. This title does not imply that land outside the areas of special flood hazards or uses permitted within such areas will be free from flooding or flood damages. This title shall not create liability on the part of the city, any officer or employee thereof, or the Federal Insurance Administration, for any flood damages that result from reliance on this title or any administrative decision lawfully made hereunder. (Ord. 1278 § 2 (part), 2002).

20.04.120 Severability.

This title and the various parts thereof are declared to be severable. Should any section of this title be declared by the courts to be unconstitutional or invalid, such decision shall not affect the validity of the title as a whole, or any portion thereof other than the section so declared to be unconstitutional or invalid. (Ord. 1278 § 2 (part), 2002).

CHAPTER 20.08 ADMINISTRATION

20.08.010 Development permit required—Application.

A development permit shall be obtained before construction or development begins within any area of special flood hazards. Application for a development permit shall be made on forms furnished by the floodplain administrator and may include, but not be limited to: plans in duplicate drawn to scale showing the nature, location, dimensions, and elevation of the area in question; existing or proposed structures, fill, storage of materials, drainage facilities; and the location of the foregoing. Specifically, the following information is required:

(1) Proposed elevation in relation to mean sea level, of the lowest floor (including basement) of all structures; in zone AO or VO, elevation of highest adjacent grade and proposed elevation of lowest floor of all structures.

(2) Proposed elevation in relation to mean sea level to which any structure will be floodproofed;

(3) All appropriate certifications listed in Section 20.08.030(4); and

(4) Description of the extent to which any watercourse will be altered or relocated as a result of proposed development. (Ord. 1278 § 2 (part), 2002).

20.08.020 Floodplain administrator—Designated.

The city building official is appointed to administer and implement this title by granting or denying development permits in accordance with its provisions. (Ord. 1278 § 2 (part), 2002).

20.08.030 Floodplain administrator—Duties and responsibilities.

The duties and responsibilities of the floodplain administrator shall include, but not be limited to:

(1) Permit review:

(A) Review all development permits to determine that the permit requirement of this title has been satisfied.

(B) All other required state and federal permits have been obtained.

(C) The site is reasonably safe from flooding.

(D) The proposed development does not adversely affect the carrying capacity of the floodway. For purposes of this title, "adversely affects" means that the cumulative effect of the proposed development when combined with all other existing and anticipated development will increase the water surface elevation for the base flood more than one foot any point;

(2) Use of other base flood data: When base flood elevation data has not been provided in accordance with Section 20.04.070, the floodplain administrator shall obtain, review, and reasonably utilize any base flood elevation and floodway data available from a federal, state or other source, in order to administer Chapter 20.12 of this code. Any such information shall be submitted to the city for adoption.

(3) Whenever a watercourse is to be altered or relocated;

(A) Notify adjacent communities and the California Department of Water Resources prior to such alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Insurance Administration.

(B) Require that the flood-carrying capacity of the altered or relocated portion of the watercourse is maintained;

(4) Obtain and maintain for public inspection and make available as needed:

(A) The certification required in Section 20.12.040(a) (floor elevations),

(B) The certification required in Section 20.12.040(b) (elevations in areas of shallow flooding),

(C) The certification required in Section 20.12.040(c)(3) (elevation or floodproofing of nonresidential structures),

(D) The certification required in Section 20.12.040(d)(1) and (2) (wet floodproofing standard),

(E) The certified elevation required in Section 20.12.060(b) (subdivision standards),

(F) The certification required in Section 20.12.080(a) (floodway encroachments);

(5) Make interpretations where needed, as to the exact location of the boundaries of the areas of special flood hazards (for example, where there appears to be a conflict between a mapped boundary and actual field conditions). The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in Chapter 20.16 of this code.

(6) Take action to remedy violations of this title as specified in Section 20.04.080. (Ord. 1278 § 2 (part), 2002).

CHAPTER 20.12 FLOOD HAZARD REDUCTION PROVISIONS

20.12.010 Construction standards—Generally.

In all areas of special flood hazards the standards set out in this chapter are required. (Ord. 1278 § 2 (part), 2002).

20.12.020 Construction standards—Anchoring.

(a) All new construction and substantial improvements shall be anchored to prevent flotation, collapse or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy.

(b) All manufactured homes shall meet the anchoring standards of Section 20.12.070. (Ord. 1278 § 2 (part), 2002).

20.12.030 Construction standards—Materials and methods.

(a) All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.

(b) All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage.

(c) All new construction and substantial improvements shall be constructed with electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

(d) Require within zone AH or AO adequate drainage paths around structures on slopes to guide floodwaters around and away from proposed structures. (Ord. 1278 § 2 (part), 2002).

20.12.040 Construction standards—Elevation and floodproofing.

(a) New construction and substantial improvement of any structure, in zones other than AO, shall have the lowest floor, including basement, elevated to or above the base flood elevation. Nonresidential structures may meet the standards in Section 20.12.040(c). Upon the completion of the structure the elevation of the lowest floor including basement shall be certified by a registered professional engineer or surveyor, and verified by the community building inspector to be properly elevated. Such certification and verification shall be provided to the floodplain administrator.

(b) New construction and substantial improvement of any structure in zone AO shall have the lowest floor, including basement, elevated above the highest adjacent grade at least as high as the depth number specified in feet on the FIRM, or at least two feet if no depth number is specified. Nonresidential structures may meet the standards in Section 20.12.040(c). Upon the completion of the structure the elevation of the lowest floor including basement shall be certified by a registered professional engineer or surveyor, or verified by the community building inspector to be properly elevated. Such certification and verification shall be provided to the floodplain administrator.

(c) Nonresidential construction shall either be elevated in conformance with Section 20.12.040(a) of (b) or together with attendant utility and sanitary facilities:

(1) Be floodproofed so that below the elevation recommended under Section 20.12.040(a) and (b) the structure is watertight with walls substantially impermeable to the passage of water;

(2) Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; and

(3) Be certified by a registered professional engineer or architect that the standards of this subsection are satisfied. Such certifications shall be provided to the floodplain administrator.

(d) Require for all new construction and substantial improvements, that fully enclosed areas below the lowest floor that are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or meet or exceed the following minimum criteria:

(1) Either a minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided. The bottom of all openings shall be no higher than one foot above grade. Openings may be equipped with screens, louvers, valves or other coverings or devices; provided that they permit the automatic entry and exit of floodwaters; or

(2) Be certified to comply with a local floodproofing standard approved by the Federal Insurance Administration.

(e) Manufactured homes shall also meet the standards in Section 20.12.070. (Ord. 1278 § 2 (part), 2002).

20.12.050 Standards for utilities.

(a) All new and replacement water supply and sanitary systems shall be designed to minimize or eliminate infiltration of floodwaters into the system and discharge from systems into floodwaters.

(b) On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding. (Ord. 1278 § 2 (part), 2002).

20.12.060 Standards for subdivision.

(a) All preliminary subdivision proposals shall identify the flood hazard area and the elevation of the base flood.

(b) All final subdivision plans will provide the elevation of proposed structure(s) and pads. If the site is filled above the base flood, the final pad elevation shall be certified by a registered professional engineer or surveyor and provided to the floodplain administrator.

(c) All subdivision proposals shall be consistent with the need to minimize flood damage.

(d) All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize flood damage.

(e) All subdivisions shall provide adequate drainage to reduce exposure to flood hazards. (Ord. 1278 § 2 (part), 2002).

20.12.070 Standards for manufactured homes.

(a) All manufactured homes that are placed or substantially improved, within Zones A1-30, AH and AE on the community's Flood Insurance Rate Map, on sites located

(1) Outside of a manufactured home park or subdivision,

(2) In a new manufactured home park or subdivision,

(3) In an expansion to an existing manufactured home park or subdivision, or

(4) In an existing manufactured home park or subdivision on a site upon which a manufactured home has incurred "substantial damage" as the result of a flood,

shall be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated to or above the base flood elevation and be securely fastened to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.

(b) All manufactured homes to be placed or substantially improved on sites in an existing manufactured home park or subdivision within Zones A1-30, AH, and AE on the community's Flood Insurance Rate Map that are not subject to the provisions of paragraph 20.12.070(a) will be securely fastened to an adequately anchored foundation system to resist flotation, collapse, and lateral movement, and be elevated so that either the

(1) Lowest floor of the manufactured home is at or above the base flood elevation, or

(2) Manufactured home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than thirty-six inches in height above grade.

Upon the completion of the structure, the elevation of the lowest floor including basement shall be certified by a registered professional engineer or surveyor, and verified by the community building inspector to be properly elevated. Such certification and verification shall be provided to the floodplain administrator. (Ord. 1278 § 2 (part), 2002).

20.12.075 Standards for recreational vehicles.

All recreational vehicles placed on sites within Zones A1-30, AH, and AE on the community's Flood Insurance Rate Map will either:

(a) Be on the site for fewer than one hundred eighty consecutive days, and be fully licensed and ready for highway use—a recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to

the site only by quick disconnect type utilities and security devices, and has no permanently attached additions, or

(b) Meet the permit requirements of Chapter 20.08 of this title and the elevation and anchoring requirements for manufactured homes in Section 20.12.070(a). (Ord. 1278 § 2 (part), 2002).

20.12.080 Floodways.

Located within areas of special flood hazard established in Section 20.04.070 are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of floodwaters which carry debris, potential projectiles, and erosion potential, the following provisions apply:

(1) Prohibit encroachments, including fill, new construction, substantial improvements, and other development unless certification by a registered professional engineer or architect is provided demonstrating that encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge.

(2) If subsection (1) of this section is satisfied, all new construction and substantial improvements shall comply with all other applicable flood hazard reduction provisions of Chapter 20.12 of this code. (Ord. 1278 § 2 (part), 2002).

CHAPTER 20.16 VARIANCES

20.16.020 Conditions for variances.
20.16.010 Board of appeals.

20.16.010 Board of appeals.

(a) The building board of appeals of the city shall hear and decide appeals and requests for variances from the requirements of this title.

(b) The building board of appeals shall hear and decide appeals when it is alleged there is an error in any requirement, decision, or determination made by the floodplain administrator in the enforcement or administration of this title.

(c) In passing upon such applications, the building board of appeals shall consider all technical evaluations, all relevant factors, standards specified in other sections of this title, and;

(1) The danger that materials may be swept onto other lands to the injury of others;

(2) The danger of life and property due to flooding or erosion damage;

(3) The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;

(4) The importance of the services provided by the proposed facility to the community;

(5) The necessity to the facility of a waterfront location where applicable;

(6) The availability of alternative locations for the proposed use which are not subject to flooding or erosion damage;

(7) The compatibility of the proposed use with existing and anticipated development;

(8) The relationship of the proposed use to the comprehensive plan and floodplain management program for that area;

(9) The safety of access to the property in time of flood for ordinary and emergency vehicles;

(10) The expected heights, velocity, duration, rate of rise, and sediment transport of the floodwaters expected at the site; and

(11) The costs of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, gas, electrical, and water system, and streets and bridges.

(d) Generally, variance may be issued for new construction and substantial improvements to be erected on a lot of on-half acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, providing subsection (c)(1) through (11) of this section have been fully considered. As the lot size increases beyond one-half acre, the technical justification required for issuing the variance increases.

(e) Upon consideration of the factors of Section 20.16.010(c) and the purposes of this title, the building board of appeals may attach such conditions to the granting of variances as it deems necessary to further the purposes of this title.

(f) The floodplain administrator shall maintain the records of all appeal actions and report any variances to the Federal Insurance Administration upon request. (Ord. 1278 § 2 (part), 2002).

20.16.020 Conditions for variances.

(a) Variances may be issues for the reconstruction, rehabilitation or restoration of structures listed in the National Register of Historic Places or the State Inventory of Historic Places, without regard to the procedures set forth in the remainder of this section.

(b) Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result.

(c) Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.

(d) Variances shall only be issued upon:

(1) A showing of good and sufficient cause;

(2) A determination that failure to grant the variance would result in exceptional hardship to the applicant; and

(3) A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of, the public, or conflict with existing local laws or ordinances.

(e) Variances may be issued for new construction and substantial improvements and for other development necessary for the conduct of a functionally dependent use; provided, that the provisions of Sections 20.16.020(a) through (d) are satisfied and that the structure or other development is protected by methods that minimize flood damages during the base flood and create no additional threats to public safety.

(f) Any applicant to whom a variance is granted shall be given written notice that the structure will be permitted to be built with a lowest flood elevation below the regulatory flood elevation and that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation. A copy of the notice shall be recorded by the floodplain board in the office of the Yuba County recorder and shall be recorded in a manner so that it appears in the chain of title of the affected parcel of land. (Ord. 1278 § 2 (part), 2002).

3.2.4 Details of Ongoing & Completed Mitigation Strategies

Flood Prevention

In 1924 a one-time swamp was converted into scenic Ellis Lake in the north central part of the City. Ellis Lake still serves as a detention pond for drainage water that is pumped into the rivers during sustained periods of precipitation.

The inhabited areas of the City of Marysville is not currently located within the 100-year floodplain. Ellis Lake, East Lake Park, and the areas outside the City's ring levee system are currently mapped into the 100-year floodplain. FEMA has not yet revised the Flood Insurance Rate Maps for Marysville in the digital mapping program. The Corps of Engineers is currently preparing the Upper Feather River Floodplain Mapping Study for the Department of Water Resources. It is anticipated that this study will reflect the results of the current boring program and the associated underseepage analysis of the Feather River levees around Marysville.

The City of Marysville, an urban area of approximately 1,500 acres and 12,600 people, is ringed by 7.5 miles of levee along the south bank of the Jack and Simmerly Sloughs, the east bank of the Feather River and the north bank of the Yuba River. An additional 3.9 miles along the north bank of the Yuba River extends upstream of Marysville, providing some protection to agricultural lands northeast of the City.

It should be noted that the design, construction, or maintenance of these levees are not under the authority of the City of Marysville, but the Marysville Levee Commission, the United States Corps of Engineers (USACE), and Department of Water Resources (DWR). Regardless, the following is information on the levee system that protects the City.

Sacramento River Flood Control Project Levees (SRFCP):

In 1953 certain levees in Yuba County were identified as specific project works and features of the SRFCP. The levees surrounding the City are part of the SRFCP. The Marysville Levee Commission was established to provide maintenance and operations of the ring levee system protecting the City. The ring levee system is comprise of three levee structures: Unit 1 is 3.3 miles of the Jack & Simmerly Slough South Bank from the Feather River to the Yuba River, Unit 2 is 1.3 miles of the Feather River East Bank from the Yuba River to Jack and Simmerly Slough, and Unit 3 is 6.9 miles of the Yuba River North Bank from the Feather River to High Ground. The City is responsible for staffing and supporting the Marysville Levee Commission.

Sacramento River Flood Control System Evaluation (System Evaluation):

After the flood of 1986, Congress authorized an evaluation of the SRFCP by the US Corps of Engineers (Corps) DWR. The System Evaluation was done in six phases with each phase covering a distinct geographical region of the SRFCP. Phase II evaluated 134 miles of levees protecting the Marysville/Yuba City, and included the Marysville Commission Levees.

The Design Memorandum for Phase II identified problems in the Feather River levee and recommended 0.6 miles of cutoff wall to be constructed. The Corps constructed 0.33 miles of 30-foot deep cutoff wall in 1996. Additional work was done by the Corps in 1999 as part of the PL 84-99 authorization. A 35-foot deep cutoff wall was constructed in Unit 1 and Unit 2. This work was done to stabilize the levee for the 1957 design event.

"Water Resources Review Document Comprehensive Report" ([Draft] prepared by MBK Engineers for the Yuba County Multi-Jurisdictional Multi-Hazard Mitigation Plan)

The intent of this study was to document flood hazards in Yuba County and includes review of the SRFCP and the System Evaluation. Current status of the Marysville Levees can be found in Figure 14 of that report.

Fire Prevention

All businesses in Marysville are required to meet the fire and life safety requirements adopted by the State of California and the City of Marysville. New businesses pay a fire inspection fee when they obtain their business license from the City. At the time of opening, businesses are required to schedule an inspection with the fire department. The initial inspection will identify correction of any or all repairs required by the fire department and the business will be placed on the list for annual inspection. The City encourages all businesses to review the Self Inspection Worksheet which contains general information on what the fire department requires from businesses.

One of the major missions at the Marysville Fire Department (MFD) is the prevention of fires in the community. In order to facilitate this goal the City sponsors and supports a very proactive fire prevention program at the fire department. This program is responsible for checking all new building plans to make sure that the plans meet the fire code and conducting fire inspections of new and existing businesses.

Residential Fire Inspections are not routinely conducted for existing single-family residential homes, but all residents are urged to keep fire safety a number one priority in their homes. The Marysville Fire Department – Home Fire Safety Checklist provides information regarding some of the major hazards that often lead to fires and fire related deaths in homes.

Citizens are encouraged to use the check list and work with their family to help reduce the likelihood of a fire. The Fire Department provided educational presentations and demonstrations on home fire safety including home fire escape plans.

4 Risk Assessment

DMA 2000 Requirements – Risk Assessment
Multi-Jurisdictional Risk Assessment **§201.6(c)(2)(iii)**: For multi-jurisdictional plans, the risk assessment must assess each jurisdiction's risks where they vary from the risks facing the entire planning area.
Identifying Unique Jurisdictional Hazards & Risks: **Was a** risk assessment (all sections) completed, by this participating jurisdiction for each unique hazard or risk that was not covered in the main section of the MJP? [Only unique or additional hazards and risks, within a participating jurisdiction, should be included. These would be hazards and risks that are **not already included** as part of the MJP. For each unique hazard, a profile of the hazard along with vulnerabilities should be included in the jurisdiction's annex or supplement to the MJP. Example: A jurisdiction with a volcano, not covered in the MJP, would complete all risk assessment section for their volcano.]

The Marysville risk assessment was conducted as part of the Yuba County Hazard Mitigation Project and involved the collaboration of numerous governmental entities, state and federal agencies, the City of Wheatland, and the County of Yuba. A complete description of the County-wide planning process is available in Section Two of the Yuba County Multi-Jurisdictional Multi-Hazard Mitigation Plan.

This section describes the components of the risk assessment process, including a discussion of the identified hazards, a profile of these hazards, and a review of the City of Marysville asset inventory, a vulnerability assessment, and the impact of future development in the service area of Marysville.

According to FEMA, a risk assessment "is the process of measuring the potential loss of life, personal injury, economic injury, and property damage resulting from natural hazards by assessing the vulnerability of people, buildings, and infrastructure to natural hazards" (FEMA 2001). Any mitigation activities to reduce losses to life and property must be based upon a thorough assessment of the risks to these assets.

The steps involved in completing the risk assessment included:

- A profile of the potential hazard occurrences (location and extent) and historical occurrences;
- Probability of a hazard
- Vulnerability to assets and potential impacts
- Analysis of future development trends

These steps provide the basis for the risk assessment presented in this section.

4.1 Hazards

DMA 2000 Requirements – Risk Assessment
Hazards **§201.6(c)(2)(i) & (ii)**: Local risk assessments must provide sufficient information to enable the jurisdiction to identify and prioritize appropriate mitigation actions to reduce losses from identified hazards. **Identifying Hazards** **§201.6(c)(2)(i)**: [The risk assessment **shall** include a] description of the type … of all natural hazards that can affect the jurisdiction.
For EACH Hazard identified by THIS jurisdiction a narrative summary of the Overview of the Hazard (from the jurisdiction's perspective) and the Impact (to people, buildings, the environment, etc.) if the Hazard occurred, shall be part of each jurisdiction's annex or supplement to the MJP.

A hazard is a source of potential danger or adverse condition. A natural event is a hazard when it has the potential to harm people or property. A hazard event is a specific occurrence of a particular type of hazard (*FEMA How-to Guide # 2, Appendix A*).

The City of Marysville addressed all hazards, natural and man-made, that could affect critical facilities and infrastructure within their jurisdiction. Natural hazards include those that arise from natural earth processes such as uncontrollable meteorological or geological events. Events of man–made origin include accidental or intentional events such as the derailment of a rail car carrying hazardous material or terrorism, respectively. All hazards that may affect the City were considered and ranked according to the likelihood of their occurrence using the best–available knowledge and data by the Marysville Planning Committee and other stakeholders, including community members.

Hazards included in the Plan may be potential threats to the City and are described in terms of the nature of the hazard, their magnitude, duration, and location. Each hazard is summarized by its history of occurrence and the probability and location or future hazard events. This was accomplished through review of previous studies conducted by the county or other jurisdictions, including state and federal agencies. Using GIS, mapped information was used to identify areas potentially at risk of a particular hazard in the City of Marysville.

Profiled hazards are described by their location within the City, likelihood of occurrence, extent and magnitude, and history of occurrence in the jurisdiction. Potential damage to the assets affected by these hazards is identified in the Vulnerability Assessment. Each hazard was described in an informative manner to ensure that users of this Plan who may be unfamiliar with a particular hazard will have a better idea of the potential for property damage or loss of life.

4.1.1 Identifying Jurisdictional Hazards

Hazard identification is the process of identifying hazards that threaten an area (*FEMA How-to Guide # 2, Appendix A*).

The Planning Committee prioritized hazards by committee discussion, historical documentation and public input. The initial planning meeting provided an opportunity to discuss the role of the Yuba County Plan and the identification of hazards to assess the impact of the hazards on the City. Additionally, the City participated in several public stakeholder meetings to review hazard vulnerability information and receive input on the development of the plan. Subsequent conversations with Marysville's Director of Public Works and fire chief identified the impact to assets and hazards. The City staff and planning committee ranked the hazards, discussing

potential loss and impact on critical and essential services in terms of threat level to the jurisdiction.

As a result of the meetings, public discussion, and input from stakeholders, the hazards were prioritized into three threat risk categories of low, moderate, or high risk to the City of Marysville (Table 4-1).

Table 4–1 Hazard Rank Priorities – City of Marysville

High	Moderate	Low
Flood/Levee Failure	Traffic	Tornado
Severe Winter Storms	Terrorism	Earthquake
Hazardous Materials	Extreme Heat	Drought
Fire	Dam Failure	

List and Description of Hazards Affecting the City of Marysville
Profiles were developed from the hazards above identified as high threats to the City. The guidelines presented in the FEMA Workshop document #1 "Identify the Hazards" were followed to ensure that hazards were adequately profiled. The FEMA Workshop tasks included:

- Listing the hazards that may occur:
  - Research newspapers and other historical records.
  - Review existing plans and reports.
  - Consult with experts in the area.
  - Gather information on Internet websites.
- Focus on the most prevalent hazards in the community:
  - Go to hazard websites.
  - Locate your agencies or state on the website map.
  - Determine whether Marysville is in a high–risk area. Get more localized information if necessary.

The City of Marysville used the tools above as a baseline. With collaboration with the Yuba County Hazard Mitigation Project and other agencies such as CDF and the Marysville Levee Commission, the City referenced their historical disaster data, local disaster recovery data, GIS mapping, and local Emergency Operations Plans to assess their risk to each disaster.

Table 4–2 Summary of the City of Marysville's Profiled Hazards

Hazard	Description	Justification
Flood/Levee Failure	The City of Marysville is ringed by 7.5 miles of levees. An additional 3.9 miles of levees extend upstream providing some protection to agricultural lands northeast of the City.	Marysville has a long history of catastrophic flooding events involving both the Yuba and Feather Rivers. Major floods since the area's settlement in the mid-1800's have resulted in loss of life, significant property damage, and constrained economic development. Recent catastrophic flooding in Yuba County resulted in a evacuations, which included Marysville.
Severe Winter Storms	Severe winter storms have historically caused damage to the City through localized flooding, high river levels, and levee erosion.	Severe winter storms are most often experienced as periods of heavy precipitation and increased river levels.

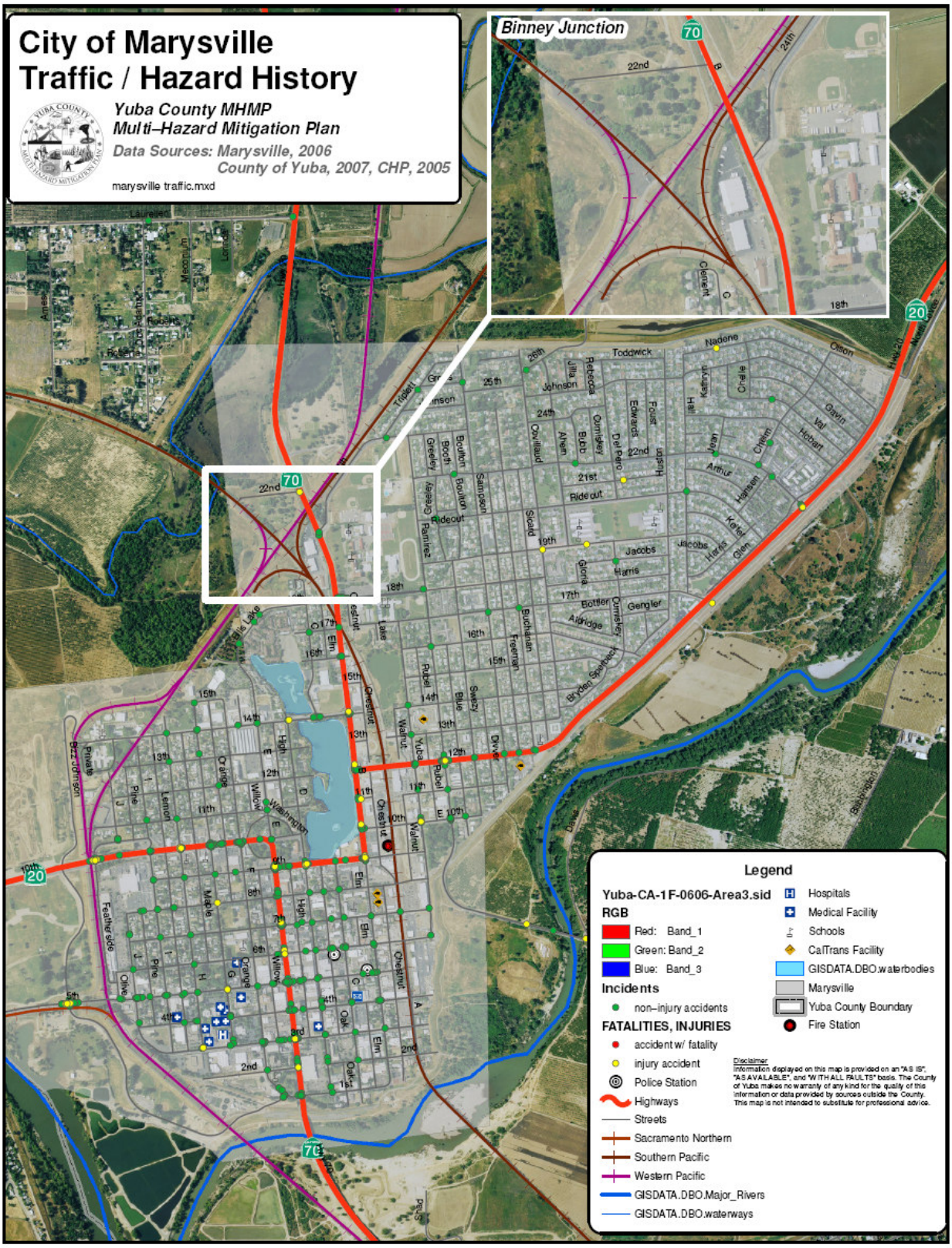
Hazard	Description	Justification
Hazardous Materials Release	The City is bisected by major transportation routes for automobile and truck traffic, State Highways 20 and 70. Four bridges providing linkage to and from Marysville are often impacted by traffic through the City. Union Pacific Railroad rail lines encircle 3.5 miles of the City, with trains passing through every 30 minutes. The city is also located near the Yuba County Airport and the airspace of Beale AFB.	State Highways 20 and 70, and the Union Pacific Railroad have high volumes of hazardous materials traffic located very close to commercial, residential, school, and city properties. Aging infrastructure in the City has revealed plumes from underground storage tanks.
Fire	Long dry summers with high temperatures and high winds increase the potential for fire. The city is surrounded by areas with combustible vegetation.	The primary threat of fire to the City is that of an urban fire that is not contained quickly. Many of the buildings within the city limits are older and could potentially help to quickly spread a fire. The City burned down in 1851, and in the 1920's seven city blocks were lost. Most recently, a structure fire in September 2006 led to the death of two people.

Hazards for the City of Marysville identified as MODERATE or LOW in priority are:

- **Traffic**: Marysville is bisected by major transportation routes for automobile and truck traffic, State Highways 20 and 70. Four bridges providing linkage to and from the City are often impacted by traffic through the City. Recent studies have shown a drastic increase in the number of vehicles passing through the City. The amount of traffic could limit the ability of first responders to respond to emergency response calls.

  A trestle fire in Sacramento in early 2007 resulted in all train traffic normally on that line being re-directed through Marysville at Binney Junction (Figure 4-X). The result was an increase in train traffic through the City of Marysville, which increased the potential of the City to experience an emergency related to the rail lines.
- **Terrorism**: Possible targets of terrorism within the City include State and County facilities, such as the headquarters of CalTrans District 3 and the Yuba County Government Center. Schools, hospitals, and PG&E substations are also potential targets.
- **Extreme Heat**: The City houses a significant elderly population. Increased incidents of heat related incidents could impact ability to respond to emergencies.
- **Dam Failure**: The City of Marysville would be directly impacted by the failure of Oroville Dam or New Bullards Bar Dam, and could be affected by the failure of Englebright Dam or Virginia Ranch Dam. An occurrence of the failure of any of these dams, while potentially catastrophic to the City, are unlikely to occur.
- **Tornado**: Not considered a likely occurrence, a tornado would devastate the City as well as highway and train transportation. Small tornados rated F-0 have been cited in surrounding areas recently.
- **Earthquake**: Not considered a likely occurrence, an earthquake would devastate the City.
- **Drought**: The primary threat from drought is the increase in potential fuel load.

Figure 4-1 City of Marysville Traffic Hazard History



4.1.2 Profiling Jurisdictional Hazards

The following section is a description of the hazards identified by the City of Marysville as high priority hazards from the perspective of the City. Complete profiles of each of these hazards can be found in Section 4 of the Yuba County Multi-Jurisdictional Multi-Hazard Mitigation Plan.

- Flood/Levee Failure – Section 4.3.1
- Severe Winter Storms – Section 4.3.2
- Hazardous Materials – Section 4.3.10
- Fire – Section 4.3.5

4.1.2.1 Flood/Levee Failure

The City of Marysville historically sat on a bluff at the confluence of the Yuba and Feather Rivers, its elevation protecting it from the rising rivers. A study of historic river channels (Figure 4-1) indicates that, other than a small section in the southernmost portion of the City, there is no historical evidence of either of the rivers running through the current location of Marysville.

The Marysville Levee system has prevented major flooding within the City of Marysville since its construction. High water events in 1955, 1986, and 1997 led to the evacuation of the City and concerns about the possibility of a levee failure, but breaks in other locations along the Yuba and Feather Rivers relieved the pressure on the Marysville Levee system in each instance. Former Marysville Levee Commissioner W. T. Ellis noted during high water periods in the early 20th century that the only location of concern during those events was the southern section of the levee system; the same area that the historic Yuba River Channel once occupied. This section of levee has been prone to seepage issues in the past.

"Water Resources Review Document Comprehensive Report" was prepared by MBK Engineers for the Yuba County Multi-Jurisdictional Multi-Hazard Mitigation Plan). The intent of this study was to document flood hazards in Yuba County and includes a review of the Sacramento River Flood Control Project and the Sacramento River Flood Control System Evaluation. The following is taken from Chapter 7 of the Draft Report:

Known Deficiencies:

> Erosion: There are no mapped erosion sites which currently affect the Marysville Levees.
>
> Freeboard: While it appears that freeboard is adequate for the 100-year and 200-year floods along most of the Marysville levees, there are many roadway and railroad crossings. These crossings appear to have adequate freeboard for the 100-year flood, but less than three (3) feet of freeboard for the 200-year flood exist at all the crossings in Unit 1 and at the Willamette and Pacific Railroad (WPRR) crossing near Unit 3. The top of levee data is from the Comp Study and should be considered at a planning level of detail.
>
> Geotechnical: Much geotechnical information has been developed for the Marysville Levees. A recent evaluation of this information determined that additional information would be required to meet current geotechnical certification criteria. At least 21 additional borings are needed for the 7.5 miles of levees surrounding the City to meet current FEMA certification criteria. Initial information from the Yuba Basin General Reevaluation Study indicates that geotechnical underseepage criteria may be met for the 100-year event, but might be exceeded for the 200-year event.

Design Studies:

The Yuba Basin Project included the Marysville Levees in its evaluation; and 5.1 miles of cutoff wall and berm were authorized for construction. At the time of the authorization, it was thought that the Yuba Basin Project work would provide 300-year protection to the City. This evaluation of reliability did not consider underseepage. In addition, the hydrology and hydraulics have been updated since completion of the Feasibility Study.

Current Status:

An evaluation of the existing geotechnical information on the Marysville levees has determined that insufficient information exists to certify the levees for underseepage according to the new criteria. An additional 21 borings need to be conducted and underseepage evaluated in order to certify the Marysville Levees as meeting FEMA criteria. The southern and northern crossings of the WPRR, both Northern crossings of the Southern Pacific Railroad (SPRR) and the northern crossing of State Highway 70 need to be evaluated to determine what sort of modifications would be needed to provide adequate freeboard for the 200-year water surface elevation. The Upper Feather River Floodplain Mapping Study will evaluate the Marysville Levees. Preliminary results are anticipated to be released in early 2008.

Governor's Study (AB 142)

The Marysville levee system recently underwent an evaluation by United States Army Corps of Engineers (USACE) to determine levee stability and permeability. This evaluation was provided by DWR and funded by Assembly Bill (AB) 142. This funding was provided in response to Governor Schwarzenegger's declaration of a state of emergency for California's levee system. Executive Order 2-01-06 directed DWR to identify and repair critical levee sites on the California levee system to prevent catastrophic flooding and loss of life. The results of Marysville's study are pending.

A study of existing FEMA Special Flood Hazard Area (SFHA) mapping (Figure 4-2) shows the areas within Marysville that are located within the 100 year and 500 year floodplains. The areas surrounding Ellis Lake and East Park Lake are the only areas within the City currently located within the SFHA. FEMA is currently reevaluating all SFHA mapping in the Untied States and recently completed the area in Yuba County south of Marysville.

If a levee failure were to occur, it would be catastrophic to the City. The ring levee system which protects Marysville from rising river waters would act as a bowl, ensuring the City would be inundated by water flowing through the broken levee.

Per the Sacramento Area Council of Governments (SACOG):

the levees on the Yuba and Feather Rivers around Marysville are not certified as having 100-year protection, although no deficiencies have been identified at this time. DWR has conducted a drilling program along the entire levee around Marysville. This program was funded by Assembly Bill 142, which authorized funds to assess the structural capabilities of California's levee system (Figure 4-3)

The City of Marysville is not currently within the 100-year floodplain. FEMA has not yet revised the Flood Insurance Rate Maps (FIRM) for Marysville in the digital mapping program. USACE is currently preparing the Upper Feather River Floodplain Mapping Study for DWR. It is anticipated that this study will reflect the results of the current boring program and the associated underseepage analysis of the Feather River levees around Marysville.

Figure 4-2 Historic River Channels with Levee Breaks

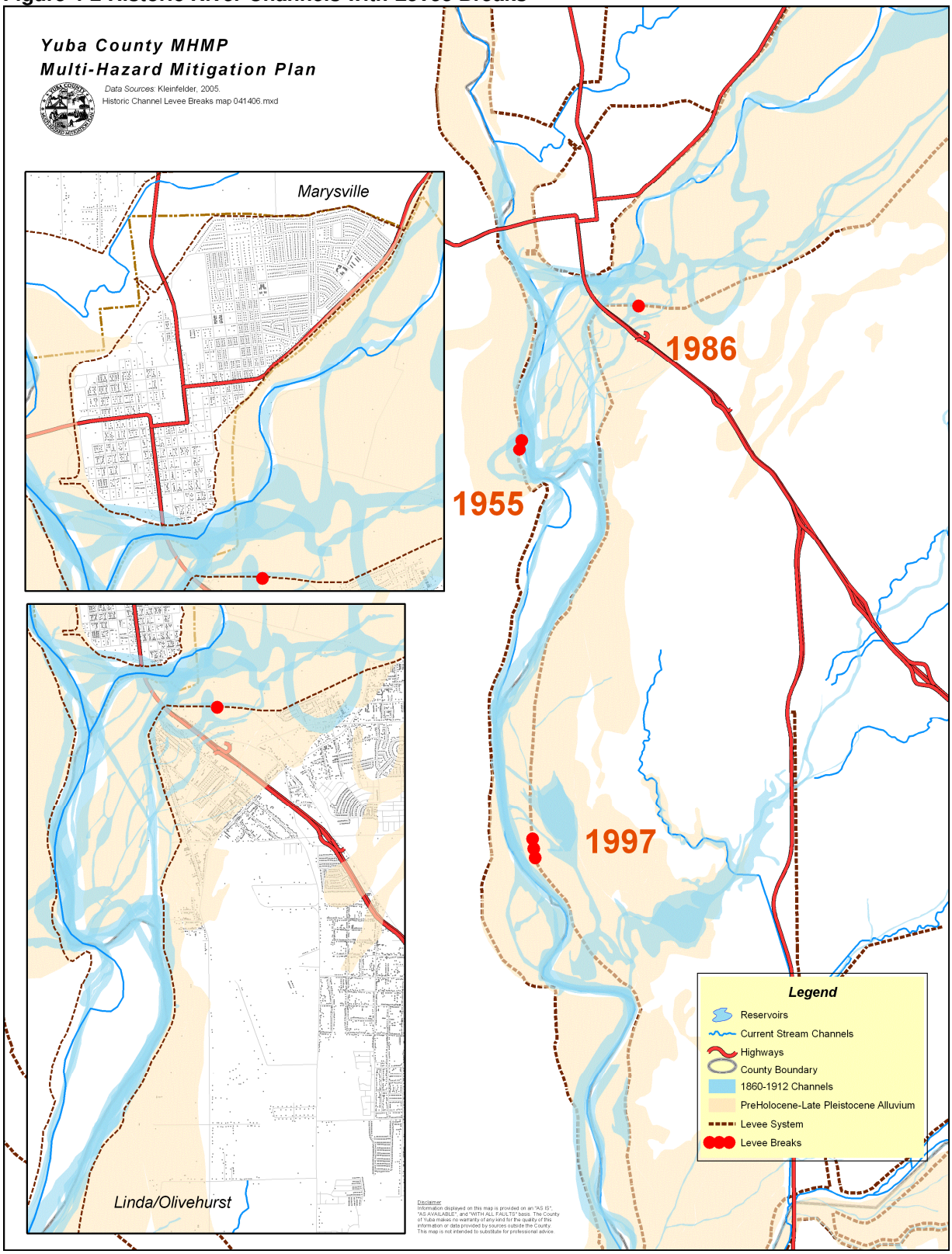


Figure 4-3 Yuba County 100 & 500 Year Flood Zones

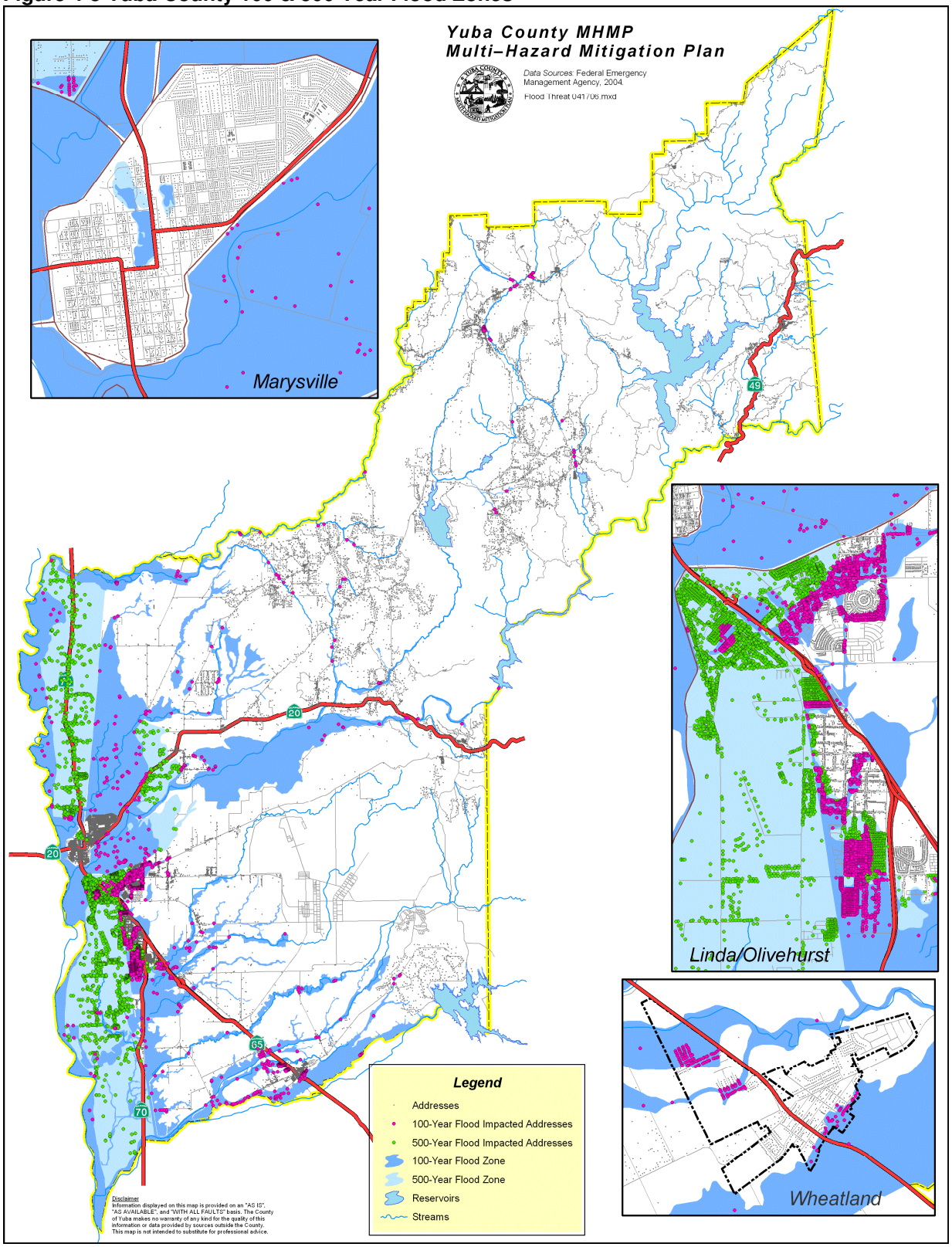
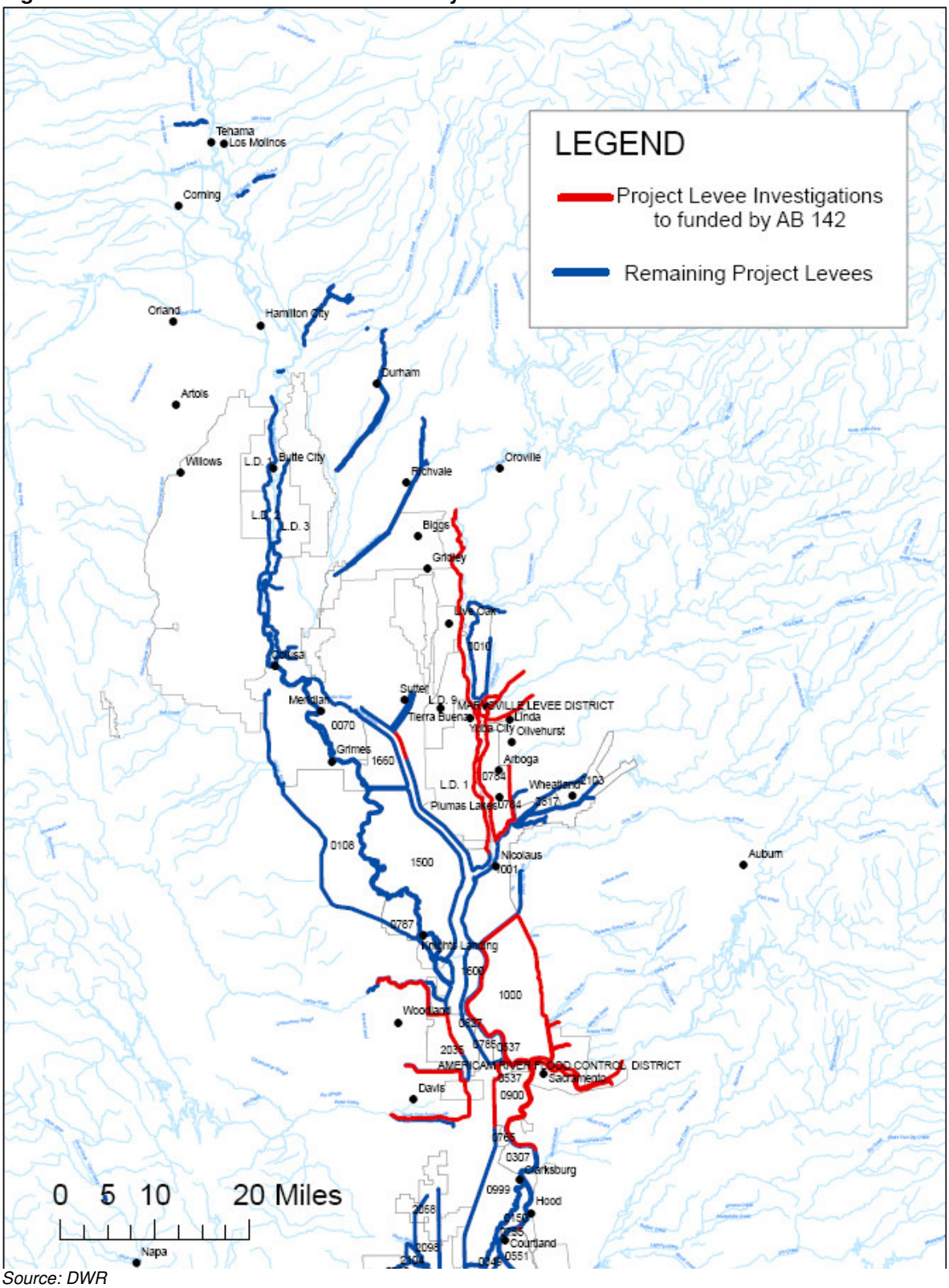


Figure 4-4 Northern Urban Levees Funded by AB 142



Source: DWR

4.1.2.2 Severe Winter Storms

Severe winter storms occur in the City of Marysville in the form of heavy precipitation. Snowfall within the City is rare and does not cause damage when it does occur. The risk from severe winter storms come in the form of increased river levels and localized flooding. The most extreme result of a severe winter storm, a levee failure, is discussed in the preceding section.

During high water periods not associated with levee breaks, Marysville's property located outside the Maryville ring levee suffers damage. This includes the wastewater treatment facility, Riverfront Park and its associated facilities. The 2005-2006 Winter Storm demonstrated the level of damage likely to occur during a high water event.

Table 4–3 2005-2006 Winter Storm Damage

2005/2006 Winter Storm Damage-City of Marysville		
Location	**Damage**	**Cost**
Riverfront Park	Levee access road at 10th Street Bridge overpass and Bizz Johnson Drive – washout	$5,000
Riverfront Park	Boat docks washed away	$15,000
Riverfront Park	Repair damage to Bizz Johnson Drive	$40,000
Riverfront Park and Cemetery	Remove pumps at soccer field, cat shed, and cemetery before high water event, replace after water recession	$3,100
Riverfront Park	Replace damaged electrical panels	$9,000
Riverfront Park	Repair damage and clean restrooms	$12,500
Cemetery	Replace damaged electrical panels	$5,000
Riverfront Park	Debris removal	$5,000
Road repair	Potholes caused by heavy rain	$5,000
Ellis Lake	Cobble bank and sidewalk undermined by high water	$10,000
Riverfront Park	2 damaged gates	$1,000
Wastewater treatment plant	Fencing around ponds washed down	$1,200
Wastewater treatment plant	Erosion of banks around ponds; pond 11 north levee washed away	$23,000
Riverfront Park	Damaged fences	$2,500
	TOTAL	**$137,300**

4.1.2.3 Hazardous Materials

Hazardous Materials are transported through the City of Marysville by truck on State Highways 20 and 70 and by rail, through lines which bisect the City. Additionally, the Marysville Fire Department has contracted with Yuba County to provide regional hazardous materials response.

A hazardous materials incident could have a damaging effect on the City of Marysville. A major spill could cause traffic to be shut down on one of the two major highways running though the City. For an area with a traffic problem, the shutting down of any major thoroughfare would greatly impact the City.

Because the rail lines and major roadways are so near to densely populated habitable areas, a hazardous materials spill could impact a high volume of people, possibly leading to injuries and illness.

Most recently, a gas spill and a local station resulted in 1500 gallons of gasoline being released, shutting down traffic at a major Marysville intersection.

Tables 4-4 through 4-7 demonstrate the number of hazardous materials calls responded to by the Marysville Fire Department from 2005 through July 2007

4.1.2.4 Fire

The effects of fire within the City of Marysville are largely mitigated by the presence of a hydrant system within the city. Historically, Marysville had one of the first fire departments in the area, which was formed shortly after the original city burned to the ground.

The City of Marysville operates its own fire department and contracts with the California Department of Forestry and Fire Protection for fire service, along with its robust volunteer staff. The Marysville Fire Station is strategically located near the center of town, helping to ensure a rapid response time.

Most recently, a structure fire on 7th street in September 2006 led to the death of two people. However the Fire Department was able to restrict the fire to that building, owing to the response time of the fire department and the City's hydrant system.

The primary threat of fire to the City is that of an urban fire that is not contained quickly. Many of the buildings within the city limits are older and could potentially help to quickly spread a fire.

Tables 4-4 through 4-7 demonstrates the number of fire calls responded to by the Marysville Fire Department from 2005 through July 2007

Table 4–4 Marysville Fire Department Statistical Information - 2005

Emergency Responses	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
Medical Calls	148	107	130	128	148	124	150	139	116	112	96	135	**1,533**
Fire Calls	11	8	20	16	25	27	34	42	42	31	18	12	**286**
Vehicle Accidents	24	17	22	18	30	24	32	26	32	17	19	36	**297**
Public Assist	5	14	12	7	3	7	11	12	7	12	13	9	**112**
HazMat Calls	0	0	2	1	0	0	2	9	5	2	3	0	**24**
Total Calls	188	146	186	170	206	182	229	228	202	174	149	192	**2,252**

Table 4–5 Marysville Fire Department Statistical Information - 2006

Emergency Responses	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
Medical Calls	124	124	131	113	102	131	141	126	118	107	117	168	**1,502**
Fire Calls	20	18	20	18	13	41	17	42	35	28	23	17	**292**
Vehicle Accidents	27	21	26	20	22	29	21	25	20	33	31	22	**297**
Public Assist	10	2	8	7	18	17	8	16	7	6	7	11	**117**
HazMat Calls	0	2	3	3	3	1	3	3	3	0	4	5	**30**
Total Calls	181	167	188	161	158	219	790	212	183	174	182	223	**2,238**

Table 4–6 Marysville Fire Department Statistical Information - 2007

Emergency Responses	Jan	Feb	Mar	Apr	May	Jun	Jul	Total
Medical Calls	107	119	128	111	124	130	107	**826**
Fire Calls	14	21	32	35	24	28	31	**185**
Vehicle Accidents	18	8	13	19	14	13	27	**112**
Public Assist	16	17	8	5	7	8	13	**74**
HazMat Calls	4	2	0	5	1	2	3	**17**
Total Calls	159	167	181	175	170	181	181	**1,214**

4.2 Vulnerability Assessment: Overview

This section assesses the vulnerability of Marysville facilities to the profiled hazard events. The vulnerability assessment considers the types of threats and the potential impact from loss of use of a facility or infrastructure. The degree of impact is measured in the amount of loss to the facility owner.

There are several types of methods commonly used to assess vulnerability. The methodology used in this assessment, the assumptions made, and the data limitations are discussed in the following section.

A discussion of the population at risk from these hazards can be found is Section 4 of the Yuba County Multi-Jurisdictional Multi-Hazard Mitigation Plan. The Marysville annex provided information on the assets of Marysville.

4.2.1 Asset Inventory

DMA 2000 Requirements – Risk Assessment
Assessing Vulnerability - Identifying Structures **§201.6(c)(2)(ii)(A)**: The plan **should** describe vulnerability in terms of the types and numbers of existing and future buildings, infrastructure, and critical facilities located in the identified hazard area.
Does the annex or supplement describe vulnerability in terms of the types and numbers of **existing** buildings, infrastructure, and critical facilities located in the identified hazard areas? Does the annex or supplement describe vulnerability in terms of the **types and numbers** of **future** buildings, infrastructure, and critical facilities located in the identified hazard area?

Assets are the buildings and facilities, equipment, and infrastructure owned by a jurisdiction as well as the population served or within the boundary of the jurisdiction. A review of the City of Marysville's assets was completed in coordination with city departments and insurance information provided for the City. All assets are organized and categorized in a GIS layer so their locations can be identified with respect to identified hazards.

All of the hazards identified by the City can have a significant impact on the citizens and their residences, commercial and industrial businesses and services, and critical facilities and infrastructure. Critical and essential facilities and infrastructure are essential resources that provide critical services to the public, i.e., hospitals, utilities, and educational and governmental institutions. Knowing the location of assets in case of a hazard event is important for the city to be able to respond effectively and efficiently. This section details the assets in the City by noting their function and location. This information will be subsequently used to prepare the vulnerability assessment, and assist in identifying mitigation options available to the City to lessen Marysville's exposure to a hazard event.

Asset inventory will be utilized for emergency notification in the event of a hazard or disaster.

Table 4-7 is a review of all assets, buildings and facilities, equipment, and infrastructure owned by Marysville. Figure 4-5 identifies the location of these assets.

Table 4–7 Critical Assets Owned by the City of Marysville

Name of Asset	Asset Description	Replacement Value ($)	Contents Value ($)
City Hall & Police Station	Concrete	3,165,128	288,816
Fire Station	Concrete	1,401,747	236,232
Drill Tower	Wood frame	98,931	
Shop	Wood frame	45,591	
Public Works Bldg	Concrete	496,535	71,088
Mobile equipment storage	Steel	219,647	10,019
Paint storage shed	Wood frame	26,625	24,255
Storm water plumbing bldg	Concrete	33,280	98,178
Primary sediment tank	Concrete	492,058	
Sewage treatment plant	Steel frame	1,971,974	294,283
Digestion tank A	Concrete	147,617	
Digestion tank B	Concrete	147,617	
Chlorinator bldg		86,109	34,652
Sewage lift station		45,558	
Ellis sewage lift station		20,954	
Ellis Yuba sq pump/sewage station	Concrete	651,015	288,761
Ellis storm water pump station	Concrete	73,809	98,178
2nd chlorinator bldg	concrete	984,116	231,009
17th storm water pump bldg		49,206	144,381
Museum annex	Wood frame	39,923	23,102
Mary Aaron museum	masonry	318,767	103,954
9th sprinkler bldg		10,246	57,752
Irrigation pump house		21,904	
Ellis Lake comfort station		34,587	
Comfort station		59,191	
Cat shed		31,259	
Spectator shelters	Steel	40,847	
BBQ shelter	Steel	2,283	
Pavilion stage cover	Steel	88,570	
Swimming pool			41,328
Restrooms arena		33,922	
River Front Park Snack Bar		66,168	
Restrooms Lions Grave		33,922	
Storm water pump station		56,872	
Irrigation pump bldg		30,618	
Plumas Golf Club	Wood frame	1,533,213	
Cast shed		22,285	5,775
Plumas Lake Golf Pro Shop	Wood frame	156,824	
Implement buildings		44,356	5,920
Comfort station boat dock		59,191	
Comfort station soccer		59,191	23,102
Comfort station Lions Grove		34,581	
Comfort station		71,484	
Comfort station portable		71,484	
Rideout sewage lift station		649,828	288,761
Bryant field lift station		20,538	

Name of Asset	Asset Description	Replacement Value ($)	Contents Value ($)
Secondary sedimentation station		307,536	86,628
Misc/all locations			60,642
PW equipment storage		165,815	3,867
12th St duplex		81,031	
Bryant field stadium		2,138,399	
Equipment			884,445

The City has a population of 12,268 as of November 2005. This population is vulnerable to each of the identified hazards, and could suffer losses in the event of an emergency. Table 4-5 summarizes the improved values of the assets within the City as of November 2005. Asset values were identified using information from the Yuba County Assessor's Office, with the exception of government, schools, and utilities. These values are not available through the Assessor's Office and were compiled by using the asset inventories and values identified by the County of Yuba, CalTrans, the Yuba County Office of Education, and Marysville Joint Unified School District. Government assets are those owned by governments and includes the City of Marysville's assets.

Parcel structural improvement values are taken from the County of Yuba Assessor's Office database of improvements. These improvements are values as assessed by the County Assessor as of November 2005. Using a GIS, parcel boundaries were joined to the database of assessed values to create a layer of structural improvement values for each parcel. Land use codes from the County Assessor defined for each parcel were used to develop an Occupancy Class (Government, Residential, Commercial, Religious, etc.). For each occupancy class, improvement values were summed to present a generalization of the total exposure by occupancy for the City.

Table 4–8 City of Marysville Asset Improved Value Summary

Type	Ag/Rural	Commercial	Government	Industrial	Other	Religion	Residential	Schools	Utility	Total
Sum. Improved Value	$1,106,744	$201,370,240	$186,482,407	$21,262,101	$10,710	$7,183,424	$211,220,801	$69,232,145	$0	$697,868,572

Annex A
City of Marysville

The City of Marysville is responsible for the protection of the infrastructure within its jurisdiction. The City is financially responsible for their assets during a hazard event. The function of the City is to provide overall emergency management during disasters. Other special districts and government agencies also have assets within the City of Marysville, and would be responsible for any costs associated with a hazard event that affects their infrastructure. Some of these assets include:

Federal Facilities
United States Post Office

State Facilities
California Department of Transportation District 3
State of California Superior Court
State of California Board of Corrections – Parole Office

Yuba County Facilities
County of Yuba Government Center
Yuba County Courthouse
Sutter-Yuba Juvenile Hall
Yuba County Library

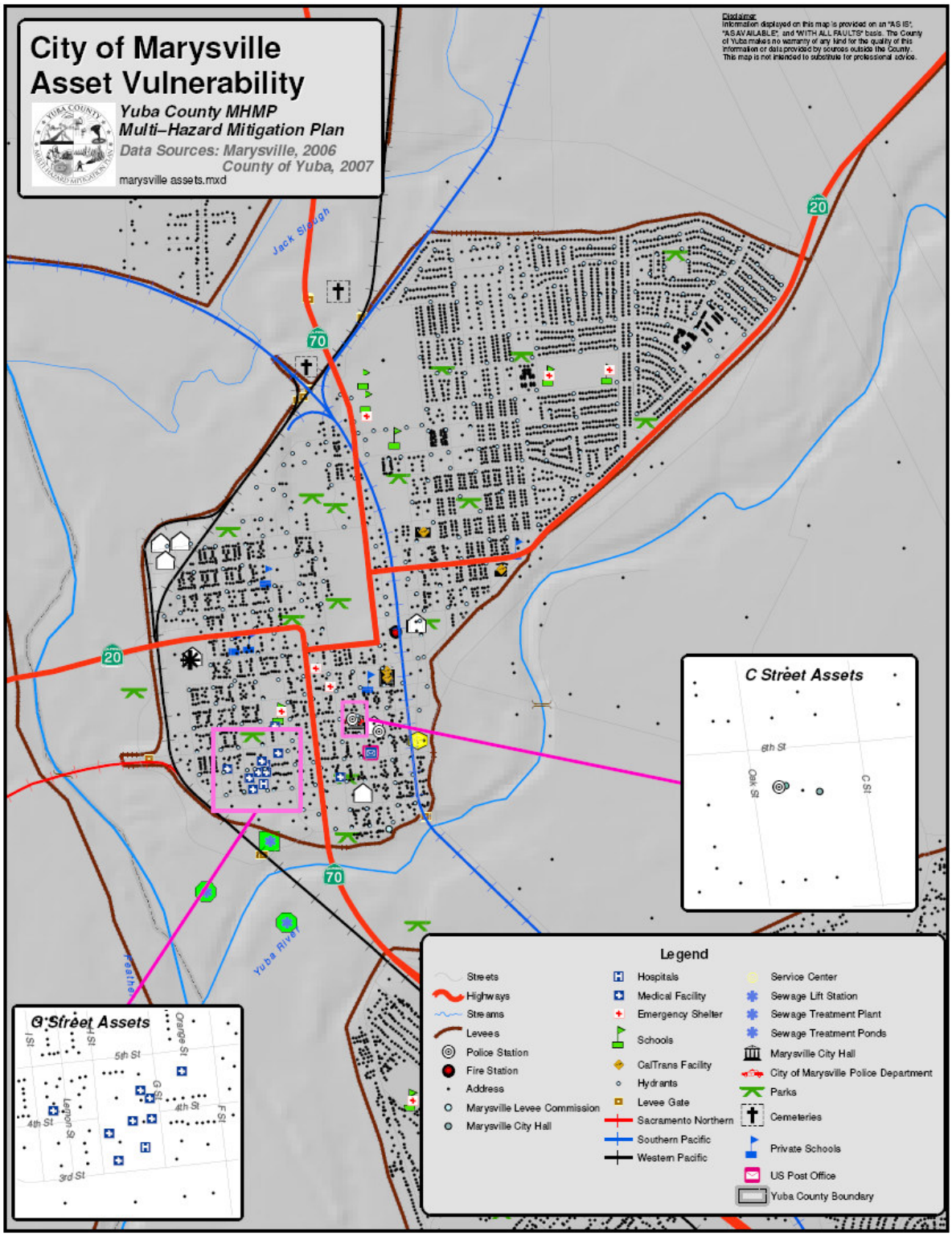
Medical
Rideout Hospital
Medical Clinics
DaVita Dialysis
Fremont-Rideout Facilities

Education/Schools
Yuba County Office of Education
Marysville Joint Unified School District Office
Marysville High School
Marysville Charter Academy for the Arts
Anna McKenney Intermediate School
Covillaud Elementary School
Kynoch Elementary School

Adult/Senior Services
Adult Day Care Centers
Senior Assisted Living Facilities

Public Utilities
Pacific Gas & Electric Company
AT&T Communications
Union Pacific Railroad
Yuba Sutter Disposal, INC
Yuba-Sutter Transit

Figure 4-5 City of Marysville Assets



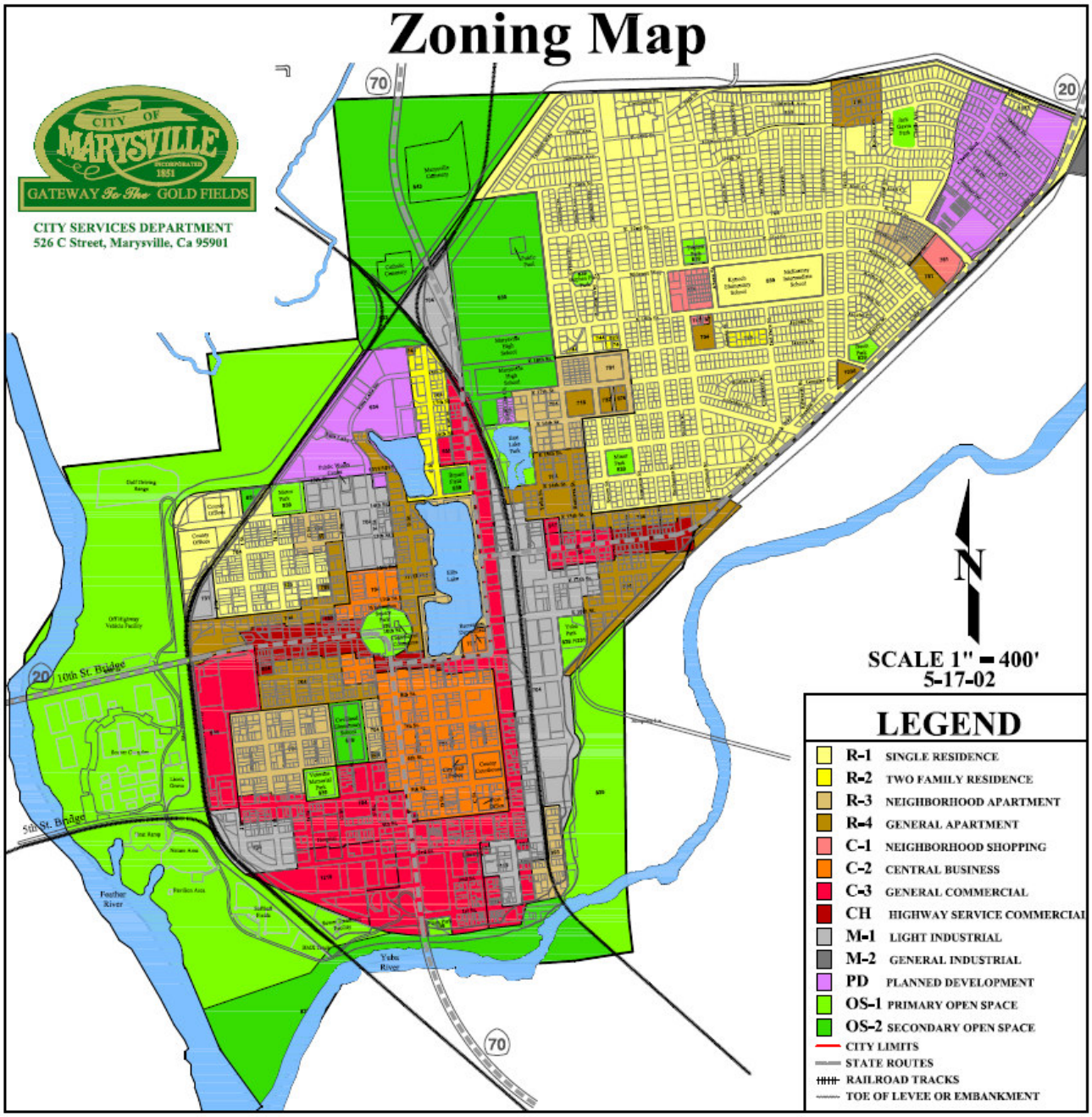
4.2.1.1 Description of Future Land Use & Development Trends

DMA 2000 Requirements – Risk Assessment
Assessing Vulnerability – Analyzing Development Trends **§201.6(c)(2)(ii)(C)**: [The plan should describe vulnerability] in terms of providing a general description of land uses and development trends within the community so that mitigation options can be considered in future land use decisions.
For EACH Hazard identified by THIS jurisdiction, does the annex or supplement describe the impact of land use and development trends within the participating jurisdiction? (*With particular emphasis on future buildings and infrastructure). EXAMPLE: The annex or supplement should describe how a jurisdiction's land use and development trends would affect the flood hazard areas, the fire hazard areas, etc.*

Development in the City of Marysville is currently confined by a levee system that rings the City. Growth due to development would include annexation and expansions into unincorporated areas of Yuba County. The City is currently and will continue to redevelop portions of the City currently within the ring levee system. The City also uses infill as part of its land use planning and development projects.

The 1986 Sphere of Influence Study conducted by Yuba County Local Area Formation Council (LAFCO) allows the City to annex areas outside the levee systems (unincorporated county lands). Any annexations will require mitigation measures to reduce potential flood losses.

Figure 4-6 City of Marysville Zoning Map



4.3 Vulnerability Assessment: Estimating Potential Losses

DMA 2000 Requirements – Risk Assessment
Assessing Vulnerability – Estimating Potential Losses **§201.6(c)(2)(ii)(B)**: [The plan should describe vulnerability in terms of an] estimate of the potential dollar losses to vulnerable structures identified in paragraph (c)(2)(i)(A) of this section and a description of the methodology used to prepare the estimate.
Does the annex or supplement estimate **potential dollar losses** to vulnerable structures? Does the annex or supplement describe the **methodology** used to prepare the estimate?

The terms *loss* and *exposure* are used frequently in vulnerability assessments. Loss is the relative amount of damage that may occur given a particular hazard event, while exposure is the total value, or replacement cost, for building stock or Marysville assets. For Marysville assets, loss is determined by referencing the location of a facility to the historical or potential occurrence of a natural hazard and determining the amount of damage that may be sustained, while exposure is the total value (often quantified as a replacement cost) of assets and facilities to a hazard event.

Uncertainty is inherent in all vulnerability assessments. This assessment was performed using the best available data from sources which includes US Census, FEMA, HAZUS, State Department of Finance, CDF, the County of Yuba, and the City of Marysville. In consideration of this, we must note that the results of the assessment are approximations of relative risk by hazard. The assumptions made in population sampling methods, the strength of building materials, uncertainties in hydrologic models, loss estimation techniques where national or regional assumptions are used to represent local conditions – all represent limitations in scientific knowledge that must be considered when reviewing the results of the vulnerability assessment.

4.3.1 Vulnerability to Flood

A County wide vulnerability assessment was performed using the currently-established FEMA 100-year and 500-year flood zones. Data was obtained from FEMA's Q3 data base. County assets, including the City of Marysville, were overlain by the 100-year and 500-year flood zones. An asset was considered to be completely inundated and a total loss (contents destroyed and the facility needed to be replaced) if any portion of the facility was found to be within the flood zone. This provides for a small contingency factor given the variability of flooding.

To obtain the exposure of the population within the City, To obtain the exposure of the population within the district, parcels were selected from the feature classes Y100_Flood_Exposure for the 100-year exposure and both the Y100_Flood_Exposure and Y500_Flood_Exposure to the 500-year exposure. Exposure classes FloodY100_Exposure and FloodY500_Exposure were used to calculate the sum of [improv_v] for the 100-year and 500-year floods. The 100-year and 500-year flood zones were merged to create a new feature class in special_district_hazards.mdb so that calculated values would be inclusive of the 100-year flood area for the 500-year flood. The new feature class Combined_Y100_Y500_flood_hazard was used in this selection for the 500-year event. *If there is no difference between the exposure for the 500-year flood from the 100-year flood then there is no additional exposure for the 500-year flood.*

Census data was selected where the center of the census block occurred within the district's boundaries. Blocks of this new layer were selected that intersected the 100-year and 500-year flood extents. These blocks were saved out as a feature class if the blocks closely matched the district boundary or, if not, selected out as a new layer. This new layer was clipped to the district boundaries in most instances and exported out to a new feature class in the geodatabase special_districts_hazards_090707.mdb. This layer contains the original area of the block (in square feet) and, after clipping, as a feature class the area is automatically calculated to [Shape_area] in square feet. [Shape_area] was divided by [Orig_area] to create a percentage calculated in the field [pct]. [Pct] was multiplied against the total population for the block in the field [total_popu] to calculate the percentage of population for the block within the district boundary in the field [pct_popu].

The impact of damage resulting from the flooding hazard, as mentioned, will vary. Most damage resulting from rising water will inundate residences and buildings, damaging infrastructure and critical facilities. The loss of ingress and egress by the population in the affected areas will impact ability of emergency response and limit capabilities. Damage from flooding can range from minimal, where the damage to an individual home may be on the order of a few thousand dollars to the complete loss of a building or loss of life from the inability to evacuate from the rising flood waters.

Depending on the type of flooding and the ability to access the affected areas, the flood hazard event can range from hours (flash flooding) to several days or weeks (flooding from standing water/levee break). The ring levee surrounding Marysville may contribute to holding water within the levee structure in a flood event. The long-term effects of flood damage can span months to decades as evident in the 1986 Flood and levee failure devastating the community of Linda which was once a vital retail center of business.

Facilities located outside of the Marysville levee system, including the City's wastewater treatment facilities and all city-owned property within Riverfront Park, are located within the 100 year floodplain. Those assets located within the levee system are not currently identified as being within the floodplain (Figure 4-5). Table 4-6 identifies those assets located within the 100-year floodplain.

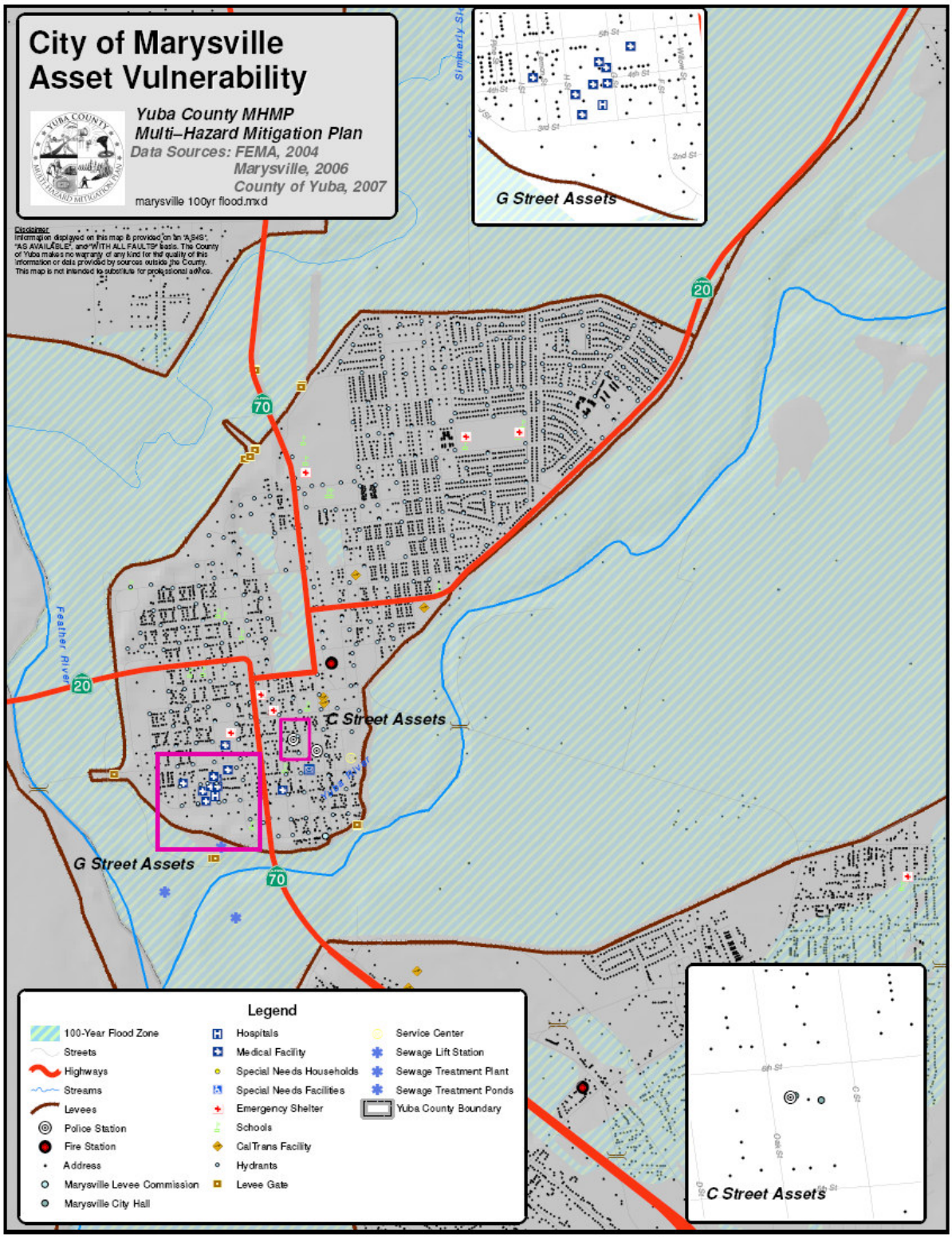
Table 4–9 City of Marysville 100-Year Floodplain Vulnerability

Name of Asset	Asset Description	Size of Building (sq. ft)	Replacement Value ($)	Contents Value ($)
Sewage treatment plant	Steel frame		1,971,974	294,283
Digestion tank A	Concrete		147,617	
Digestion tank B	Concrete		147,617	
Chlorinator bldg			86,109	34,652
Sewage lift station			45,558	
Spectator shelters	Steel		40,847	
BBQ shelter	Steel		2,283	
Pavilion stage cover	Steel		88,570	
River Front Park Snack Bar			66,168	
Restrooms Lions Grave			33,922	
Storm water pump station			56,872	
Comfort station boat dock			59,191	
Comfort station soccer			59,191	23,102
Comfort station Lions Grove			34,581	
Comfort station			71,484	

Table 4–10 City of Marysville Population Exposure to Flood

Occupancy Class	100-Year Flood	500-Year Flood
Ag/Rural	$1,106,744	$1,106,744
Commercial	$7,799,470	$13,781,175
Industrial	$8,940,961	$8,984,200
Residential	-	$1,796,391
Total	**$17,847,175**	**$25,668,510**

Figure 4-7 City of Marysville 100-Year Flood Vulnerability



In the event of a levee failure, the damage to Marysville would be catastrophic. The levees which surround Marysville would also impede the flow of water out of the City, causing the entire city to be inundated. All assets owned by the City and within the City would be damaged or destroyed. From the perspective of the City of Marysville, Table 4-7 illustrates the level of damage caused by a levee failure. A levee failure was assumed to have destroyed each of the identified facilities.

Table 4–11 Marysville Vulnerability to Levee Failure

Name of Asset	Asset Description	Size of Building (sq. ft)	Replacement Value ($)	Contents Value ($)
City Hall & Police Station	Concrete		3,165,128	288,816
Fire Station	Concrete		1,401,747	236,232
Drill Tower	Wood frame		98,931	
Shop	Wood frame		45,591	
Public Works Bldg	Concrete		496,535	71,088
Mobile equipment storage	Steel		219,647	10,019
Paint storage shed	Wood frame		26,625	24,255
Storm water plumbing bldg	Concrete		33,280	98,178
Primary sediment tank	Concrete		492,058	
Sewage treatment plant	Steel frame		1,971,974	294,283
Digestion tank A	Concrete		147,617	
Digestion tank B	Concrete		147,617	
Chlorinator bldg			86,109	34,652
Sewage lift station			45,558	
Ellis sewage lift station			20,954	
Ellis Yuba sq pump/sewage station	Concrete		651,015	288,761
Ellis storm water pump station	Concrete		73,809	98,178
2nd chlorinator bldg	concrete		984,116	231,009
17th storm water pump bldg			49,206	144,381
Museum annex	Wood frame		39,923	23,102
Mary Aaron museum	masonry		318,767	103,954
9th sprinkler bldg			10,246	57,752
Irrigation pump house			21,904	
Ellis Lake comfort station			34,587	
Comfort station			59,191	
Cat shed			31,259	
Spectator shelters	Steel		40,847	
BBQ shelter	Steel		2,283	
Pavilion stage cover	Steel		88,570	
Swimming pool				41,328
Restrooms arena			33,922	
River Front Park Snack Bar			66,168	
Restrooms Lions Grave			33,922	
Storm water pump station			56,872	
Irrigation pump bldg			30,618	
Plumas Golf Club	Wood frame		1,533,213	
Cast shed			22,285	5,775
Plumas Lake Golf Pro Shop	Wood frame		156,824	
Implement buildings			44,356	5,920

Name of Asset	Asset Description	Size of Building (sq. ft)	Replacement Value ($)	Contents Value ($)
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Comfort station soccer			59,191	23,102
Comfort station Lions Grove			34,581	
Comfort station			71,484	
Comfort station portable			71,484	
Rideout sewage lift station			649,828	288,761
Bryant field lift station			20,538	
Secondary sedimentation station			307,536	86,628
Misc/all locations				60,642
PW equipment storage			165,815	3,867
12th St duplex			81,031	
Bryant field stadium			2,138,399	
Equipment				884,445

Residential Losses:

The areas surrounding Ellis Lake and East Park Lake are the only areas within the levee system currently located within a Special Flood Hazard Area (SFHA). FEMA is currently reevaluating all SFHA mapping in the Untied States and recently completed the area in Yuba County south of Marysville. With the history of flooding in Yuba County, the county has been aggressive in promoting participation in the National Flood Insurance Program (NFIP). As of June 2006, 991 NFIP policies have been written for properties located in the City.

Communities with repetitive flood losses are responsible for the majority of the NFIP losses in the state. Of the eleven (11) identified repetitive flood loss properties in the County of Yuba, none are located in the City of Marysville.

A failure of one of the dams upstream of the City would also impact the City's flood vulnerability. A failure at Oroville Dam (Figure 4-6), located on the Feather River, or New Bullards Bar Dam (Figure 4-7), on the Yuba River, would inundate the City of Marysville. FERC identified inundation areas for these dams indicate that the volume of water from a failure of either of these dams would overwhelm the City's levee system. A failure at Englebright Dam (Figure 4-8) on the Yuba River or Virginia Ranch Dam (Figure 4-9), at Collins Lake, would put additional water on the Marysville levee system, but would not inundate the City itself.

Figure 4-8 Oroville Dam Inundation Area

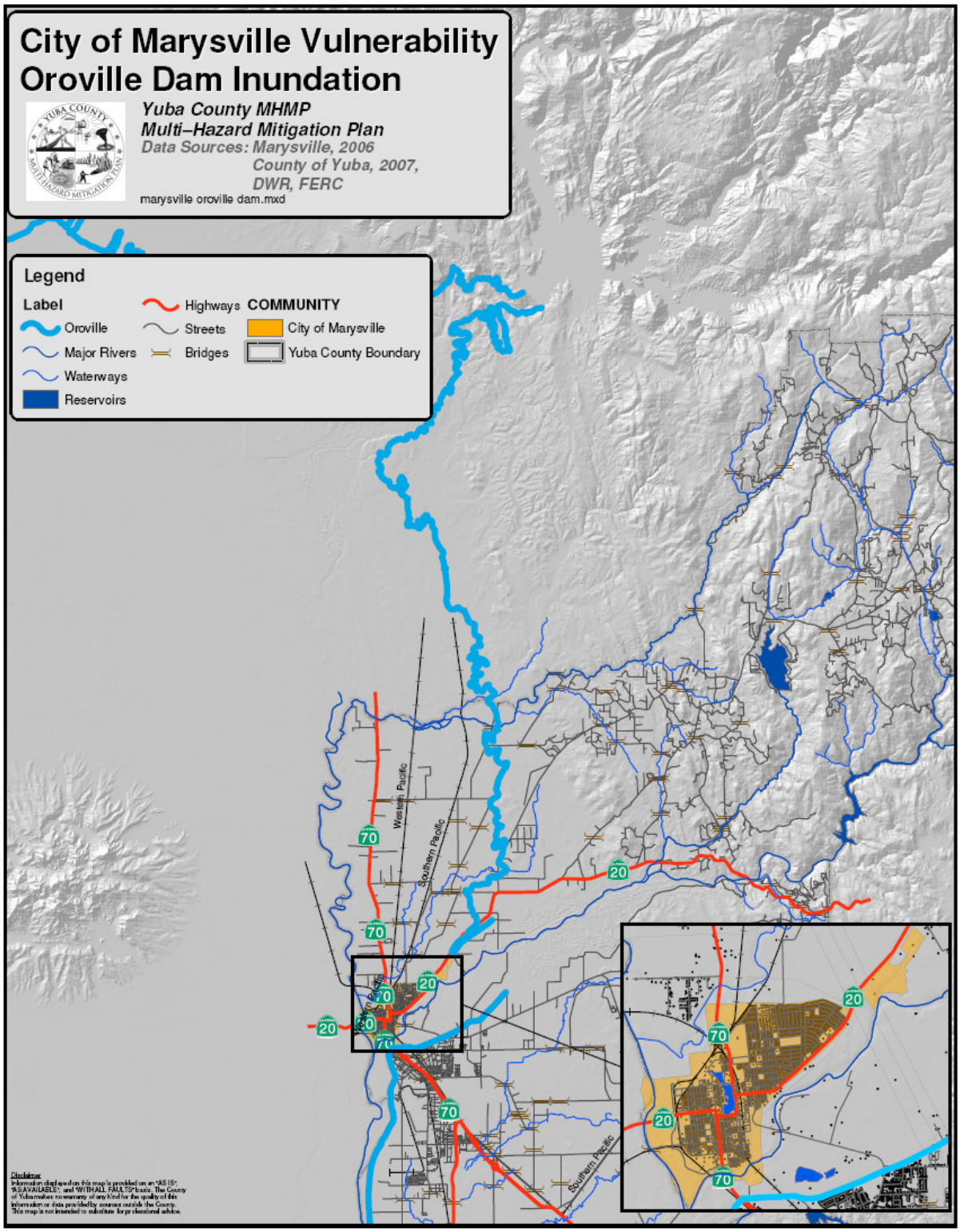


Figure 4-9 New Bullards Bar Dam Inundation Area

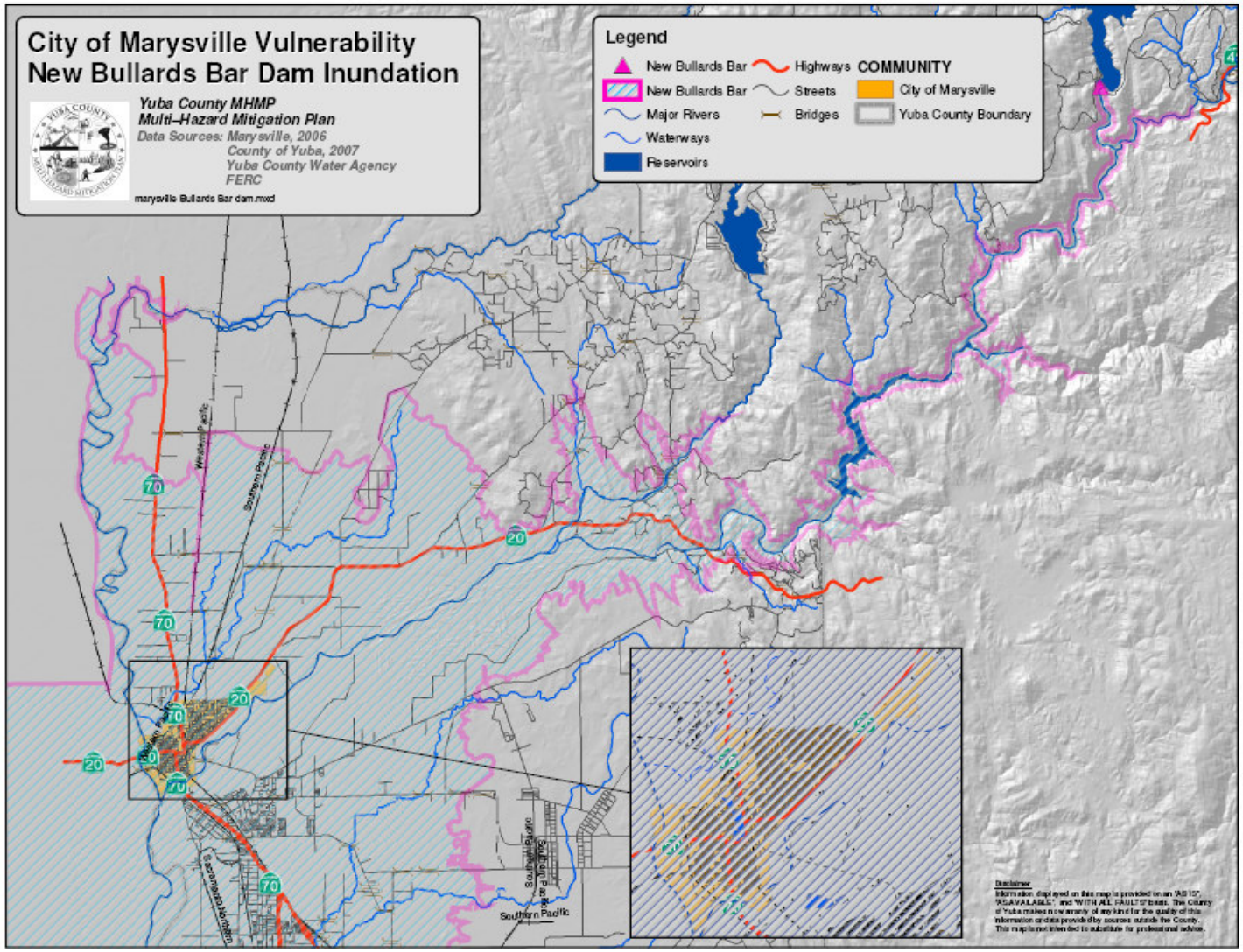


Figure 4-10 Englebright Dam Inundation Area

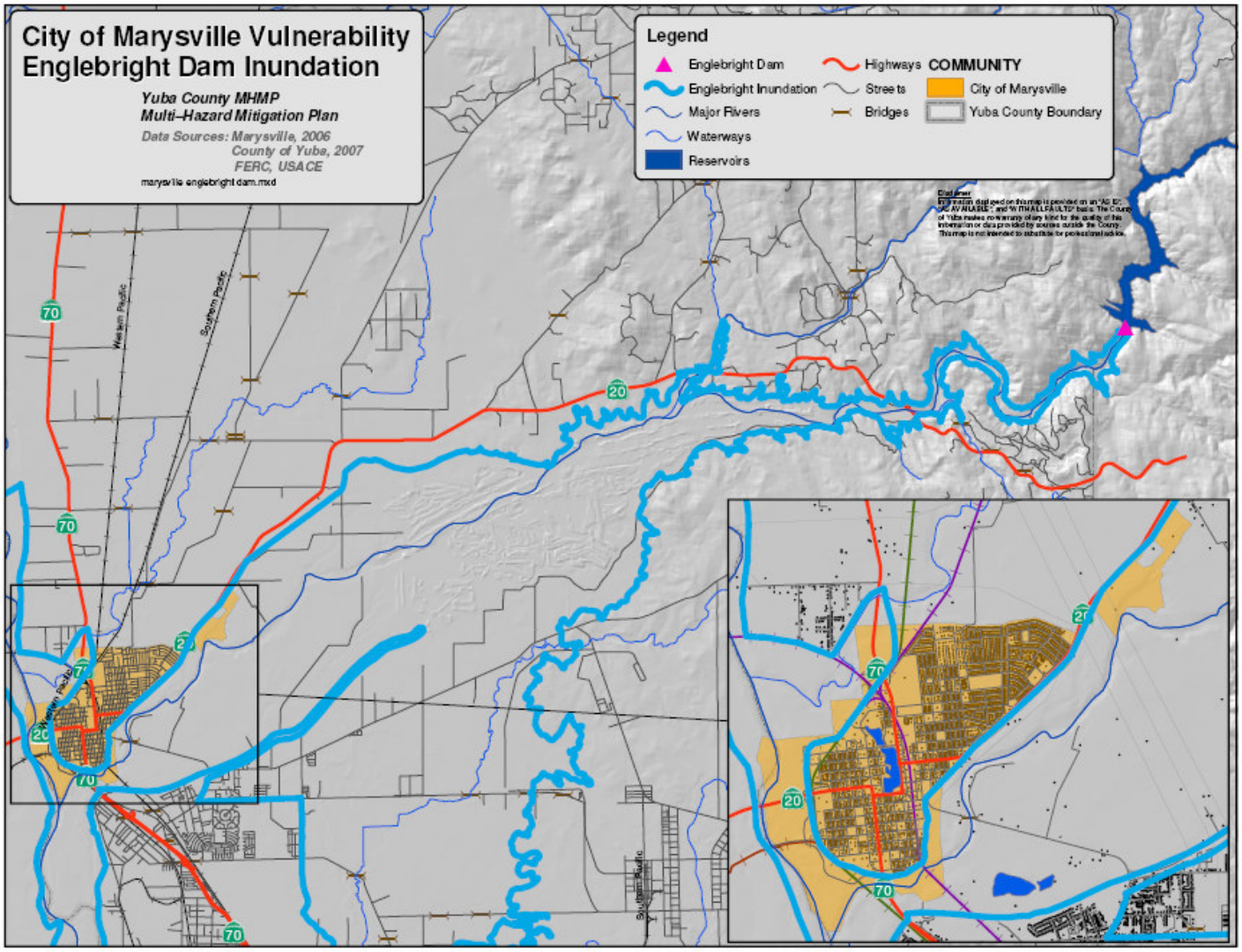
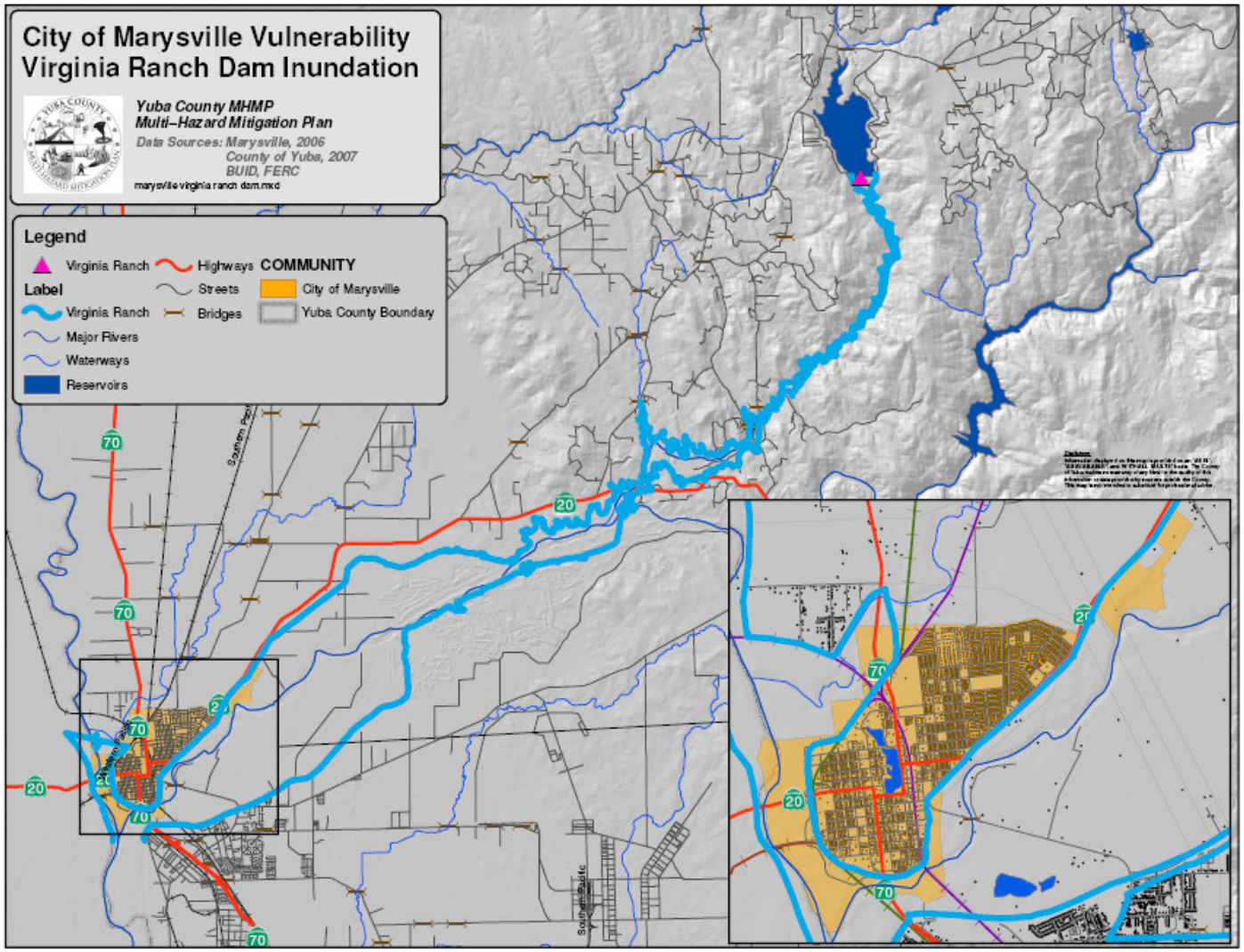


Figure 4-11 Virginia Ranch Dam Inundation Area



Future development within the City of Marysville is primarily infilling of existing property within the existing City limits. The redevelopment in some areas of the City is replacing old structures with newer structures, increasing the value of these properties. The result of this is the possibility of an increased cost should a major flood event, such as a levee failure was to occur.

New development within the City also leads to improvements to the internal drainage system of the City. Consequently, these improvements serve to decrease localized flooding, which in turn decreases the City's vulnerability to a localized flooding event.

4.3.2 Vulnerability to Severe Winter Storms

The City's vulnerability to severe winter storm was identified by reviewing historical occurrences of this hazard. A severe winter storm not associated with a levee break will primarily affect the City property located outside of the Marysville Ring Levee system. A typical winter storm event will primarily impact the roads within the levee system; however, the costs of these damages are generally negligible. Once again, current data limitations have limited this assessment to those facilities that have previously been damaged by winter storm events as well as the critical facilities identified by the City. Future vulnerability analysis will attempt to take other infrastructure, such as streets and smaller assets, such as stop signs, into account as the information becomes available.

Table 4–12 Potential Severe Winter Storms Vulnerability

Name of Asset	Asset Description	Size of Building (sq. ft)	Replacement Value ($)	Contents Value ($)
Paint storage shed	Wood frame		26,625	24,255
Storm water plumbing bldg	Concrete		33,280	98,178
Primary sediment tank	Concrete		492,058	
Sewage treatment plant	Steel frame		1,971,974	294,283
Digestion tank A	Concrete		147,617	
Digestion tank B	Concrete		147,617	
Chlorinator bldg			86,109	34,652
Sewage lift station			45,558	
Ellis sewage lift station			20,954	
Ellis Yuba sq pump/sewage station	Concrete		651,015	288,761
Ellis storm water pump station	Concrete		73,809	98,178
2nd chlorinator bldg	concrete		984,116	231,009
17th storm water pump bldg			49,206	144,381
9th sprinkler bldg			10,246	57,752
Irrigation pumphouse			21,904	
Ellis Lake comfort station			34,587	
Comfort station			59,191	
Cat shed			31,259	
Spectator shelters	Steel		40,847	
BBQ shelter	Steel		2,283	
Pavilion stage cover	Steel		88,570	
Restrooms arena			33,922	
River Front Park Snack Bar			66,168	
Restrooms Lions Grave			33,922	
Storm water pump station			56,872	
Irrigation pump bldg			30,618	
Implement bldgs			44,356	5,920
Comfort station boat dock			59,191	
Comfort station soccer			59,191	23,102
Comfort station lions grave			34,581	
Comfort station OHV			71,484	
Comfort station portable			71,484	
Rideout sewage lift station			649,828	288,761

Name of Asset	Asset Description	Size of Building (sq. ft)	Replacement Value ($)	Contents Value ($)
Secondary sedimentation stn			307,536	86,628

Much like in the flooding analysis, future development within the City will serve to increase the potential cost to the City of this hazard event, while improvements to internal drainage structures will decrease the City's overall vulnerability.

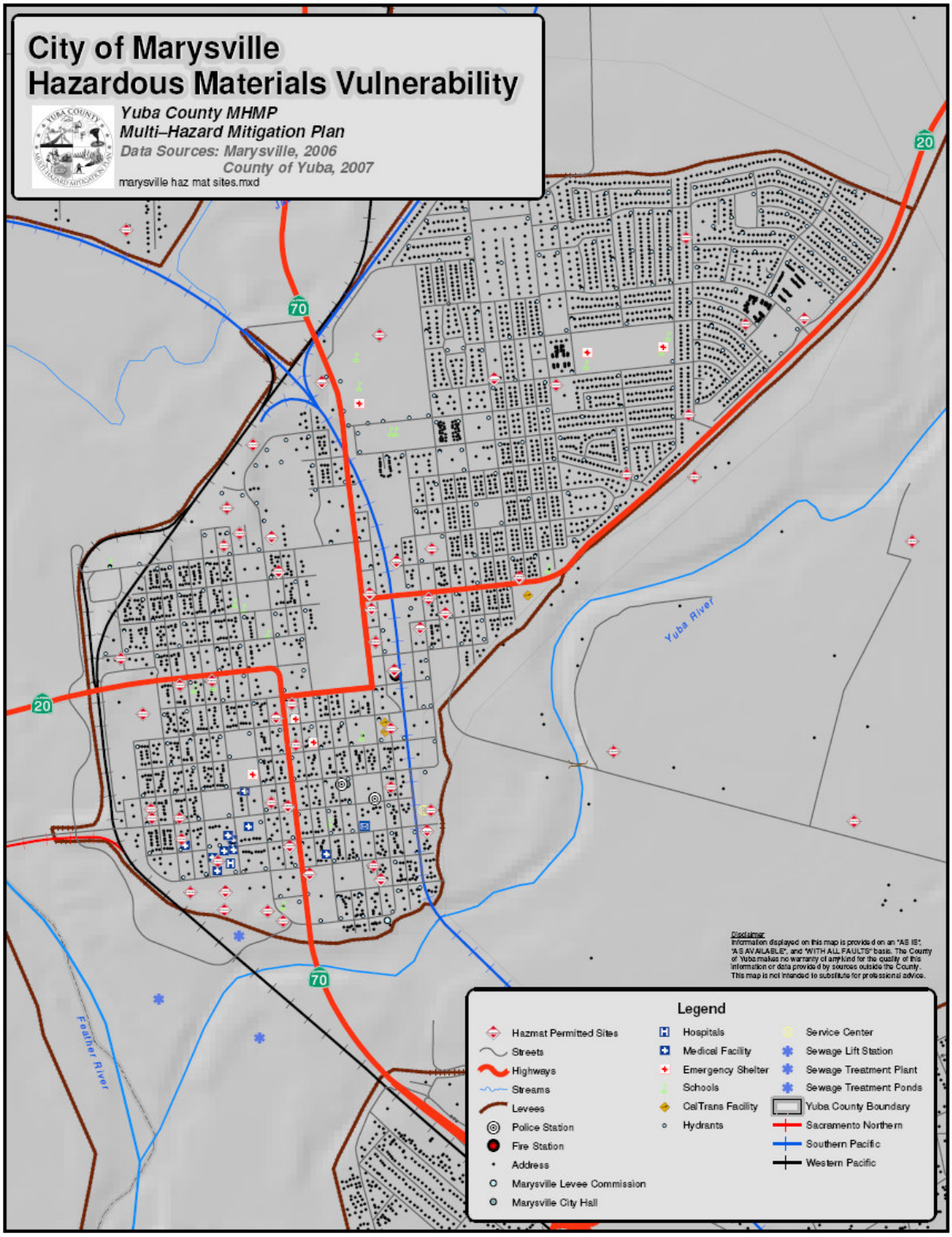
4.3.3 Vulnerability to Hazardous Materials

Hazardous materials have the potential of causing significant damage to property, lives and the environment. Man–made hazardous materials events usually impact the City through the release of a toxic gas, plumes of chlorine, ammonia, or propane gases or a substance release that contaminates the groundwater or soil such as diesel or gasoline. These chemicals have the potential to cause chronic or long–term effects.

The cost to the City is primarily through response, as the physical facilities are unlikely to be harmed by a hazardous materials release. The cost of such a response will vary depending on the magnitude of the spill. The location of hazardous materials sites within the City must be registered with the Yuba County Environmental Health Department (Figure 4-12).

Future development in the City of Marysville would likely decrease the overall vulnerability to this hazard. Because the City is one of the oldest in the State of California, some potential hazardous materials locations are not currently known. Future development within the City, while complying with CEPA/NEPA requirements will unearth many of these sites, allowing their effects to be mitigated. Future hazardous materials sites within the City will register with Yuba County Environmental Health.

Figure 4-12 Hazardous Materials Sites in Marysville



4.3.4 Vulnerability to Fire

The cost to the City of Marysville due to fire is dependent on the location and magnitude of the fire. Response costs will always be incurred by the City in the event of a fire within the City limits. A fire within a facility owned by the City has the potential to destroy the facility. The potential costs identified below are those facilities owned by the City of Marysville. It is unlikely that all of these facilities would be destroyed by a single fire; however each of the facilities could be vulnerable to an occurrence of this hazard.

To identify the threat to the Marysville population, CDF FRAP's Fire Threat raster was used to select from the attribute [Threat2people] to compare to the feature class blocks_fire_threat2people.shp. This shapefile has numerous statistics calculated from the original source raster. The statistic [Majority] is used to denote the wildfire threat that covers the majority of the area of the census block. The layer was clipped to the extent of the district boundary. [Pct] was calculated from [shape_area] / [orig_area]. [Pct_popu] was calculated from [total_popu] * [pct]. [Pct_popu] was summed by [Majority] fire threat classification.

The parcels that are related to Moderate, High, and Very High wildfire exposure threat have already been calculated in January 2006. These are present in the feature classes noted above. These parcels are selected and exported to a new feature class by threat level. Parcels whose center is located within the boundary of the district were exported out by threat level to a new feature class. These were then dissolved by [Majority] and the [improv_v] was summed for the results presented.

Table 4–13 Potential Fire Vulnerability

Name of Asset	Asset Description	Size of Building (sq. ft)	Replacement Value ($)	Contents Value ($)
City Hall & Police Station	Concrete		3,165,128	288,816
Fire Station	Concrete		1,401,747	236,232
Drill Tower	Wood frame		98,931	
Shop	Wood frame		45,591	
Public Works Bldg	Concrete		496,535	71,088
Mobile equipment storage	Steel		219,647	10,019
Paint storage shed	Wood frame		26,625	24,255
Storm water plumbing bldg	Concrete		33,280	98,178
Primary sediment tank	Concrete		492,058	
Sewage treatment plant	Steel frame		1,971,974	294,283
Digestion tank A	Concrete		147,617	
Digestion tank B	Concrete		147,617	
Chlorinator bldg			86,109	34,652
Sewage lift station			45,558	
Ellis sewage lift station			20,954	
Ellis Yuba sq pump/sewage station	Concrete		651,015	288,761
Ellis storm water pump station	Concrete		73,809	98,178
2nd chlorinator bldg	concrete		984,116	231,009
17th storm water pump bldg			49,206	144,381
Museum annex	Wood frame		39,923	23,102
Mary Aaron museum	masonry		318,767	103,954
9th sprinkler bldg			10,246	57,752

Name of Asset	Asset Description	Size of Building (sq. ft)	Replacement Value ($)	Contents Value ($)
Irrigation pumphouse			21,904	
Ellis Lake comfort station			34,587	
Comfort station			59,191	
Cat shed			31,259	
Spectator shelters	Steel		40,847	
BBQ shelter	Steel		2,283	
Pavilion stage cover	Steel		88,570	
Swimming pool				41,328
Restrooms arena			33,922	
River Front Park Snack Bar			66,168	
Restrooms Lions Grave			33,922	
Storm water pump station			56,872	
Irrigation pump bldg			30,618	
Plumas Golf Club	Wood frame		1,533,213	
Cast shed			22,285	5,775
Plumas Lake Golf Pro Shop	Wood frame		156,824	
Implement bldgs			44,356	5,920
Comfort station boat dock			59,191	
Comfort station soccer			59,191	23,102
Comfort station lions grave			34,581	
Comfort station OHV			71,484	
Comfort station portable			71,484	
Rideout sewage lift station			649,828	288,761
Bryant field lift station			20,538	
Secondary sedimentation stn			307,536	86,628
Misc/all locations				60,642
PW equipment storage			165,815	3,867
12th St duplex			81,031	
Bryant field stadium			2,138,399	
Equipment				884,445

Table 4–14 Marysville Population Exposure to Fire

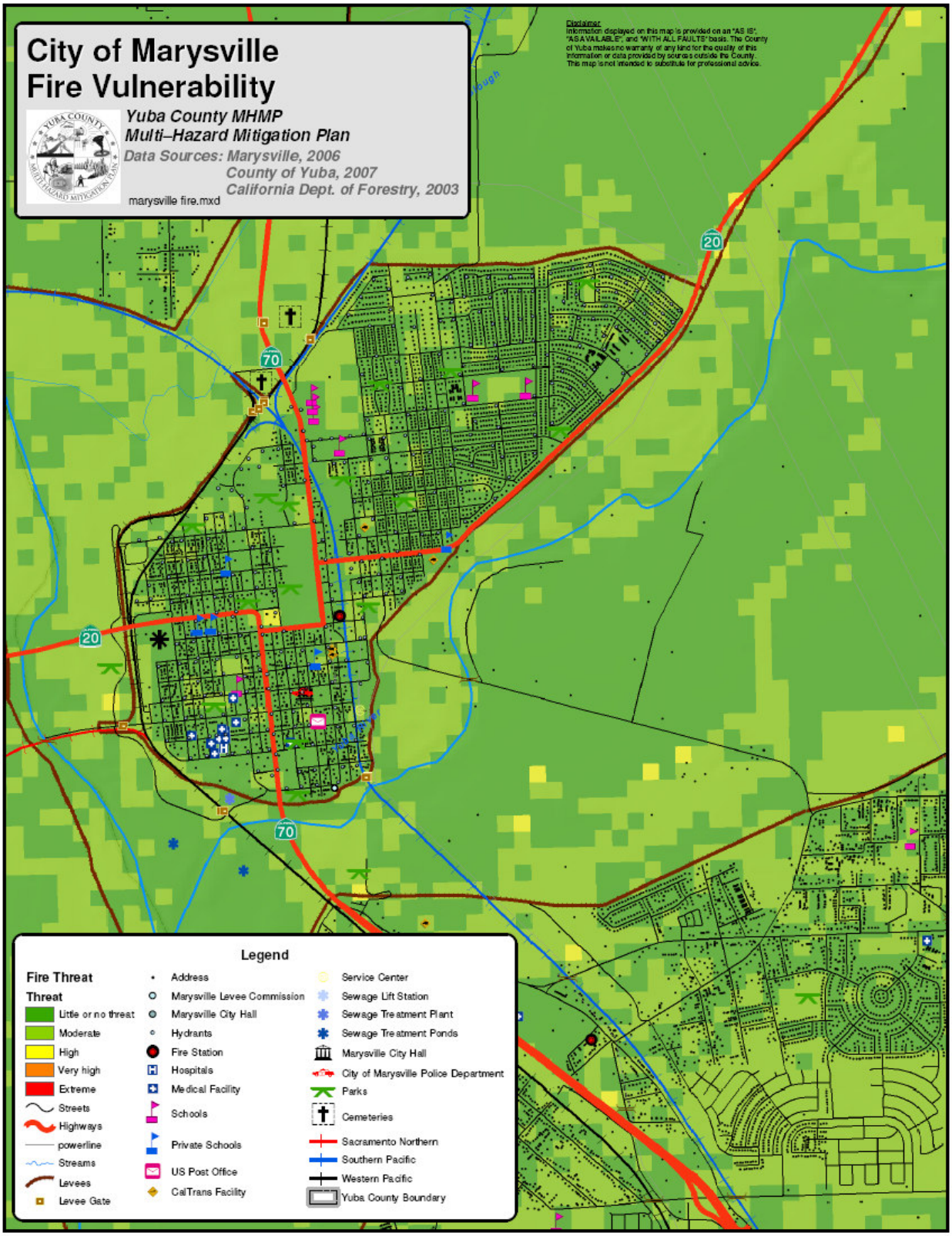
Occupancy Class	Moderate Fire Threat	High Fire Threat
Ag/Rural	-	$1,106,744
Commercial	$28,778,982	$179,774,682
Industrial	$43,239	$21,218,862
Other	-	$10,710
Residential	$121,989,998	$89,230,803
Total	**$150,812,219**	**$291,341,801**

There are 5,876 Marysville residents living in the moderate fire threat zone and 6,392 in the High fire threat zone.

Per CDF, most of the City of Marysville is identified as being in a little to no threat or moderate fire severity zone (Note: this is a separate calculation than the fire threat to people information presented in Table 4-14). The corner of State Highway 70 and 20 at Washington Square Park is the only area in the City zoned as a high fire threat (Figure 4-11).

Future development within the City will lead to a decrease in vulnerability to this hazard. As previously discussed, primary development within the City is occurring as infill and redevelopment of existing structures. As older structures are removed in favor of newer buildings, the new buildings will be constructed of fire safe materials and be held to more rigorous fire code standards.

Figure 4-13 City of Marysville Fire Vulnerability



5 Mitigation Strategy

Marysville mitigation strategies and projects were developed in conjunction with and as part of the Yuba County Multi-Jurisdiction Multi-Hazard Mitigation Plan.

The information in the hazard vulnerability analysis and loss estimation information was used as a basis for developing mitigation goals and objectives. Mitigation goals are defined as general guidelines explaining what Marysville wants to achieve in terms of hazard and loss prevention. Goal statements are typically long-range, policy-oriented statements representing Marysville's visions. Objectives are statements that detail how Marysville's goals will be achieved, and typically define strategies or implementation steps to attain identified goals. Other important inputs to the development of goals and objectives include performing reviews of existing local plans, policy documents, and regulations for consistency and complementary goals. Stakeholder participation and community outreach to support the process of identifying hazard, risks, and mitigation goals were essential in the development of comprehensive goals.

The following provides an overview of the steps involved in preparing a mitigation strategy which consists of:

1. Assessing current capabilities
2. Developing mitigation goals and objectives
3. Identifying and prioritizing mitigation actions
4. Preparing an implementation strategy

Marysville's hazard mitigation mission is served by goals that reduce the vulnerability of Marysville. Plan goals guide the overall direction of mitigation activities, which focus Marysville's overall mitigation program.

5.1 Unique Mitigation Goals to Reduce Vulnerabilities for The City of Marysville

DMA 2000 Requirements – Mitigation Strategy
§201.6(c)(3): The plan shall include a mitigation strategy that provides the jurisdiction's blueprint for reducing the potential losses *identified in the risk assessment, based on existing authorities, policies, programs and resources, and its ability to expand on and improve these existing tools.*
Does the annex or Supplement include a description of mitigation **goals** to reduce or avoid long term vulnerabilities to each of this jurisdiction's identified hazards?

Mitigation goals are general guidelines explaining what Marysville wants to achieve in terms of hazard and loss prevention. Goal statements are Marysville's long-range, policy-oriented statements representing the City's visions. Objectives detail how Marysville's goals will be achieved, and define strategies or implementation steps to attain identified goals. Other important inputs to the development of Marysville's goals and objectives include reviews of existing local plans, policy documents, and regulations for consistency and complementary goals, as well as soliciting input from the public.

Marysville Hazard Mitigation Goals

1. Prevent personal injury, loss of life, and damage to property and the environment from natural and man–made hazards;
2. Promote public awareness and understanding of natural and man–made hazards and the risk they present to quality of life and the economy;
3. Enhance the ability of the City of Marysville and stakeholders to respond to the effects of hazards on people, property, and the environment;
4. Continue to support partnerships with private and public sector agencies, businesses, and organizations to further comprehensive planning and implementation of mitigation measures;
5. Encourage individual responsibility from Marysville residents for their exposure to natural and man–made hazards and the risk they present to life, property, and the environment; and
6. Continue the hazard mitigation planning process in support of DMA 2000 by:
    - Organizing and Identifying Resources
    - Assessing Risks and Vulnerabilities
    - Identifying Hazard Mitigation Measures
    - Updating Mitigation Plans

Objective 1 **Plan for emergency response and coordination to prevent personal injury, loss of life, and damage to property and the environment from natural and man–made hazards**	• Protect life, property, and the environment before disasters occur • Enforce existing local, state and federal fire safe codes and regulations • Implementation of hazard mitigation programs and strategies
Objective 2 **Enhance and protect City assets and support of identification of resources to address hazards, improve capabilities for emergency response and recovery.**	• Enhance and improve City emergency response and recovery plans to all emergency situations • Secure and protect all critical assets and identify resources • Continue coordination between the County of Yuba and all Stakeholders to collaborate in mitigation planning and strategies.
Objective 3 **Provide Public Education to encourage awareness and participation in disaster prevention and effective hazard mitigation strategies**	• Mitigation outreach to the public and schools featuring exemplary projects, fire prevention, and emergency preparedness • Encourage participation in the National Flood Insurance Program • Emergency planning to ensure road access for emergency vehicles remain clear and free of vegetation • Ensure that all lifeline infrastructure are able to withstand hazard events or have contingency plans to quickly recover after a disaster • Develop disaster preparedness program among the general public and businesses to address evacuations, preparedness and protection.

Objective 4 **Identify hazard mitigation projects through collaboration with the public and private sector stakeholders**	• Fire prevention/flood mitigation program • Roads and public hazard mitigation projects to protect lives and property • Ensure road access for emergency vehicles remain clear and free of obstruction • Ensure that all lifeline infrastructure are able to withstand hazard events or have contingency plans to quickly recover after a disaster • Provide emergency access and egress for the community for all hazards
Objective 5 **Protect essential critical facilities and infrastructure for all hazards in Marysville**	• Protect and enhance emergency communication and notification systems to remain operational during emergencies • Establish alternate emergency support and redundancy in communications for remote areas • Back up generators for critical facilities to ensure critical services and emergency needs • Identify and support facilities to serve as shelters for emergencies to address mass shelters
Objective 6 **Support training and compliance to ensure all emergency personnel meet emergency management requirements using NIMS and SEMS**	• Achieve a level of readiness for first responders and emergency management to support coordinated emergency response training and exercises • Provide highest level of training to fulfill required federal and state mandates using NIMS and SEMS emergency management systems

5.2 Identification and Analysis of Mitigation Actions

DMA 2000 Requirements – Mitigation Strategy
Multi-Jurisdictional Mitigation Actions **§201.6(c)(3)(iv)**: For multi-jurisdictional plans, there must be identifiable action items specific to the jurisdiction requesting FEMA approval or credit of the plan.
Does the plan include **at least one** identifiable action item for each participating jurisdiction requesting FEMA approval of the plan? AND Does the Annex of Supplement for this jurisdiction identify and analyze, for at least one action item; 1. How this action is prioritized in comparison to other proposed actions (For example, is there a discussion of the process and criteria used to determine its priority). *2.* How was (or will) cost-benefit criteria be considered for this action, and will cost-benefit be used in the prioritization of this action (as compared to other proposed jurisdiction actions)? 3. How will this mitigation strategy/action be implemented and administered? (For example, does it identify the responsible department, existing and potential resources, and time frame?)

The recommended actions were compiled by the City of Marysville and the Yuba County Hazard Mitigation Project through Stakeholder committee meetings and community meetings. The identified projects complement those projects identified is Section Five of the Yuba County Multi-Jurisdictional Multi-Hazard Mitigation Plan

The actions were identified and prioritized in consideration of cost-benefit and environmental concerns. Those projects that were not considered feasible were not considered for inclusion on the final project listing. A complete list of the actions considered can be found in Section 5.5 of the Yuba County Multi-Jurisdictional Multi-Hazard Mitigation Plan.

All proposed mitigation actions are based on a sound planning process that accounts for the inherent risk and capabilities of the City of Marysville. Tables 5-1 and 5-2 identify those projects identified by the City of Marysville and the Marysville Levee Commission, respectively. The tables include the implementation strategy for these projects, including potential funding sources, the responsible parties, the proposed timeline, and the estimated cost.

Table 5–1 Marysville Hazard Mitigation Projects

Category	Action Item	Goal	Background Statement	Priority	Estimated Cost	Benefits	Funding Source	Timeline
Flood/Levee Failure	Levee improvement	2,4,5	Study existing penetration of levee that may cause seepage or lead to levee failure. Study seepage through core sample studies. Modify levees to meet certification standards for levee height and seepage control for 200 year protection.	High	$30 to $50 million	Protect life and property within the City of Marysville.	Levee assessment, bonding, or local, state, and federal government funding.	Ongoing
Responsible Party: Marysville Levee Commission, DWR, USACE, YCWA								
All Hazards	Public Education and Awareness	1,3	Conduct a public education and awareness program to educate residents about the threat of various hazards, including flood and flood insurance	High	$250,000	Ensuring public safety and increased awareness if the public to hazards and effective mitigation strategies	DHS-FEMA	Ongoing
Responsible Party: City of Marysville, Marysville Levee Commission								
Hazardous Materials	Upgrade City sewer system.	2,5	Relocate sewer ponds currently in the flood plain.	High	$35 million	Keep City sewer system intact during flooding, prevent uncontrolled discharge of sewer pond effluent into the Feather River.	City sewer assessment, bonds	Ongoing
Responsible Party: City of Marysville								

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Category	Action Item	Goal	Background Statement	Priority	Estimated Cost	Benefits	Funding Source	Timeline
All Hazards	Relocate Command and Control facilities.	1,2,5	Locate Command and Control facilities above the flood stage either above the existing fire station, or in a new facility also designed to be secure from other threats. Establish an EOC at this location	High	$5 to $25 million	Maintain command and control during emergency incident management of existing disaster. Allow for better management of incident.	DHS-FEMA City general fund, bond, or special assessment.	2008/2009
Responsible Party: City of Marysville								
All Hazards	Elevate helicopter landing area.	1,2,5	Construct elevated helicopter landing area either on top of existing medical facility, or as a stand alone elevated area nearby.	High	$5 to $10 million	Will allow medical access during all emergencies.	DHS-FEMA Private and local medical facilities.	Pending funding
Responsible Party: City of Marysville								
Flood	Improve storm water pumping system.	4,5	• Replace all worn and outdated storm water pumping stations. • Upgrade storm water runoff and catch basins.	High	$3,000,000	Allow for better storm water drainage preventing property damage throughout the City. Provides for storm water mitigation during levee seepage and flooding issues.	DHS-FEMA, DWR: Prop 40, 50, 84 City sewer and storm water assessment, bonds, and other local government.	Ongoing
Responsible Party: City of Marysville								

Category	Action Item	Goal	Background Statement	Priority	Estimated Cost	Benefits	Funding Source	Timeline
Flood	Improve storm water pumping system.	2,4,5	• Modify Ellis Lake, allowing increase storm water runoff capacity.	High	$3,000,000	Allow for better storm water drainage preventing property damage throughout the City. Provides for storm water mitigation during levee seepage and flooding issues.	DHS-FEMA DWR: Prop 40/50/84 City sewer and storm water assessment, bonds, and other local government.	Ongoing
Responsible Party: City of Marysville								
Flood	Update Slow Rise Flood Plan and Training project	1,2,4,6	• Training will provide the City the opportunity to prepare for a flood scenario • Updating the slow rise flood plan will update the information currently contained and allow for greater familiarity with the outlined procedures	High	$250,000	Improved response to flood emergencies.	DHS-FEMA Fire dept. operational budget, other government agency reimbursements, state and federal grants.	2008 or pending
Responsible Party: City of Marysville, Marysville Levee Commission, DWR, YCWA								
Flood	Update Floodplain Management Ordinance	3,4	To comply with State and Federal Floodplain Management standards, the City must update its floodplain management plan	High	$200,000	Participation and eligibility in NFIP/CRS	DHS-FEMA, DWR	Pending funding

Category	Action Item	Goal	Background Statement	Priority	Estimated Cost	Benefits	Funding Source	Timeline
Responsible Party: City of Marysville, Marysville Levee Commission								
Earthquake	Structural Retrofit – City Hall	2	Aging infrastructure could pose a risk in the event of an earthquake		$3,000,000	Increased safety and protection of essential services and a historic site	DHS-FEMA	Pending Funding
Responsible Party: City of Marysville								

Table 5-2 identifies the mitigation actions of the Marysville Levee Commission. The responsible parties for each of these projects are:

- Marysville Levee Commission
- City of Marysville
- United States Army Corps of Engineers
- California Department of Water Resources
- Yuba County Water Agency

Table 5–2 Marysville Levee Commission Mitigation Actions

Category	Action Item	Goal	Background Statement	Priority	Estimated Cost	Benefits	Timeline
Flood	Rip-rap along the left side of the Feather River from the 10th Street Bridge upstream 3/4 mile +/- to the elongation of 16th Street	4,5	The left side embankment of the Feather River is being eroded away. Within the last 10 years the erosion has caused the potential for the future scouring of the footings of the 10th Street Bridge, one of the main emergency routes from Yuba and Sutter Counties.	Moderate	$500,000 +/-	Prevent potential for the scour of critical footings of the 10th Street Bridge	Summer and Fall of 2008 or 2009

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Category	Action Item	Goal	Background Statement	Priority	Estimated Cost	Benefits	Timeline
Flood	Rehabilitate top and side slopes and modify access points along the escape route levee from Walnut Ave to Hallwood Blvd	4,5	The MLC is required to maintain the escape route along this portion of the Marysville levee. Rehab to this section would provide a new baseline and provide an upgraded levee and escape route to maintain	Moderate	$1,000,000	Allow for a more ease in maintenance and inspection of the escape route and added flood protection.	Spring thru Fall of 2010
Flood	Pave top of levees for emergency access and stability in times of levee inspections and high water emergency evaluations.	4,5	The majority of the levee system is paved. Certain areas not paved should be incorporated into stable inspection routes.	High	$250,000	Provide for a more stable inspection route and prevent the erosion of the levee travel way.	Spring thru Fall of 2008
Flood	Re-establish the flood training site east of the Historic City Cemetery. Provide for the training of flood gate setup and takedown, boil fighting, sand bag filling and sand bag wall construction, etc. To be utilized by surrounding Counties.	4,5,6	In the early 90's, the Marysville Fire Department constructed and later abandoned an area for firefighting training and flood control training. The training center would be a welcome asset to the surrounding communities.	High	$200,000 -	Provide for a tactical training center for all agencies including State and Federal training.	Spring 2008
Flood	Inspect all flood gates protecting the City. Reconstruct and/or rehabilitate gates as necessary to provide needed protection.	1,5	Gates are inspected periodically but have not been upgraded in the near past. These gates provide a vital need in the safety of the City during high waters.	High	$200,000+	Protection of the City during high waters.	Spring of 2008
Flood	Provide 50 year protection to the Historic City Cemetery. Provide gravity gates for flood water release and spillway to allow water to enter Cemetery area slowly.	2,5	Protection of Historic City Cemetery and proposed flood training area has been a need since the development of the Cemetery.	Low	$750,000+	Protection of the City Cemetery and proposed training area during high waters.	2011

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Category	Action Item	Goal	Background Statement	Priority	Estimated Cost	Benefits	Timeline
Flood	Review all levee penetrations and map the penetrations. Prepare an O&M Manual for the specific areas needing attention during rising flood waters (Pump sites and penetrations, sewer line closures, etc. Determine the need for the penetrations and abandon where necessary.	4,5	Penetrations through the levee are a potential for levee failure if not adequately mapped and maintained	High	$250,000+/-	Protect the City from potential flooding	2008
Flood	Repair 17th and Hall Street Outflow Structure to the Yuba River. Rip-rap or gunite the spillway at the Yuba river. Stabilize the outflow discharge pipe and protection device. Improve access to spillway and remove brush and trees around location.	2,4,5	Failure of outflow discharge could cause backup in the distribution box at the base of the levee near 17 Street and Hwy 20. If this happened there could be a potential for levee failure at this location.	High	$200,000 +/-	Protection of the levee and City.	Summer and Fall of 2007 and construction season of 2008
Flood	Study/Construct levee and pump station/gravity flow system and eastern edge of the UP Railroad Trestle, east of the Marysville City Cemetery, to provide for storage and limit flows to the Feather River in times of hydraulic stress downstream along the Feather River.	2,4,5	Allow for the Feather River flood storage and controlled release of these backflow waters from the Jack Slough and Simmerly Slough watershed.	Moderate	$200,000 to $3mil+/-	Protection downstream along the Feather River.	2010/2011

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City of Marysville

Category	Action Item	Goal	Background Statement	Priority	Estimated Cost	Benefits	Timeline
Flood	Remove and replace rip-rap from Bizz Johnson Drive east to the UP railroad trestle along the right bank of the Yuba River. Clear any existing vegetation, install vegetation control mat prior to replacing rip-rap.	2,4,5	Regulations require a vegetation free side slope for flood protection levees. To insure this policy is maintained this project needs to be constructed	High	$2,000,000 +/-	Protection and vegetation remediation for the subjection portion of the levee system	2008/2009

5.2.1 Prioritizing Mitigation and Implementation of Mitigation Actions

In compliance with DMA 2000, described below is the information regarding prioritizing mitigation actions and the requirements for the implementation of mitigation strategies.

The recommended actions were developed and reviewed by the planning committee and Stakeholders. Actions and proposed projects were rated the in consideration of cost-benefit, environmental impacts and feasibility concerns.

It is understood that the mitigation strategies adopted in this plan are recommendations only, and they must be approved and funded in order to be implemented as official Hazard Mitigation Strategies for the City of Marysville. Actions may be implemented by the City, either solely or in conjunction with other governmental agencies, special districts or the community.

The Hazard Mitigation Planning Committee acknowledges that these actions will go through a rigorous and detailed environmental, historic, or benefit to cost analyses prior to implementation. Although such considerations were considered in the prioritization of these strategies, further analyses will be undertaken before these strategies become scheduled for implementation.

Upon adoption by the Marysville City Council, the selected strategies will be further developed and considered for implementation as funding becomes available. The plan describes potential sources of federal, state, local and private funding, and general procedures to obtain that funding

5.3 Plan Maintenance

DMA 2000, §201.6(d) states "[Local] plans must be reviews, revised if appropriate, and resubmitted for approval within five years in order to continue to be eligible for…project grant funding."

Per FEMA's Multi-Hazard Mitigation Planning Guidance:

> [Local] Plans must demonstrate that progress has been made…in the past five years…to fulfill commitments outlined in the previously approved plan. This will involve a comprehensive review and evaluation of each section of the plan…Plan updates may validate the information on the previously approved plan, or may involve a major rewrite. In any case, a plan update is NOT an annex to the previously approved plan; it must stand on its own as a complete and current plan.

The City of Marysville will be responsible for updating and maintaining the local plan annex and ensuring that those activities outlined in Tables 5-1 and 5-2 are being implemented as expected. Further, the City will update plan information as it becomes available; including updating the asset inventory and risk assessment section as updated information is received. Hazards not currently identified as high hazards should be monitored for consideration and possible inclusion in further updates.

It is a goal of the City of Marysville to develop a stand-alone Local Hazard Mitigation Plan using the foundation of the Plan Annex to the Yuba County Multi-Jurisdictional Multi-Hazard Mitigation Plan during this five year cycle.

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Additional References may be found in the Yuba County Multi-Jurisdictional Multi-Hazard Mitigation Plan.