



Public Health & Safety



Vision

The major themes of this Element are based on the County's General Plan Update Vision, Goals, and Strategies, a document that was approved by the Board of Supervisors prior to preparation of the General Plan. Following are highlights of the County's General Plan Update Vision, Goals, and Strategies document that are related to the Public Health & Safety Element:

- *Have schools, parks, and public gathering places that provide a safe enjoyable environment and promote active, healthy lifestyles.*
- *Provide the highest level of flood protection possible for our residents.*
- *Ensure that existing and future communities are healthy places to live by promoting a physically active lifestyle with clean air to breathe and safe facilities to meet the community's needs.*
- *Ensure that existing residences and resources are protected from hazardous conditions, such as wildfires, flooding, and soil erosion, in the process of evaluating future subdivisions.*
- *Protect our air and water quality by implementing responsible and realistic policies that protect these precious resources.*
- *Provide public services, such as law enforcement, fire protection, public transportation, and civic facilities, at appropriate levels for urban and rural communities.*
- *Ensure that existing residences and resources are protected from hazardous conditions, such as wildfires, flooding, and soil erosion, in the process of evaluating future subdivisions.*



Introduction

The goals, policies, and actions in this Element ensure that public health and safety are considered in the County's decisions related to the provision of services, proposed plans, development projects, and public investments. This Element also informs changes to County codes and ordinances, such as the Zoning Ordinance, and the County's grading, building, and construction standards.

This Element addresses issues required under state law as mandatory for the safety element of a general plan.¹ Following are the County's goals, policies, and actions addressing:

- Flooding and dam inundation;
- Fire risk;
- Water quality;²
- Airport operations;
- Air quality and climate change;
- Hazardous materials;
- Geologic and soils stability hazards, including seismic issues;
- Emergency preparedness, response, and evacuation;
- Noise; and
- Healthy communities.

The General Plan establishes the overall policy framework to guide various implementation actions. One of the most pertinent implementation actions for this Element is the Multi-Jurisdictional Multi-Hazard Mitigation Plan. Yuba County was a participant in the development of the Multi-Jurisdictional Multi-Hazard Mitigation Plan, and this plan is hereby incorporated by reference.

Relationship to other Elements

Public health and safety issues and the County's policy response to these issues are embodied not only in this Element, but also the Community Development and Natural Resources Elements. The issues addressed in this Element feed into the County's land use strategy, which is designed, in part, to avoid development in areas prone to natural hazards. The Circulation section of the Community Development Element is also closely tied to public health and safety issues. A highly connected circulation network allows for multiple routes to a given location for emergency services personnel and evacuation in the event of a disaster. The Circulation section of the Community Development Element and implementing standards also address road width, turning radii, and other aspects of the circulation network that are related to emergency access. With approximately 40,000 traffic fatalities per year nationally, vehicular transportation is a major public health and safety issue. Since transportation corridors are a major source of noise, there is a strong relationship between the noise section of this Element and the circulation section of the Community Development Element, as well.

Air quality and climate change are addressed in this Element, but most policies that would address air quality issues are included in the Community Development Element. The transportation sector is the largest source of greenhouse gas emissions in Yuba County and in California, and mobile sources (vehicles) are the source of the majority of overall air pollution within the Feather River Air Quality Management District. The Community Development Element describes the development of land use patterns and transportation facilities that will reduce dependence on automobile travel and reduce the length of vehicle trips, which has major implications for improvements to air quality and greenhouse gas

¹ Please refer to Government Code Section 65302 (g) (1) for more details.

² Water quality is addressed in this Element both relative to public health and environmental health.



emissions. Achieving air quality goals requires supportive land use patterns, community design, transportation systems, and the location of highways, railroads, industries, and other sources of air emissions in relation to houses, schools, and other sensitive land uses. The Natural Resources Element policies on energy efficiency also have the potential to reduce indirect air pollutant emissions. The Housing Element includes policies and programs to address housing conditions, which can have health and safety repercussions for County residents.

These are just a few examples of the many important relationships between public health and safety issues and those policy topics addressed in other General Plan Elements. The County is aware of complementary policies in other Elements and has developed an internally consistent General Plan with these important connections in mind.

Public Health & Safety Goals, Policies & Actions

Following are the County's goals, policies, and actions related to public health and safety.

Flooding and Dam Inundation

Flood hazards affecting developed and planned development areas in the County primarily relate to high flows on the Feather, Bear, and Yuba rivers, as well as other creeks and drainage channels. Localized flooding has also been a problem for the unincorporated communities of Linda and Olivehurst. Flooding can also be an issue for some agricultural activities and storage.

There have been 10 major flood events that have impacted low-lying valley areas along the Yuba and Feather Rivers in the last 100 years. A levee failure in 1950 along the Yuba River affected Hammonton, Linda, and Olivehurst and flooded approximately 43,000 acres. A levee failure along the Yuba River in 1986 inundated 7,000 acres and 3,000 homes in Linda and Olivehurst. In 1997, a levee failure along the Feather River flooded 16,000 acres and 840 homes in Arboga, Linda, and Olivehurst.³

The County has been making substantial investments in both drainage and flood control facilities to benefit portions of Linda and Olivehurst (including the Plumas Lake Specific Plan Area). Extensive levee systems have been constructed along the Feather, Yuba, and Bear Rivers, and Western Pacific Interceptor Canal to provide flood protection. The objectives of local and areawide flood protection facilities and drainage infrastructure include reducing the instance of flooding, improving local drainage, and enhancing flood protection for developed and developing areas near the Yuba, Feather, and Bear Rivers. These improvements have had the co-benefit of protecting important agricultural areas of the County from flooding.

The County and Reclamation District 784 signed a joint powers agency agreement to create the Three Rivers Levee Improvement Authority (TRLIA) to finance and construct levee improvements designed to protect developed and developing portions of south Yuba County from flooding from the Yuba, Feather, and Bear rivers and the Western Pacific Interceptor Canal. Levee improvements are designed to provide protection against the 0.5% Annual Exceedance Probability (AEP) event (otherwise known as 200-year flood protection). Most of the necessary improvements to protect south Yuba County from wide-scale flooding have been completed, as of the writing of this document.⁴ Areas prone to flooding have

³ Yuba County Water Agency. Integrated Regional Water Management Plan. 2008.

⁴ For a description of other flood improvements, please refer to Section 4.4.1 of the Yuba County Water Agency's Integrated Regional Water Management Plan, available online at: <http://www.ycwa.com/projects/detail/7>.



changed over time as flood protection has improved. Current floodplains are shown in Exhibit Public Health & Safety-1.

In addition to an extensive levee system, Lake Oroville (located in Butte County) and New Bullards Bar Reservoir provide flood protection to large portions of Yuba County. New Bullards Bar Reservoir has a capacity of 966,000 acre-feet, of which 170,000 acre-feet is reserved for flood control purposes on a seasonal basis. Oroville Dam has a capacity of 3,537,000 acre-feet, of which up to 750,000 acre-feet is dedicated to flood control between October and March. Lake Almanor, located on the North Fork of the Feather River can provide incidental flood storage, thereby saving storage space in Lake Oroville.⁵

The Department of Water Resources released interim criteria for levees and floodwalls, with the expectation that these criteria will be superseded by regulations in the California Code of Regulations for urban and urbanizing areas of the Sacramento and San Joaquin Valleys. It will be important for the County to maintain consistency with State and federal regulations as they change during buildout of the 2030 General Plan.⁶

In the event of a major earthquake, these waterbodies could inundate certain areas in the County. There are several dams in and outside the County that could affect lands addressed in this General Plan if they were to become severely damaged or fail (see Exhibits Public Health & Safety-2 and Public Health & Safety-3). However, according to the Yuba County Multi-Jurisdictional Multi-Hazard Mitigation Plan, "failure of these dams during a catastrophic event such as a severe earthquake is considered a very unlikely event. Due to the method of construction, they have performed well and failure is not expected to occur."⁷

Goal HS1. Flood Protection

Reduce flood risk for the County's people and property

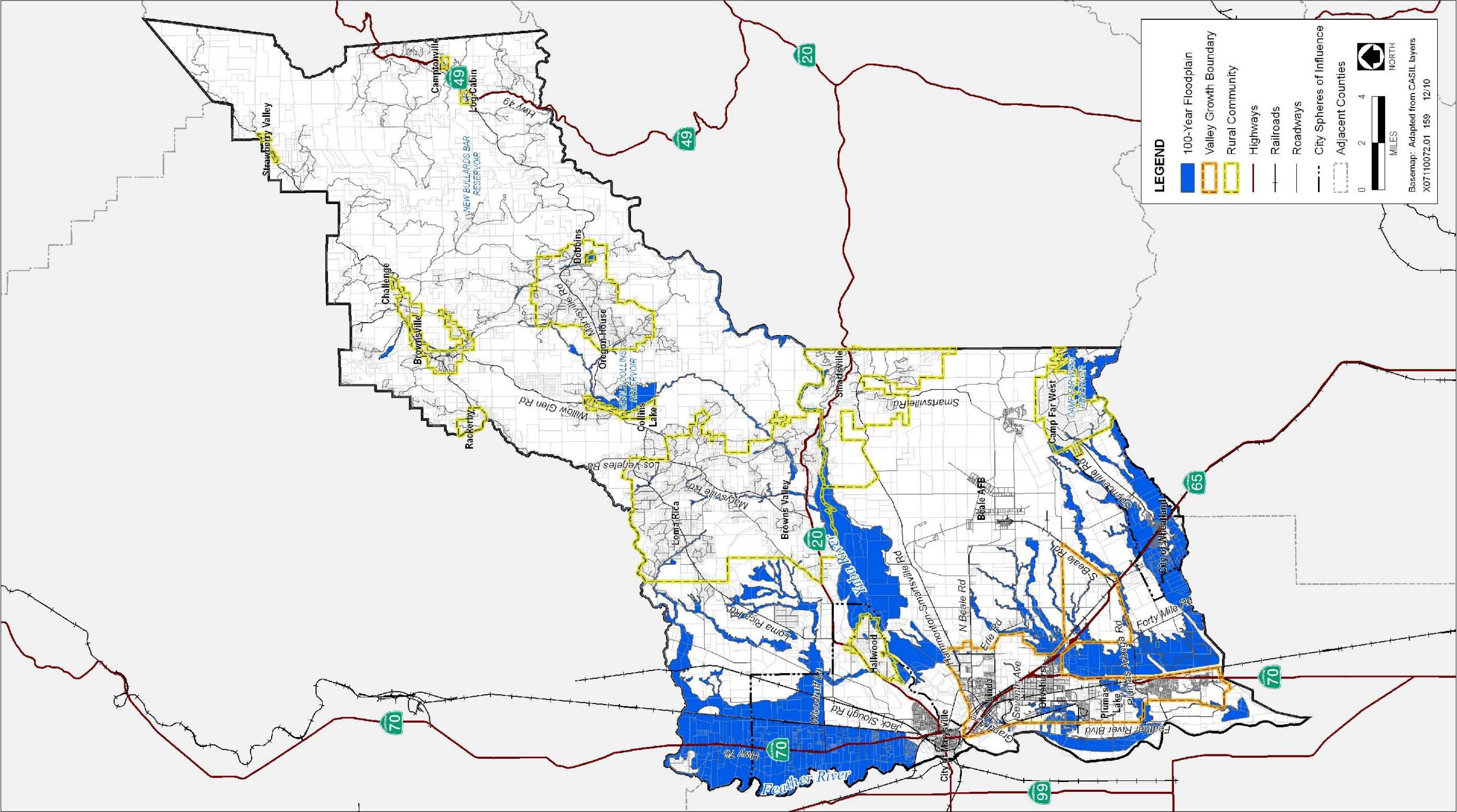
Policy HS1.1 The County will not approve new housing development that would have a finished floor within the 100-year floodplain, as defined by the Federal Emergency Management Agency.

Policy HS1.2 For areas under the jurisdiction of the Central Valley Flood Protection Board, the County will not approve new developments within a flood hazard area or an area of moderate flood hazard without demonstrating adequate flood protection according to Government Code Sections 65865.5, 65962, and 66474.5.

⁵ Yuba County Water Agency. Integrated Regional Water Management Plan. 2008.

⁶ Department of Water Resources. 2010 (December 15th). Interim Levee Design Criteria for Urban and Urbanizing Areas in the Sacramento-San Joaquin Valley, Version 4.

⁷ Yuba County. Multi-Jurisdictional Multi-Hazard Mitigation Plan. Section 4, page 86.



Source: Federal Emergency Management Agency geographic information systems layers received 2010, to become effective February 18, 2011.

Exhibit Public Health & Safety-1. Floodplain

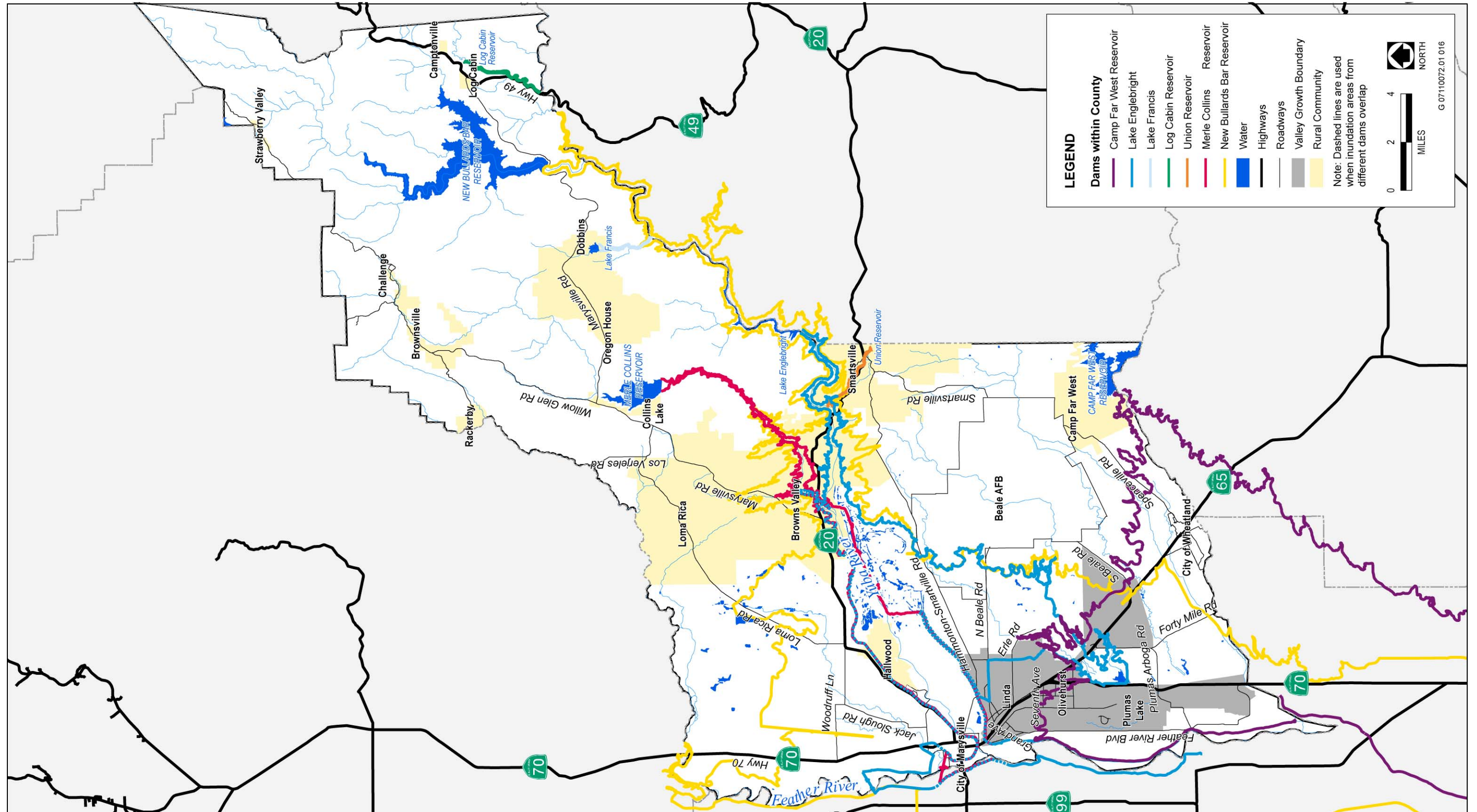


Exhibit Public Health & Safety-2. Dam Inundation (Dams inside County)

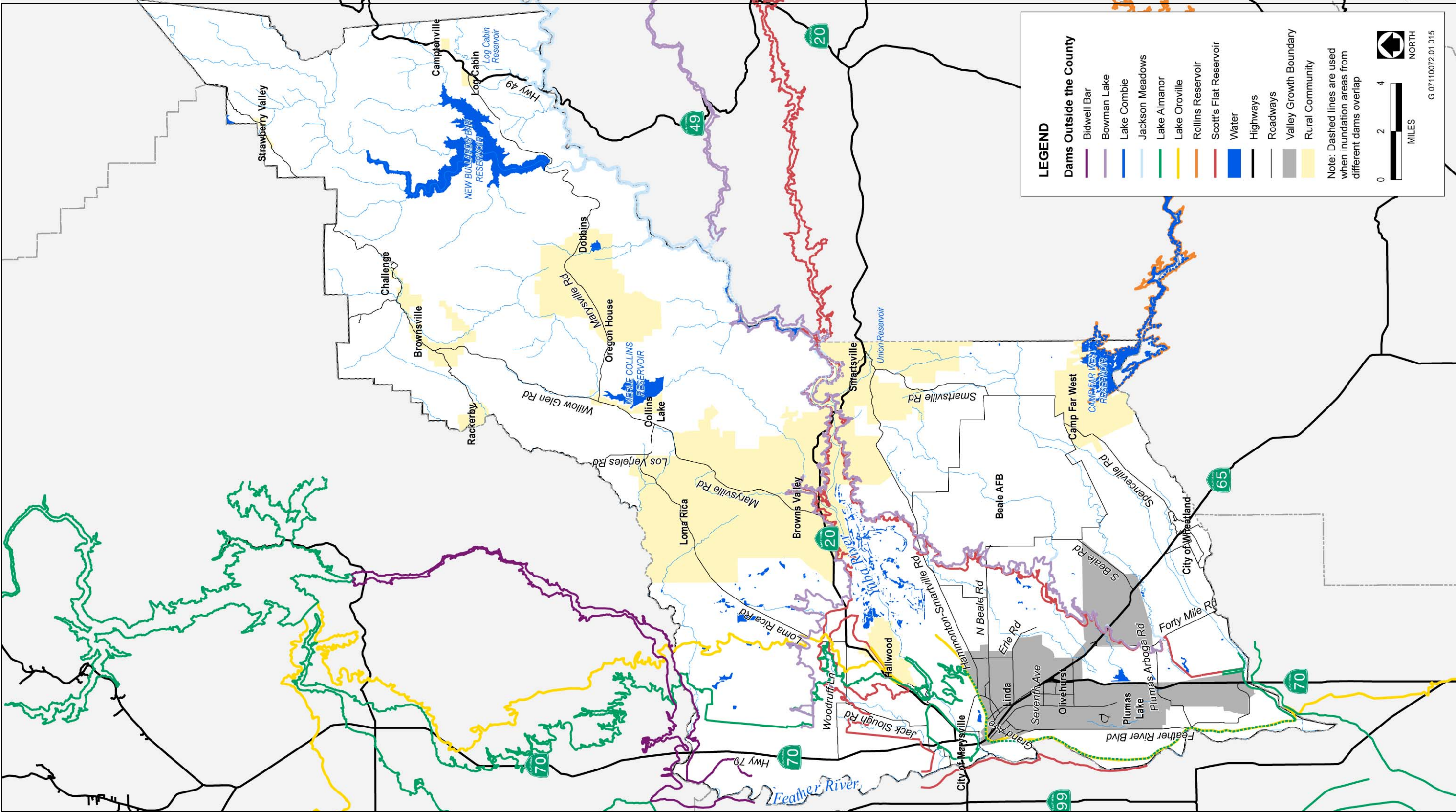


Exhibit Public Health & Safety-3. Dam Inundation (Dams outside County)



- Policy HS1.3 The County may allow non-residential improvements within the 100-year floodplain so long as the proposed improvements do not:*
- *Increase flood heights or velocities;*
 - *Inhibit emergency access;*
 - *Create excessive costs in providing governmental services during or after flooding;*
 - *Interfere with the existing waterflow capacity of the floodway;*
 - *Substantially increase erosion and/or sedimentation; or*
 - *Contribute to the deterioration of any watercourse or the quality of water in any body of water.*
- Policy HS1.4 Public buildings are discouraged in the 100-year flood zone, but if they are constructed, they should be flood-proofed to a point at or above the base flood level elevation.*
- Policy HS1.5 The County will continue to collaborate with the Yuba County Water Agency, local reclamation districts, levee commissions, and U.S. Army Corps of Engineers to improve, certify, and maintain the levee system that protects developed and planned development areas in Linda and Olivehurst, including the Plumas Lake Specific Plan Area. Urban areas in Yuba County should have 200-year flood protection or greater.*
- Policy HS1.6 The County will prohibit construction near levees that would adversely affect the integrity of the subject levee or would impede maintenance, inspection, or planned levee expansion.*
- Policy HS1.7 The County will use the best available flood hazard information and mapping from regional, state, and federal agencies to inform land use, zoning, and public facility investment decisions.*
- Policy HS1.8 The County will update its policies and standards, if necessary, to remain consistent with state and federal standards for floodplains, levee design criteria, and urban development in areas subject to flooding during General Plan buildout.*
- Policy HS1.9 New developments shall evaluate potential flood hazards and demonstrate compliance with state and federal flood standards prior to approval.*
- Policy HS1.10 New developments shall provide drainage improvements according to County standards.*
- Policy HS1.11 Natural waterways should be protected from unnecessary alteration whenever flood protection structures or other forms of construction are proposed.*

Action HS1.1 General Plan and Zoning Updates

The County will monitor maps issued by the State Department of Water Resources and the Federal Emergency Management Agency and will amend the General Plan, as necessary, to ensure compliance with state and federal standards for development in flood hazard areas.

The County will communicate with staff from the Central Valley Flood Protection Board to ensure that local policies and standards are consistent with state law and



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regulations. The County will amend the Public Health & Safety Element and Community Development Element, if necessary, to ensure adequate flood protection is provided in areas anticipated for urban development or to provide demonstration of adequate progress toward the requisite level of flood protection.

Policies and actions in the General Plan related to flood protection will integrate data from the State Plan of Flood Control. For flood-related revisions to the Public Health & Safety Element, the County will consult with the Central Valley Flood Protection Board and local flood protection agencies serving the County.

Following flood-related updates to the General Plan, the County will, if necessary, amend applicable development standards, including the Zoning Ordinance, Subdivision Ordinance, improvement standards, and other codes to ensure consistency with flood protection policies. Subdivision approvals, development agreements, permits, and other County and special district approvals should incorporate amended flood policies and regulations.

Related Goals:	Goal HS1, Goal CD15, Goal NR12
Agency/Department:	Community Development and Services Agency
Funding Source:	General Fund and/or Permit fees
Time Frame:	Annually, following issuance of official updated flood hazard maps from the Federal Emergency Management Agency and the State Department of Water Resources

Action HS1.2 Flood Emergency Plan

The County will collaborate with the cities of Wheatland and Marysville to develop a flood emergency plan, consistent with the adopted Central Valley Flood Protection Plan. The flood emergency plan should also be consistent with local hazard mitigation plans and the local flood protection planning.

Related Goals:	Goal HS1, Goal HS9, Goal CD15, Goal NR12
Agency/Department:	Community Development and Services Agency
Funding Source:	General Fund
Time Frame:	Within 24 months of the adoption of the Central Valley Flood Protection Plan, which is required to be adopted by July 1, 2012



Fire Risk

The County's policy approach to fire risk is multi-faceted. In addition to ensuring adequate emergency access and evacuation routes, water for fire suppression, avoiding development in high wildfire risk, and fire resistant materials in appropriate areas, there is the need to be more fire resilient. Whereas "fire resistant" can be defined as being resistant to ignition, "fire resilient" has to do with the ability of a community to respond positively to, and recover quickly from the effects of a wildfire.⁸



Fire hazard is greatest in the foothill and mountain areas of the County. Many of Yuba County's residential communities—Smartsville, Dobbins, Oregon House, Collins Lake, Browns Valley, Loma Rica, Rackerby, Camptonville, Log Cabin, Brownsville, and Challenge—are located in areas of high or very high fire hazard (see Exhibit Public Health & Safety-4). The Dobbins-Oregon House area has been affected by several wildfires, including: Bullards Fire (2010); Yuba Fire (2009); Marysville Road Fire (2006); Pendola Fire (1999); and Williams Fire (1997).⁹

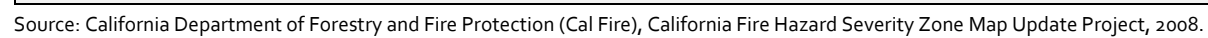
The Yuba Watershed Protection & Fire Safe Council has recently targeted fuel reduction along roads as a focus of activity in the foothills of Yuba County. The Council has partnered with Yuba County Public Works Department to reduce fuels along public roadways that prevent or slow the spread of vehicle fires into adjacent wildlands. Reduction of fuels along roads has slowed the spread of recent fires and increased the effectiveness of the initial response from fire fighters.

Reducing wildfire risk during buildout of this General Plan will require similar collaboration among agencies and property owners to reduce fuels, ensure emergency access, coordinate response efforts, and manage how and where people and property are introduced into areas with high fire risk.

Grassland fires are a concern within urban areas, but the greater fire threat in the core of Yuba County's urban areas is from structural fires. Fire and building codes are designed to reduce overall risk to fire risk related to structural fires. Older buildings can be retrofitted to current safety standards. Fire stations, equipment, and personnel must be planned in coordination with development to ensure adequate fire suppression in the County's growing areas. Connected transportation networks are important to ensuring emergency access to both the County's urban and rural areas, to facilitate rapid response to fires.

⁸ For more information, please see "The Strategic Fire Plan for California," available online at: http://www.bof.fire.ca.gov/board_committees/resource_protection_committee/current_projects/resources/2010_fire_plan_1-27-10version.pdf

⁹ Letter from Michael Lee, Director of the Dobbins/Oregon House Fire Protection District to Dan Cucchi, Project Planner, Yuba County dated December 19th, 2010.



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Goal HS2. Fire Risk

Protect people and property from wildland and urban fire risk and create more fire-resilient communities

- Policy HS2.1 *Prior to approval, new developments proposed in areas of very high, high, or moderate fire hazard, as designated on maps maintained by Cal Fire, shall demonstrate compliance with Fire Safety Regulations and local regulations for defensible space, ignition-resistant construction materials, property maintenance to reduce fuels, natural hazards disclosure requirements, emergency access and multiple access points, availability of water for fire suppression, and other relevant building and development standards.*
- Policy HS2.2 *The County will communicate with appropriate local, state, and federal fire protection personnel during the development review process and will condition projects considering input from these agencies to require defensible space, fire-wise landscaping, fuel breaks, emergency access, fire flow, hydrants, sprinkler systems, fire stations and other improvements and conditions, as appropriate.*
- Policy HS2.3 *New development projects shall pay on a fair-share basis for fire stations, equipment, and other fire suppression improvements necessary to provide adequate fire protection services.*
- Policy HS2.4 *All community water systems serving new development projects are required to meet or exceed County minimum standards for provision of water for fire flows.*
- Policy HS2.5 *Road and building construction on slopes of more than 15% is strongly discouraged and will only be approved if consistent with County standards and the Yuba County Wildfire Safety Plan.*
- Policy HS2.6 *The County will seek funding for, and cooperate with efforts to protect watersheds, reforest areas, and restore ecosystems affected by wildfire.*
- Policy HS2.7 *The County will use the best available science to evaluate and protect people and property from changes in fire risk attributable to climate change, insects, and disease.*
- Policy HS2.8 *Communication and electricity infrastructure in areas prone to wildfire should be located and designed to avoid interruptions during periods of fire activity.*
- Policy HS2.9 *Public trails and unimproved roads should be maintained, where feasible, to provide emergency access, including evacuation and wildfire response. These rights-of-way are not considered primary evacuation or emergency access routes and vehicles that cannot successfully navigate these routes shall not make use of them.*
- Policy HS2.10 *New developments shall provide access that will allow safe evacuation and movement of firefighting equipment during a wildfire. Evacuation routes shall have the capacity to accommodate traffic in relation to the population served.*
- Policy HS2.11 *New developments in moderate, high, or very high fire hazard areas cannot propose limited access roads unless such access limitations do not adversely affect fire response and suppression.*



- Policy HS2.12 Property owners may manage fuel load on County road easements and rights-of-way adjacent to their properties with prior approval of the County and in compliance with applicable County standards.*
- Policy HS2.13 Clustered developments in Rural Community portions of the foothills are encouraged to take advantage of natural and manmade fire breaks, provide defensible space for clusters of buildings (rather than individual buildings), locate and orient buildings and pervious areas to reduce fire risk, avoid areas of steep topography and dense vegetation, and otherwise use a site plan review process in coordination with County staff to ensure that wildfire risk is minimized.*
- Policy HS2.14 The County will encourage the retrofitting of older buildings to current safety standards in coordination with proposed major remodeling or additions.*
- Policy HS2.15 Developments in the Valley Growth Boundary shall be planned and constructed to resist the encroachment of uncontrolled fire.*

Action HS2.1 Fire Standards

The County will maintain a planning and entitlement review process that documents compliance with state and local standards for fire safety. The County will update zoning, development, improvement standards, and building standards, as necessary, to maintain compliance with relevant fire codes, including those maintained by Cal Fire. County codes would be anticipated to address such topics as landscaping standards and fire-resistant plant materials, fire resistant building materials for exterior walls and other exterior features of structures, defensible space standards for different topographic conditions, sprinklers, emergency access, water supply and pressure for firefighting, building and road construction in areas prone to fire risk and greater slopes, and other relevant topics.

Related Goals:	Goal HS2
Agency/Department:	Community Development and Services Agency; Office of Emergency Services; Yuba Watershed Protection and Fire Safe Council
Funding Source:	Grants, development fees, and other funding sources, and if necessary, General Fund
Time Frame:	Ongoing, as necessary to maintain consistency with relevant fire codes

Action HS2.2 Yuba County Wildfire Safety Plan

The County will prepare, adopt, and implement a comprehensive wildfire safety plan for foothills portions of the County with high and very high wildfire risk. This plan will be designed to reduce fuel loads, ensure emergency access and evacuation routes, and provide incentives for property owners to improve properties in order to reduce wildfire risk and improve fire resiliency for existing developed areas.

As a part of this planning effort, the County will collaborate with other public agencies and nonprofits to implement fire breaks and fuel reduction projects in areas of high and very high fire risk, including removal of invasive species that increase understory fuel loads. Areas of particular focus could include County roads, ridges surrounding rural communities, and defensible space around existing



structures. The County will seek funding from sources, such as the Bureau of Land Management and the U.S. Department of Agriculture for fire fuel reduction projects.

The County will collaborate with land owners in fire prone areas without adequate secondary access to improve access, add water tanks, or otherwise improve fire safety conditions. The County will seek funding to provide incentives for property owners to retrofit existing structures in high and very high fire risk areas to reduce combustibility.

Planning for emergency access and evacuation routes will take into account records of historic fire activities affecting foothills portions of the County. Emergency access and evacuation will also take into account fire behavior modeling, including consideration of wildfire driven by winds that could limit the use of existing evacuation routes. The County will analyze and consider planning and fair-share funding of improvements needed to provide for emergency access and evacuation routes generally leading away from the head of a wildfire that has the characteristics of the worst-case predicted wildfire and secondary access allowing egress oriented in a direction of approximately 180 degrees from the previously described route.

The County would examine fair-share funding approaches and grant funding approaches for improvements needed to provide adequate emergency access and evacuation.

Related Goals:	Goal HS2
Agency/Department:	Community Development and Services Agency; Office of Emergency Services; Yuba Watershed Protection and Fire Safe Council
Funding Source:	State and federal grants, other State or federal funding, and private funding from landowners of affected properties
Time Frame:	As funding is available



Water Quality

In general, surface water and groundwater quality in Yuba County is good.¹⁰ Different watershed areas have different water quality characteristics. Major watershed areas in the County are shown in Exhibit Public Health & Safety-5).

The Yuba River has excellent water quality by most measures, although gold mining activities have left a legacy of mercury contamination. Mercury is routinely detected in both the Feather and Yuba Rivers, but the concentrations have not exceeded regulatory limits. Pesticides have been detected in the Feather River more frequently than in the Yuba River, but with the exception of the drinking water standard for carbofuran (a pesticide), there are no applicable regulatory criteria established for the pesticides that have been detected.



A series of special districts and private water companies provide domestic, commercial, and irrigation water in unincorporated Yuba County. Beale Air Force Base (AFB) provides water for its operations. For the most part, municipal providers do not serve irrigation needs and irrigation districts do not provide municipal water. Today, agricultural users rely mostly on surface water and urban users rely mostly on groundwater.

Yuba County Water Agency (YCWA) was formed as an independent special district to provide wholesale water and flood control. Linda County Water District provides domestic water service, water for fire protection, and wastewater services to residents of the community of Linda. The Olivehurst Public Utility District (OPUD) provides domestic water, wastewater, drainage services, parks, and fire protection services to people in the community of Olivehurst (which includes Plumas Lake). Both OPUD and Linda County Water District anticipate substantial growth in demand as a result of County-approved plans and projects.

Water provided by Linda County Water District and OPUD is routinely tested, as required by State regulations. The Health & Safety Code requires public water systems to periodically report on water quality. Water samples are analyzed against established pollutant limits that protect the public and environmental health. A source water assessment was completed for wells serving Olivehurst and Plumas Lake. This assessment illustrates the variety of potential sources of pollution for Yuba County water supplies, which include: manufacturing and railroad operations; agricultural drainage and livestock; gas stations; sewer and septic systems; auto body shops; and airports.

¹⁰ Yuba County Water Agency. Integrated Regional Water Management Plan. 2008.

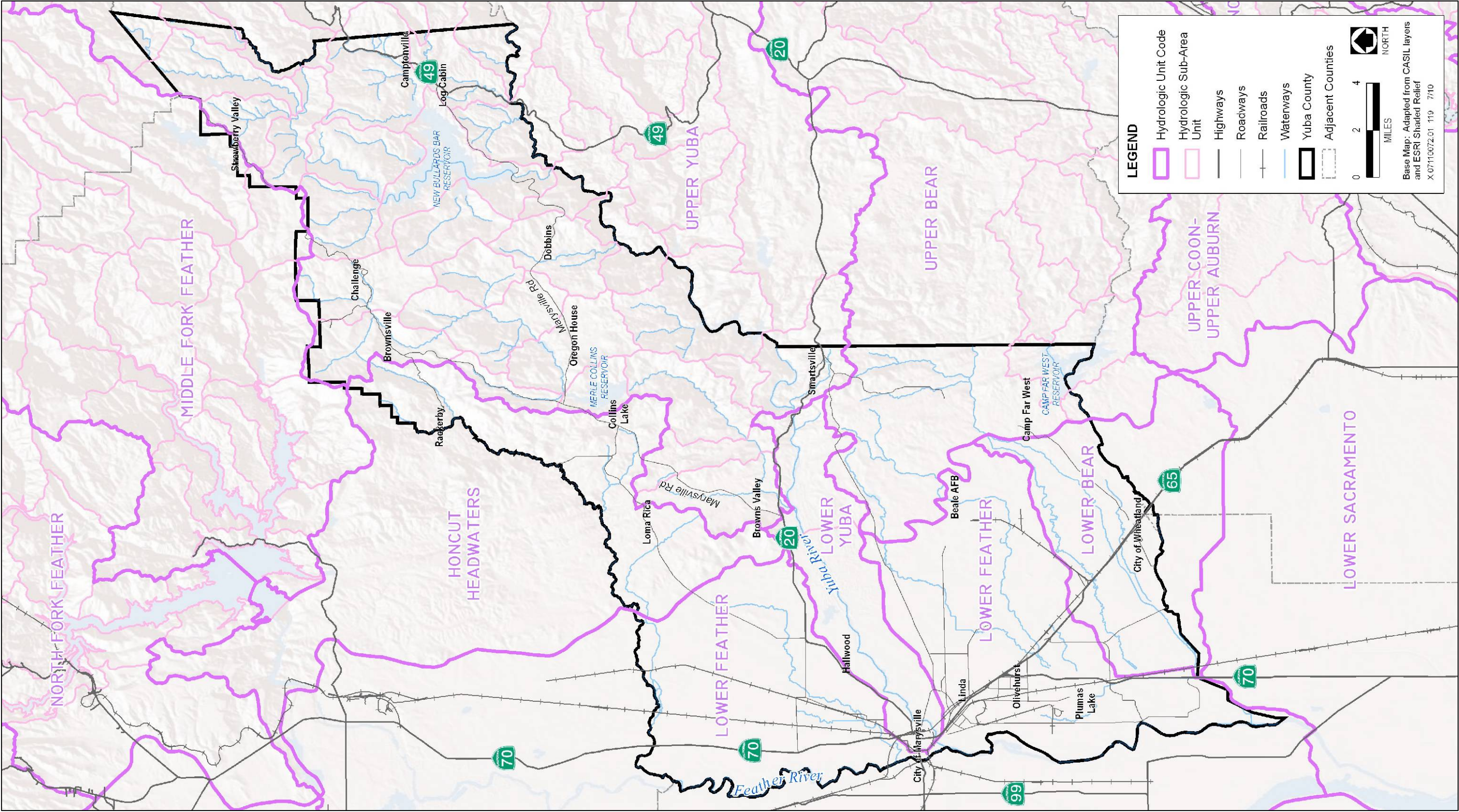


Exhibit Public Health & Safety-5. Yuba County Watersheds



As the County grows, there is the potential for impacts to water quality and natural habitat from surface runoff. As natural areas or agricultural land is converted to rooftops, driveways, parking lots, roads, and other impervious surfaces, rain and snowmelt no longer soak into the ground. Instead, drainage systems carry runoff that may contain sediment, oil, grease, pesticides, nutrients, bacteria, trash, and heavy metals to streams and other water bodies.¹¹

In order to reduce impacts to hydrology and water quality, many local governments are applying “low impact development” (LID) or “natural drainage systems” (NDS) concepts within the context of new development or redevelopment. These concepts reduce the rate of surface water runoff, filter pollutants out of runoff, and facilitate infiltration of water into the ground. Rather than collecting runoff in piped or channelized networks and controlling the flow downstream in large stormwater management facilities, NDS and LID take a decentralized approach to disperse flows and manage runoff closer to where it originates (see Exhibit Public Health & Safety-6).

LID incorporates a set of site design strategies and decentralized source control techniques that can be used in buildings, infrastructure, or landscape design. The goal of moving stormwater away from buildings is combined with strategies to slow down, disperse, and filter stormwater runoff. NDS and LID include many different techniques for controlling runoff that can be customized for the local regulatory environment and according to specific site conditions. These systems can be less costly to construct and maintain compared to a traditional piped drainage systems, while also providing water quality benefits and using stormwater as a community amenity.

It is also important to look for opportunities to reduce the amount of impervious surfaces added in the context of new development, since impervious surfaces increase runoff and can contribute to water pollution. Different types of



Exhibit Public Health & Safety-6. Low Impact Development and Natural Drainage Systems

Top Photo: Vegetated areas can be used in parking lots to slow stormwater and promote groundwater infiltration.

Middle Photo: Streetscapes can be constructed or redeveloped to slow down, filter, and infiltrate stormwater.

Bottom Photo: Swales are used for filtering and conveying stormwater runoff.

¹¹ For more information, please refer to the Governor’s Office of Planning and Research Technical Advisory, “CEQA and Low Impact Development Stormwater Design: Preserving Stormwater Quality and Stream Integrity Through California Environmental Quality Act (CEQA) Review.” This is available online at: http://www.opr.ca.gov/ceqa/pdfs/Technical_Advisory_LID.pdf



projects in different locations will have different needs for parking, loading areas, driveways, and other types of impervious surfaces. Sometimes construction standards, parking ratios, and other standards do not consider opportunities to consolidate paved areas for multiple uses, provide shared parking, or otherwise reduce impervious surfaces. Roads and parking lots are sometimes designed to handle the peak demand (such as the rush hour or shopping activities on the day after Thanksgiving), without properly considering the more typical daily demand and the consequences of over-planning for these improvements. The County's intent is for projects to demonstrate feasible means to reduce the amount of impervious surfaces added in new development.

The County implements a Storm Water Management Plan designed to control runoff and pollutant discharge into waterways (and implement federal and state law and permitting requirements for water quality). Current County code requirements address stormwater quality, as well as drainage requirements for proposed developments.¹² Future code requirements will need to be revised based on evolutions in state law related to water quality, as well as the goals and policies in the General Plan.

Goal HS3. Water Quality

Preserve, protect, and improve the quality of regional water supplies

- Policy HS3.1 The County will collaborate with relevant service providers to ensure that municipal water supply, treatment, and delivery within unincorporated areas meet or exceed Maximum Contaminant Levels (MCLs) specified in Title 22 of the California Code of Regulations.*
- Policy HS3.2 County and regional water supply providers should monitor and proactively address water quality problems, with a focus on achieving and maintaining adequate water quality for "beneficial uses" of area waterways identified in the Yuba County Integrated Regional Water Management Plan. "Beneficial uses" in Yuba County include municipal and domestic supply, agricultural supply, industrial service supply, and industrial process supply.*
- Policy HS3.3 The County will regulate new developments, as necessary, and collaborate with irrigation districts to address Regional Water Quality Control Board requirements intended to protect agricultural use and sustain the agricultural economy.*
- Policy HS3.4 New developments shall be designed to control surface runoff discharges, in compliance with the permit requirements and the receiving water limitations administered by the Regional Water Quality Control Board.*
- Policy HS3.5 The County will cooperate with local, state, and federal agencies to remediate issues related to groundwater contamination and increases in total dissolved solids.*
- Policy HS3.6 New developments shall comply with streambed alteration standards and shall be designed to avoid harmful discharge that would substantially affect wetlands and riparian areas.*
- Policy HS3.7 Valley Neighborhoods, Employment Village areas, Commercial Mixed Use areas, and Employment areas should have coordinated drainage master planning and avoid a site-by-site approach to detention and drainage. Drainage master planning should implement an areawide approach that incorporates existing and constructed swales for conveyance and planned open space and parkland for detention.*

¹² Please refer to the General Plan Update Hydrology and Water Quality Background Report for a more detailed description of applicable regulations.



- Policy HS3.8 New developments in areas with moderate, severe, and very severe erosion potential shall provide technical documentation, to the satisfaction of the County, that adequate measures have been taken in site planning, design, and/or mitigation to avoid erosion and sediment loss (Exhibit Public Health & Safety-7).*
- Policy HS3.9 The County will evaluate available septic system technologies and shared leach field systems to serve planned Rural Centers and allow their use if proven to be protective of water quality.*
- Policy HS3.10 New developments proposing private well and septic systems shall demonstrate compliance with the County's standards for water wells and sewage disposal systems, which are designed to protect the public and environmental health.*
- Policy HS3.11 New community wastewater disposal systems are discouraged, but if considered, projects proposing a new system shall provide bonding or other financial mechanisms that are adequate for ongoing maintenance and periodic replacement, subject to County approval.*
- Policy HS3.12 New developments shall comply with applicable state siting, design, and monitoring standards for on-site wastewater treatment (septic) systems, including standards intended to protect the beneficial use of potentially affected waterbodies.*
- Policy HS3.13 Proposed residential property subdivisions that would create lots of 1 acre or less shall be served by a public water and sewer system designed in compliance with County standards. Projects that propose parcels of between 1 and 2.5 acres shall provide either a public sewer system or public water supply, as determined by the County Environmental Health Director.*
- Policy HS3.14 The County will encourage the preservation, creation, or restoration of riparian corridors, wetlands, open space buffers, and other types of open space that provide water quality benefits.*
- Policy HS3.15 New projects and plans in the Valley Growth Boundary should employ runoff collection strategies located close to the point where water initially meets the ground to minimize urban runoff, where feasible.*
- Policy HS3.16 New developments are encouraged to incorporate open, vegetated swales to filter, slow down, and convey stormwater and encourage groundwater infiltration.*
- Policy HS3.17 New developments shall limit construction of new impervious surfaces, such as parking lots, travelways, vehicle waiting areas, and vehicle loading areas to the minimum amount needed to implement the subject project.*
- Policy HS3.18 New developments shall break up parking areas, intersperse parking with vegetated areas, and incorporate other best management practices that filter and slow down runoff and promote infiltration.*

Action HS3.1 Ongoing Monitoring and Corrective Actions

During General Plan buildout, the County may conduct water quality monitoring along key waterways and watersheds. The County may require more stringent water quality standards for developments that may affect waterways or watersheds with identified water quality problems.



The County, in collaboration with regional water supply providers, will conduct ongoing monitoring to ensure the application and effectiveness of construction and environmental policies and standards. Ongoing monitoring would be designed to identify problems that may require corrective actions. The County will collaborate with regional and state agencies on the need for corrective actions for ongoing uses that pollute the County's water supply.

Related Goals:	Goal HS3, NR12
Agency/Department:	Community Development and Services Agency
Funding Source:	State and federal grants, other State or federal funding, and private funding for projects near the County's waterbodies
Time Frame:	Ongoing, with corrective actions, as needed

Action HS3.2 Improvement Standards and Design Guidelines

As discussed in the Community Development Element, the County will revise its development, subdivision, grading, and improvement standards to allow or require natural drainage systems and low impact development drainage strategies for new developments. The County will revise its improvement standards to encourage naturalized drainage swales, pervious driveways, pervious parking areas, tracked (or "Hollywood") driveways, and other stormwater management and landscaping best practices that maximize on-site infiltration and treatment of stormwater. The County's standards and guidelines will be designed to limit disturbances to natural water bodies, reduce short- and long-term water pollution, and incorporate natural drainage systems. The County will adopt design guidelines that provide certainty for new development, regarding acceptable approaches to drainage and erosion control methods.

Related Goals:	Goal HS3, Goal NR12
Agency/Department:	Community Development and Services Agency
Funding Source:	General fund, applicable fees
Time Frame:	Adopt by 2013

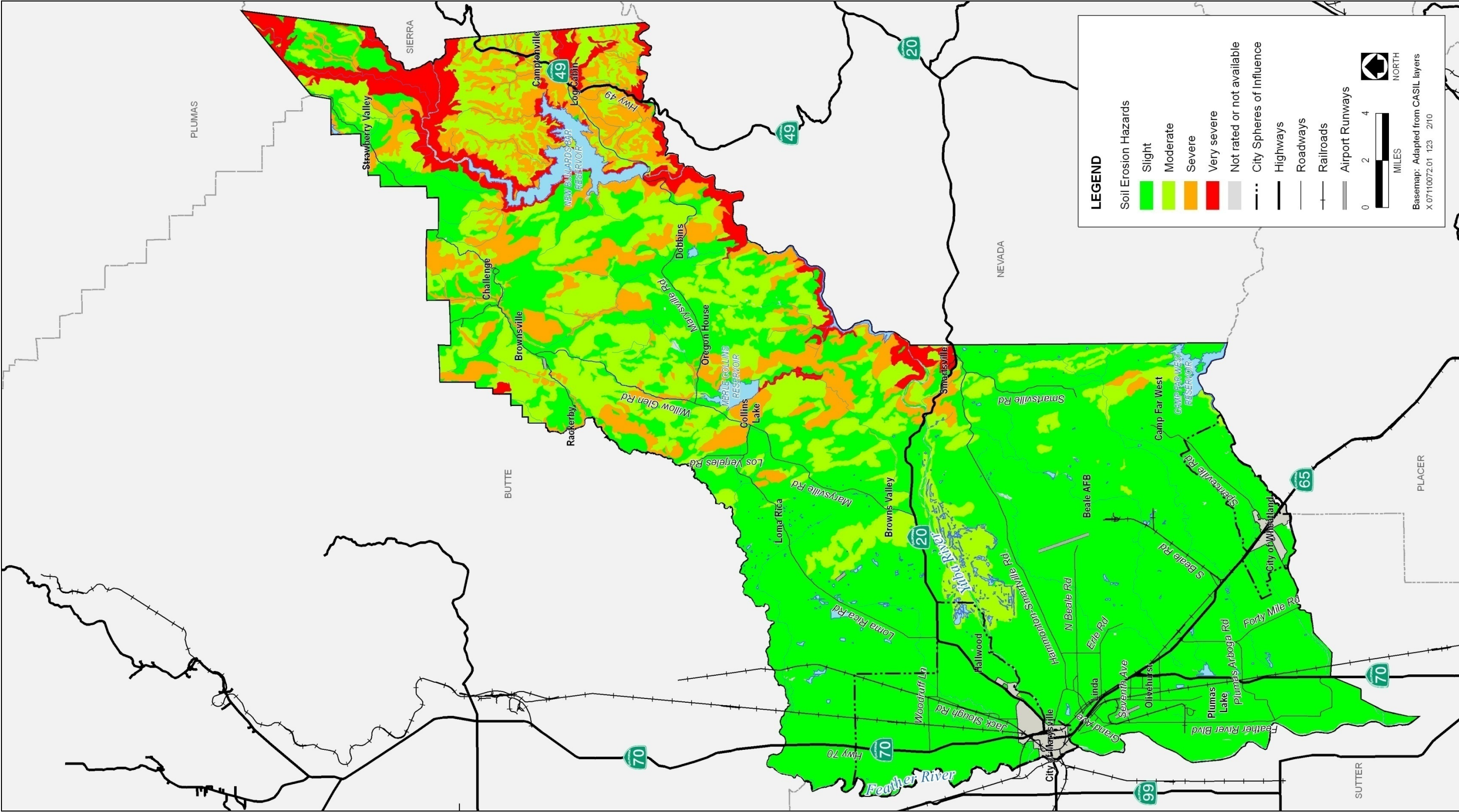


Exhibit Public Health & Safety-7. Erosion Potential



Airports

Yuba County has three airports (Exhibit Public Health & Safety-8). The largest and most active of these facilities is Beale AFB, located approximately 10 miles east of Marysville. A Joint Land Use Study (JLUS) for Beale AFB was completed in May 2008, and an Air Installation Compatible Use Zone (AICUZ) Study was completed in 2005. The AICUZ identifies constraints from flight operations, including noise zones and accident potential zones. These documents encourage collaborative planning efforts and consultation between local governments and Beale AFB when making land use decisions to ensure compatibility and safety.

The Yuba County Airport is owned and operated by Yuba County and is located in the community of Olivehurst, roughly three miles south of Marysville. The airport is a general aviation facility adjacent to residential, agricultural, and industrial lands. The airport has a Clear Zone and an Approach/Departure Zone, which extend north and south of the airport boundary into developed areas in the western portion of Linda and Olivehurst. Appropriate land uses are limited in these zones to ensure that airport crash hazards are minimized.

The Brownsville Aeropines Airport is located in the northeastern portion of the County along La Porte Road in the community of Brownsville. The airport has a single paved runway. The Clear Zone and the Approach/Departure Zone extend east and west of the runway.





Goal HS4. Airports

Avoid land use conflicts with, and reduce exposure of people and property to risks from the County's airports

- Policy HS4.1 The County will collaborate with the Airport Land Use Commission to update local airport land use compatibility plans and will condition projects, as necessary, to ensure compliance with these plans.*
- Policy HS4.2 New developments shall be located and designed to avoid conflicts with current and potential future operations at Beale Air Force Base, including Beale's Phased Array Warning System.*
- Policy HS4.3 New construction within the Air Installation Compatibility Use Zone 65 dB CNEL noise contours for the existing and potential future missions shall use building materials and construction techniques to mitigate noise impacts.*

Action HS4.1 Airport Land Use Compatibility Planning

During General Plan buildout, the County will collaborate with the Airport Land Use Commission and local airports to update compatibility plans. The County will regulate and condition new development according to restrictions of local airport land use compatibility plans.

Related Goals:	Goal HS4, Goal HS7, Goal HS10, Goal CD3, Goal CD22
Agency/Department:	Community Development and Services Agency
Funding Source:	State and federal grants, other State or federal funding, General Fund
Time Frame:	Adopt Yuba County and Beale CLUPs by 2012 with periodic revisions during General Plan buildout

Action HS4.2 Beale Air Force Base Coordination

The County, along with the cities and other public service agencies, will coordinate with Beale Air Force Base representatives to ensure continued land use compatibility between County lands and base operations. The County will involve Beale representatives in development project review and conditions.

Related Goals:	Goal HS4, Goal CD3, Goal CD10
Agency/Department:	Community Development and Services Agency
Funding Source:	General Fund, project applicant funds
Time Frame:	Ongoing, and as needed, in response to project proposals near Beale AFB

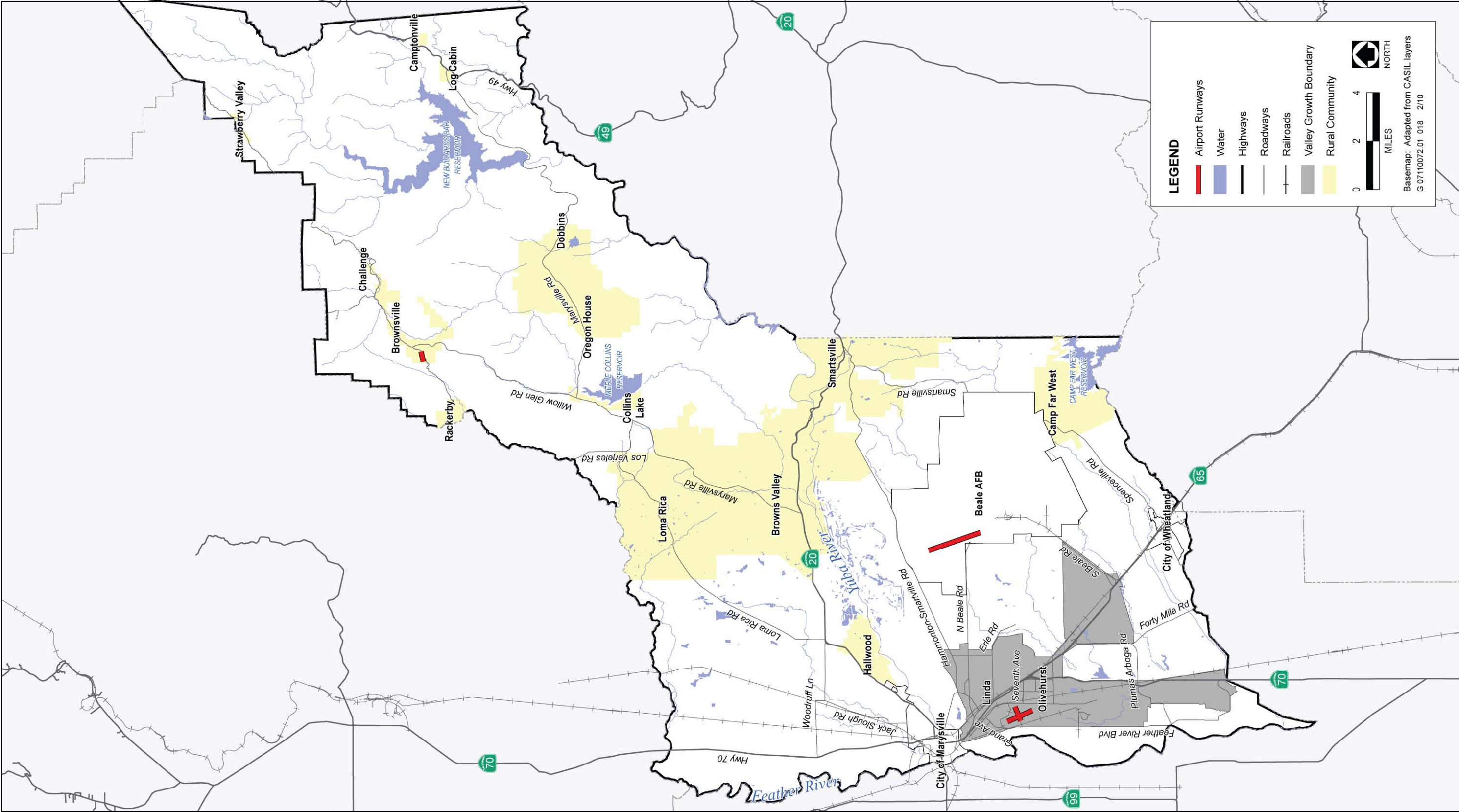


Exhibit Public Health & Safety-8. Yuba County Airports



Air Quality and Climate Change

Yuba County is located within the Northern Sacramento Valley Air Basin, a multi-county area that shares some characteristics relative to air quality, topography, meteorology, and climate. Air quality is monitored and regulated in Yuba and Sutter Counties by the Feather River Air Quality Management District (FRAQMD).

Approximately 60–70% of the air pollution in the FRAQMD area comes from mobile sources. The remaining 30–40% of the air pollution in the FRAQMD area is a result of stationary sources that include agricultural operations, open burning of vegetative wastes, wood burning for residential heating, industrial operations, and other sources.¹³ In addition to ambient air quality issues related to ozone and particulate matter, toxic air contaminants (TACs) are a concern for local air quality officials. TACs include a variety of substances from many different sources, such as gasoline stations, highways and railroads, dry cleaners, industrial operations, power plants, and painting operations. The effects of TACs are mostly experienced locally (close to the source).

Evidence has shown that emissions of greenhouse gases (GHGs) from locations around the world likely will contribute to global climate change, which could have drastic impacts related to flooding and other natural disasters, agriculture, habitats, water supply, and the global economy. In response to the environmental, economic, and social threats posed by climate change, California approved The Global Warming Solutions Act (AB 32) in September of 2006. AB 32 requires that statewide GHG emissions must be reduced to 1990 levels by 2020. Future planning efforts that do not consider GHG emissions reduction strategies could conflict with AB 32, impeding California's ability to comply with the statewide mandate. The primary GHGs of concern include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and fluorinated compounds.

Sources of GHG Emissions

Since transportation is the largest source of ozone in the region and of GHGs in Yuba County and California, land use and transportation planning to reduce vehicular travel is needed to achieve air quality goals (see Exhibit Public Health & Safety-9).

A reduction in vehicle emissions is necessary to achieve significant GHG reduction, especially since improvements in building energy efficiency can be overwhelmed by increases in vehicle miles traveled. The effectiveness of a local GHG reduction program for a growing area like Yuba County is contingent on development patterns and transportation systems that reduce emissions from the transportation sector.

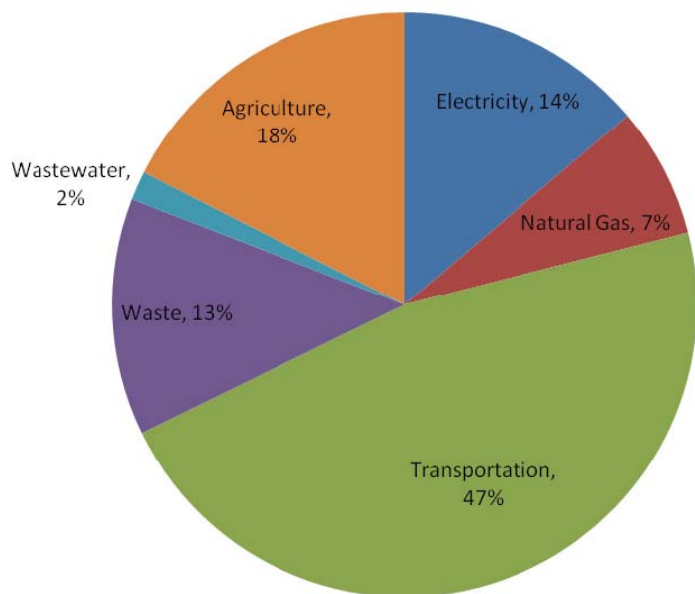


Exhibit Public Health & Safety-9
2007 Yuba County GHG Emissions Sources

¹³ Feather River Air Quality Management District. State and National Area Designations. Available online at: <http://www.fraqmd.org/Programs.htm>. Accessed March 8, 2010.



GHG-Sensitive Planning

A variety of land use, transportation, and design approaches, when used together, can substantially reduce vehicular travel (and therefore protect air quality and reduce GHG emissions). Policies included in other Elements of the 2030 General Plan have GHG-reducing effects. Policies in the Community Development Element are designed, in part, to reduce GHG emissions. The County employs several approaches to managing travel demand, including:

- **Connectivity.** A highly-connected transportation network shortens trip lengths and allows land uses to be placed closer in proximity to one another and along direct routes. A roadway network that is not well-connected requires users to travel long distances to destinations that are relatively close by, increases trip lengths, and creates obstacles for walking, bicycling, and transit access.
- **Compactness.** Compact development, by its nature, can increase the efficiency of infrastructure, enable travel by modes other than by car, and reduce trip lengths. If communities can place the same amount of development in a smaller area closer together, GHG emissions would be reduced concurrently due to less travel by car and avoid unnecessary conversion of agricultural land and other open space.
- **Diversity.** Placing a variety of land use activities in proximity to each other (housing, shopping, employment, recreation, schools, etc) provides greater choice of mobility—people can walk, bike, or take transit to meet daily needs. This strategy also makes the trips that must occur in a car shorter.
- **Facilities.** Safe and convenient bike lanes, pedestrian pathways, transit shelters, and other transportation facilities that are incorporated into a comprehensive transportation network can also encourage more travel by other means, thereby reducing air pollution and GHG emissions.
- **Reinvestment and Revitalization.** One way to avoid GHG emissions is to facilitate more efficient and economic use of the lands in already-developed portions of a community. Reinvestment in existing neighborhoods and retrofit of existing buildings is GHG efficient, and can even result in a net reduction in GHG emissions.
- **Housing and Employment.** By planning for, and placing jobs and housing closer to one another, communities can reduce work-related trips. The most effective local strategies seek to attract businesses and industries that are a good match for the current and anticipated labor force and to accommodate a variety of housing types that meet the needs of that labor force.

In addition to land use/transportation planning, another way to address global climate change and other air pollution is to promote energy efficiency and use of renewable (and low emission) sources of energy. Please see the Natural Resources Element for goals and policies addressing energy conservation and efficiency.

Legal Authority

Land use entitlement authority, which largely rests at the local government level in California, has a great influence on development patterns, community design, transportation facilities planning, and other factors that influence vehicle miles traveled (VMT). The number of VMT in a city or county, in turn, directly relates to the amount of GHG emissions. However, local government does not have control over vehicle emissions technology or fuel economy standards, which are factors in calculating greenhouse gas emissions from the transportation sector. Similarly, local government standards can have some influence on the solar orientation of buildings and other components related to building and public realm energy efficiency. However, energy generation, renewable energy requirements, and other components of electricity related emissions are outside of local government's control.



Co-Benefits of Planning to Reduce Greenhouse Gas Emissions

Even if avoiding contributions to dangerous climate change is not a priority for a given jurisdiction, there are many local co-benefits of planning to reduce greenhouse gas emissions.¹⁴ Land and transportation policies that reduce VMT and promote alternatives to automobile travel also can reduce household and business transportation costs, reduce harmful air pollution (other than GHGs), enhance mobility, reduce time spent commuting, and provide other benefits. Compact development (which reduces GHGs) can also be more efficient to serve with public infrastructure and services. Measures that promote energy efficiency reduce GHGs, but also save on household and business utility costs. Encouraging reinvestment and revitalization of existing developed areas can reduce VMT and GHGs, but also helps to conserve important open space functions, such as agriculture, recreation, watershed protection, and others.

Approaches to GHG Reduction Standards

Local governments across the globe have been taking a variety of approaches to addressing climate change. Jurisdictions have used various approaches for GHG target setting that depend on the community context, the political dynamics at play, and the applicable regulatory setting. A mixture of incentives and regulations is normally appropriate for achieving greenhouse gas reduction targets.

Oftentimes, the simplest approach is some type of percentage reduction for community-wide emissions or government operations. California's GHG mandate requires that statewide GHG emissions be reduced to 1990 levels by 2020, which would represent a roughly 10% reduction from 2006 levels and a roughly 30% reduction from forecast "business as usual" 2020 emissions.¹⁵ Some agencies have adopted a GHG reduction target of between 10 and 30% based on these statewide estimates. However, AB 32 addresses a *statewide* emissions target that is not necessarily appropriate for application at the city or county level (unless the community's growth rate is expected to be identical to that of the state). Also, the "business as usual" scenario developed by the California Air Resources Board (ARB) is based on many complex, long-range assumptions regarding statewide growth in VMT, energy prices and demand, modeling of change in different industrial sectors, and many other factors and assumptions, many of which are themselves correlated. The "business as usual" scenario is useful in illustrating the ambitious nature of California's GHG goals, but is only indirectly related to the actual AB 32 target (1990 emissions by 2020). A percentage reduction from the "business as usual" scenario also is difficult to objectively apply at the project level.¹⁶ The assumptions used to build the hypothetical project could be subject to artificial inflation in order to improve the performance of the proposed project, by comparison. Comparing a project's per-unit emissions against a local or regional per-unit average would improve on the the percentage reduction approach, but this would still have only an indirect relationship with AB 32 targets.

Greenhouse Gas Efficient Communities

The intent of AB 32 is to accommodate population and economic growth in California, but do so in a way that achieves a lower *rate* of GHG emissions. Neither state legislation nor executive order suggests that

¹⁴ Bollen, J. et al. "Co-Benefits of Climate Change Mitigation Policies: Literature Review and New Results", OECD Economics Department Working Papers, No. 693, OECD Publishing. 2009.

¹⁵ Estimates of 2006 CO₂ equivalent are provided by the California Air Resources Board, online at: http://www.arb.ca.gov/cc/inventory/data/tables/ghg_inventory_scopingplan_2009-03-13.pdf.

¹⁶ Since the location of the project itself is a major factor in the GHG emissions, analysis of a hypothetical project on the same site would mask much of the GHG efficiency or inefficiency of the site in question. Percentage reduction approaches, depending on their implementation, could mask other fundamental characteristics of land development needed to achieve AB 32 objectives such as density, intensity, and mixing of land uses. GHG-efficient locations, such as downtowns and other centrally located, relatively dense, mixed-use areas, generally have higher land costs. Projects with GHG-efficient locations have already invested in relatively dear land, and in doing so have substantially "mitigated" their GHG impacts in the site selection process. Therefore, it would be inappropriate to require similar percent reductions for projects with GHG-efficient locations and projects proposed at the fringe.



California intends to limit population or employment growth as a way to reduce the state's GHG emission levels. In achieving the state's targets, some communities will experience an *increase* in mass emissions, while others may experience a *decrease*. The key point, however, is that to achieve AB 32 targets, communities will need to achieve a lower *rate* of emissions per capita and/or per employee.¹⁷ With a reduced *rate* of emissions per capita and per employee, California can accommodate expected population growth and achieve economic development objectives, while also abiding by AB 32's emissions target. Focusing on *per-unit* rather than *mass* emissions levels is sometimes called "GHG efficiency." For land development projects, the use of an efficiency approach that considers emissions per capita or per employee correlates well with the activities accommodated by development.

Using an efficiency-based approach based on achieving 1990 GHG emission levels is tied to the science of climate change. Avoiding dangerous climate change would require ambient global CO₂ concentrations to stabilize at a level between approximately 350 and 400 ppm. Ambient global CO₂ concentrations in 1990 were approximately 353 ppm and 1990 is the year to which the AB 32 legislative mandate is tied. One may calculate the GHG efficiency required to meet AB 32 goals by taking 1990 emissions and dividing by the projected population and employment.

The "fair share" of GHG emissions per person, using this approach, is currently estimated to be between 6.4 and 6.6 metric tons of CO₂ equivalent emissions.¹⁸ Using current estimates, new development in unincorporated Yuba County should not generate greater than 6.6 net metric tons of CO₂ equivalent per person, using this fair-share approach.¹⁹ "Service population" is a term used to express the total population plus employment. The "fair share" of GHG emissions per service population needed to achieve AB 32 mandates is approximately 4.6 net metric tons CO₂ equivalent. For residents and employees accommodated in new development, emissions should not be more than 4.6 metric tons CO₂ equivalent per service population.²⁰ New development that generates GHG emissions at levels equal to or less than these levels could be considered part of the solution to the problems related to cumulative GHG emissions and would not hinder the state's ability to meet its goals of reduced statewide GHG emissions. These estimates consider only GHG emissions associated with land use sectors, including transportation, electricity, natural gas, solid waste, and domestic wastewater treatment and does not

¹⁷ Important local components in increasing GHG efficiency relate to the location, density, and design of development and the transportation facilities serving that development. There are also important state or federal actions that will be needed to increase communities' GHG efficiency, such as uniform building codes (with energy efficiency elements), renewable energy portfolio requirements, emissions standards, and regulations on industry and energy producers.

¹⁸ The estimate of GHG emissions efficiency required to be consistent with AB 32 may change if future population and/or employment estimates are parsed out more finely to, for example, remove industrial, agricultural, or other employment types from the denominator of the GHG efficiency calculation (1990 GHG emissions for land use related sectors divided by estimated 2020 population plus employment). Whether AB 32-consistent emissions are 6.4 or 6.6 metric tons CO₂e per capita or whether they are 4.4 or 4.6 metric tons CO₂e per service population is mostly dependent on whether or not electricity related emissions from cogeneration are included.

¹⁹ Use of the term "net" emissions in this context simply connotes a flexible approach that would consider both on-site and off-site emissions reduction strategies. Net emissions would consider plans and projects that reduce emissions through selection of a centrally located project site, mixing land uses, thoughtful urban design, and other on-site strategies, as well as taking actions that are demonstrated to reduce existing emissions levels off-site or through added sequestration potential.

²⁰ The efficiency standards presented here are based only on land use related emissions sectors: transportation; electricity; natural gas; water and wastewater; and recycling and waste (but not landfill related emissions). GHG emissions produced by manufacturing and agriculture are not included since the emissions characteristics of these sectors are mostly outside of the County's entitlement authority and policy purview. For example, the County does not approve or deny specific manufacturing processes or materials used in industry (unless they have demonstrated public health, safety, or welfare effects). The efficiency targets are based on those sectors over which the County would exercise some influence through its planning and development policies and standards. This fair-share approach applies to new development over which the County would have some control, but assumes equal responsibility for existing development in becoming more GHG efficient. This would occur through infill and reinvestment, as well as federal and state actions related to emissions standards, renewable energy generation, and other regulations over activities beyond the County's authority.



include manufacturing emissions, emissions related to industrial process, agricultural emissions related to fertilizer application, and other sources unrelated to the County's entitlement authority.

For most cities and counties, it would not be feasible to require or fund extensive retrofitting of existing building stock and development patterns to achieve GHG reductions. Local governments normally have limited authority for, and a limited interest in adopting planning or building regulations that would substantially affect existing businesses and residences. For this reason, in built-out communities where development patterns are somewhat fixed, there are substantial challenges for achieving ambitious greenhouse gas reduction targets. However, for growing areas like Yuba County, there is great opportunity to address climate change goals, while also decreasing household travel costs; improving air quality and public health; and achieving variety of other economic, environmental, and social objectives by incorporating greenhouse gas objectives into the location and design of new projects, plans, and public investments.

The County's approach to climate change in this General Plan addresses transportation-related emissions in the framework components of the Plan, as well as electricity, agriculture, solid waste, and other sectors. This General Plan addresses air quality and climate change for both new development areas and existing developed communities. Policies with air quality benefits are also designed to provide economic, fiscal, social, and other environmental benefits. For example, policies that encourage compact, phased development also reduce up-front and ongoing infrastructure and service costs. Policies that reduce VMT can also save household travel costs. Compact development conserves farmland by accommodating population and employment growth within smaller development footprints. Infill development concepts promoted in this General Plan are designed to attract outside funding for infrastructure and other public facilities, improving the County's fiscal position. In sum, there are extensive co-benefits associated with the wide variety of air quality related policies found throughout the General Plan.

In addition to GHG emissions, another important component of climate change for local governments is adapting to the future effects of a changed climate. Changed climate conditions are expected to have serious repercussions for public health, biodiversity, water supply and flooding, agriculture and forestry, wildfire risk, public infrastructure and facilities, and other issues. Communities prone to these effects will need to identify areas most vulnerable to these impacts and develop risk reduction strategies. The State of California intends to work collaboratively to address these impacts, as noted in the 2009 California Climate Adaptation Strategy.²¹ This General Plan address locally important aspects of climate change adaptation through water conservation strategies in the Natural Resources Element, fire and flood risk measures in the Public Health & Safety Element, evacuation and emergency response policies in the Public Health & Safety Element, preservation and restoration policies in the Natural Resources Element, and other topics addressed throughout the General Plan.

Goal HS5. Greenhouse Gas Emissions & Climate Change

Provide greenhouse-gas efficient development patterns and successfully adapt to future changes in Yuba County's climate

- Policy HS5.1 The County will guide land use change, direct investments, and apply its fees and programs to encourage more GHG-efficient development patterns, as feasible.*
- Policy HS5.2 The County's regulations, investments, and fee programs should be structured to reduce net greenhouse gas emissions for new development in the unincorporated County consistent with the level of emissions needed per-capita or per service population to achieve the County's fair share of the state's emissions mandate.*

²¹ Available online at: <http://www.climatechange.ca.gov/adaptation/>.



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- Policy HS5.3 Since transportation is the largest sector contributing to GHG emissions both locally and at the statewide level, the County will prioritize land use/transportation projects that manage travel demand by increasing housing/employment density, placing homes in closer proximity with destinations, increasing accessibility to transit, or otherwise decreasing vehicle miles traveled (per household, per capita, and/ or per employee).*
- Policy HS5.4 The County will use an efficiency-based threshold (net emissions per-capita + employee) to evaluate proposed urban land uses, such as homes, retail, office, and other uses where the location, density, and mix of uses in the project area is important to the level of greenhouse gas generation.*
- Policy HS5.5 For proposed industrial projects, including those with new stationary sources of emissions, and other uses where location, land use mix, and density is not an important indicator of GHG emissions rate, the County will require incorporation of feasible technologies or management practices and best available control technologies, in coordination with Feather River Air Quality Management District, and in compliance with regulations effective at the time of project review.*
- Policy HS5.6 The County relies, in part, on infrastructure planning and funding controlled by regional, state, and other local agencies, and will work cooperatively with these agencies to provide infrastructure and public facilities needed to support GHG-efficient development patterns.*
- Policy HS5.7 The County will work collaboratively with state agencies and public/private utility providers charged with regulating building efficiency, mobile-source emissions controls, energy sources and uses, and other components of GHG emissions to create the opportunity for more GHG-efficient local development.*
- Policy HS5.8 The County will actively pursue funding for GHG-efficient transportation systems and other needed infrastructure, building and public realm energy efficiency upgrades, renewable energy production, land use-transportation modeling, and other projects to reduce local greenhouse gas emissions.*
- Policy HS5.9 The County will partner with local agricultural groups to create voluntary and incentive-based programs designed to help farmers reduce their greenhouse gas emissions.*
- Policy HS5.10 The County should collaborate with Marysville, Wheatland, and other local and state agencies to identify risks posed by climate change and implement appropriate adaptation strategies.*
- Policy HS5.11 Rural Community Plans should address strategies to diversify the local land use mix to meet more resident needs within each community, increase energy efficiency, shorten trips, and encourage non-vehicular travel, as feasible, to increase greenhouse gas efficiency.*

Action HS5.1 Greenhouse Gas Reduction Plan

The County will prepare and adopt a Plan to reduce greenhouse gas (GHG) emissions. This Plan may be structured to address GHGs alone, or may also be designed to address other important County objectives that also promote climate change adaptation and GHG reduction, such as energy conservation, renewable energy development and use, economic development, transportation and other public infrastructure, infill and mixed-use development, or other topics.



The County will choose a GHG reduction target for countywide emissions (existing and new growth) that is consistent with state and regional regulations and plans, such as those adopted to implement The California Global Warming Solutions Act of 2006 (AB 32) and California's Sustainable Communities and Climate Protection Act (SB 375).

The County's GHG Reduction Plan will be designed to be consistent with AB 32, as appropriate and applicable within the unincorporated County. The County will ensure that the GHG emissions reductions targets represent the unincorporated County's "fair share" of statewide GHG reduction, consistent with legislation and regulations with AB 32 (i.e., reduce statewide GHG emissions to 1990 levels by 2020). This does not mean that the County will attempt to literally reach its own 1990 emissions level by 2020, as this would be a misreading of legislation. As noted, the County's overall objective is to plan for new growth in a way that is as GHG-efficient as would be needed statewide to achieve AB 32 mandates.

The County's GHG reduction target and Plan will address only those GHG emission sectors that are applicable to the County and over which the County can have influence – either through entitlement authority, public investments, incentives, or other feasible means. It would not be appropriate for the County's GHG reduction target to address GHG sources that are beyond the County's influence.

The County's GHG Reduction Target and Plan can "credit" future regional, statewide, or federal regulations and would reduce GHG emissions, as applicable. For example, vehicle emissions standards and low carbon fuel standards would substantially reduce emissions associated with the 2030 General Plan, just as it would reduce mobile source emissions throughout California communities. The effect of future regulations will be taken into account through implementation of the County's GHG Reduction Plan. The GHG reduction target may need to be revised occasionally as new legislation or regulations become effective. With emerging transportation modeling tools, it may become necessary to re-analyze the County's GHG emissions to better account for the benefits of transit investment, infill and mixed-use development, roadway connectivity, and other elements of the 2030 General Plan and implementing actions.

In addition to policies included in the General Plan and implementing actions, the County's GHG Reduction Plan will identify additional plans, policies, projects, actions, mitigation measures, and regulations that are necessary to reduce GHG emissions to a level consistent with the County's GHG reduction target.

The GHG Reduction Plan may include, but is not limited to:

- Regulations;
- Infrastructure investment strategies;
- Development streamlining and other incentives;
- Contributions to (and/or local use of) carbon offset programs;
- Infill and redevelopment plans and projects;
- Affordable housing projects or other higher-density housing and mixed-use projects near existing or planned future transit stops and along existing or planned pedestrian/bicycle networks;
- Bicycle and pedestrian master plans and infrastructure projects;
- Other public facilities and infrastructure projects in areas targeted for reinvestment;
- Financing programs for installation and use of renewable energy infrastructure in new and/or existing development;



- Programs to assist existing property owners in making energy efficiency upgrades;
- Travel demand management programs for new nonresidential projects; and
- Other plans and projects consistent with the 2030 General Plan that would improve per-capita and per-employee GHG efficiency in the County.

If a carbon offset program is developed locally, funding from this program should be used for revitalization, land assembly, transit improvements, pedestrian/bicycle facilities, and similar efforts in already-developed parts of the Valley Growth Boundary, where GHG-efficient land use and transportation environments will be provided.²² The offset should be tied to a County GHG efficiency target for new land use projects. If developments are proposed that would exceed the GHG efficiency target, the County could require a GHG offset at a level necessary to achieve the County's GHG efficiency threshold for the lifetime of the subject project. The County could also participate in a regional or statewide offset program, as appropriate.

Since transportation is the largest sector contributing to GHG emissions both locally and at the statewide level, land use/transportation projects that manage travel demand are crucial to achieving the state's GHG emissions reduction target. The County will prioritize and seek grant funding to promote planning and development projects that increase housing/employment density, place homes in closer proximity with destinations, increase accessibility to transit, or otherwise decrease vehicle miles traveled (per household, per capita, per job).

The County will periodically monitor progress toward its GHG reduction target and, if necessary, consider revisions to the GHG Reduction Plan and implementing actions. As a part of ongoing monitoring, the County will follow changes in the regulatory environment and technology, as well as grant and other funding programs that could be used to fund different components of the County's GHG Reduction Plan.

Related Goals:	Goal HS1, Goal HS2, Goal HS3, Goal HS5, Goal HS11, Goal CD2, Goal CD4, Goal CD5, Goal CD6, Goal CD7, Goal CD8, Goal CD10, Goal CD15, Goal NR2, Goal NR7
Agency/Department:	Community Development and Services Agency
Funding Source:	General fund, grant funding
Time Frame:	Adopt by 2013, monitoring reports and needed revisions in coordination with Housing Element updates and updates to the Regional Transportation Plan

²² Carbon offset programs are designed to achieve a net emissions objective by allowing additional emissions but also requiring purchase of offsetting credits. A factory or development may not be able to feasibly reduce its own carbon footprint, but would instead achieve some "net" carbon emissions objective through funding emissions reducing activities elsewhere. Funds from these credits are used for a variety of projects, such as planting trees (which absorb carbon dioxide), converting vehicle fleets to more efficient/less polluting technologies, funding for energy efficiency retrofits of existing buildings, renewable energy projects, and other activities. For a discussion of the potential for carbon offsets in the context of "indirect" GHG emissions and the California regulatory context, see Timothy P. Duane and Joanna D. Malaczynski, "Reducing Greenhouse Gas Emissions from Vehicle Miles Traveled: Integrating the California Environmental Quality Act with the California Global Warming Solutions Act," *Ecology Law Quarterly*, Vol. 36:71.



Action HS5.2 Assist Farmers to Reduce Greenhouse Gas Emissions

The County will meet with local agricultural groups, such as the Yuba-Sutter Farm Bureau, UC Davis Extension representatives, local organic farming groups, and other public and private groups representing farmers to discuss programs to reduce agricultural greenhouse gas (GHG) emissions. Methods to be explored may include, but are not limited to reduction strategies from changes in crop management, animal wastes, energy use, crop residue burning, livestock management, soil management, solid waste management, fertilizers, and off-road equipment. The County will seek funding, through carbon offsets or other sources, to provide incentives that encourage farmers to participate in consensus GHG reduction programs for agriculture.

Related Goals:	Goal HS5, Goal NR3
Agency/Department:	Community Development and Services Agency and Agricultural Commissioner, in collaboration with local farming groups
Funding Source:	General fund, grant funding, carbon offset fees
Time Frame:	Ongoing, as funding is available

Goal HS6. Construction Emissions

Use construction practices and operational strategies that minimize air pollution

Policy HS6.1 New developments shall implement emission control measures recommended by the Feather River Air Quality Management District for construction, grading, excavation, and demolition, to the maximum extent feasible.

Hazards and Hazardous Materials

Hazardous waste, toxic releases, leaking underground storage tanks, and contaminated soils have the potential to adversely affect human and environmental health. Yuba County has sites that generate and store hazardous waste and permitted operations that produce or use hazardous materials, including oils, solvents, fertilizers, pesticides, welding gases, manufacturing/ processing chemicals, and products that are flammable, toxic, reactive, or corrosive.

Unexploded ordnance (ammunition for weapons) is a potential hazard at the site of the former Camp Beale, located in the southeastern portion of Yuba County and western Nevada County (Exhibit Public Health & Safety-10). This former Army base was historically used for bombing ranges, and there is still the potential for discovering munitions or explosives in this area.²³

Goal HS7. Hazards and Hazardous Materials

Protect the community from the harmful effects of hazards and hazardous materials

Policy HS7.1 The County will assess risks associated with public investments and other County-initiated actions, and new private developments shall assess and mitigate hazardous materials risks and ensure safe handling, storage, and movement in compliance with local, state, and federal safety standards.

²³ For more information on Camp Beale, please refer to the web site managed by the Army Corps of Engineers: <https://www.campbeale.org/>.



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- Policy HS7.2 Hazardous materials waste sites and areas of contamination shall be remediated in conformance with applicable federal and state standards prior to new development that could be substantially and adversely affected by the presence of such contamination.*
- Policy HS7.3 The County will collaborate with appropriate federal, state, and regional agencies in an effort to identify and remediate soils and groundwater contaminated with toxic materials and to identify and eliminate sources contributing to such contamination.*
- Policy HS7.4 New residential developments proposed in areas adjacent to ongoing agriculture shall provide buffers or other design features adequate to protect residents from harmful effects of agricultural chemical use.*
- Policy HS7.5 The County will support compliance with state law regarding the location of school sites and sources of hazardous air emissions to ensure against endangerment of public health.*
- Policy HS7.6 The County's entitlement review procedures should be updated to ensure the public safety in the former Camp Beale area.*
- Policy HS7.7 The County will coordinate with the Army Corps of Engineers regarding cleanup of the former Camp Beale Army Base.*
- Policy HS7.8 New developments and public investments involving earth disturbance in the former Camp Beale Army Base area shall incorporate permit requirements in coordination with the State Department of Toxic Substances Control to reduce risk associated with munitions or explosives.*

Action HS7.1 Revise County Standards for Camp Beale Area

Following adoption of the General Plan, the County will revise its standards to address the potential for residual buried munitions in the former Camp Beale area. The intent of these revisions would be to ensure that public safety is considered in County approvals for any type of earth disturbance, such as grading, installation of foundations, trenching for underground utilities, installation of septic systems, and other actions. The County would revise its Ordinances to clarify the process for entitlements in areas identified as having a high probability to contain munitions or other hazardous materials associated with the former Army Base.

Related Goals:	Goal HS7
Agency/Department:	Community Development and Services Agency
Funding Source:	General fund
Time Frame:	Adopt by 2015

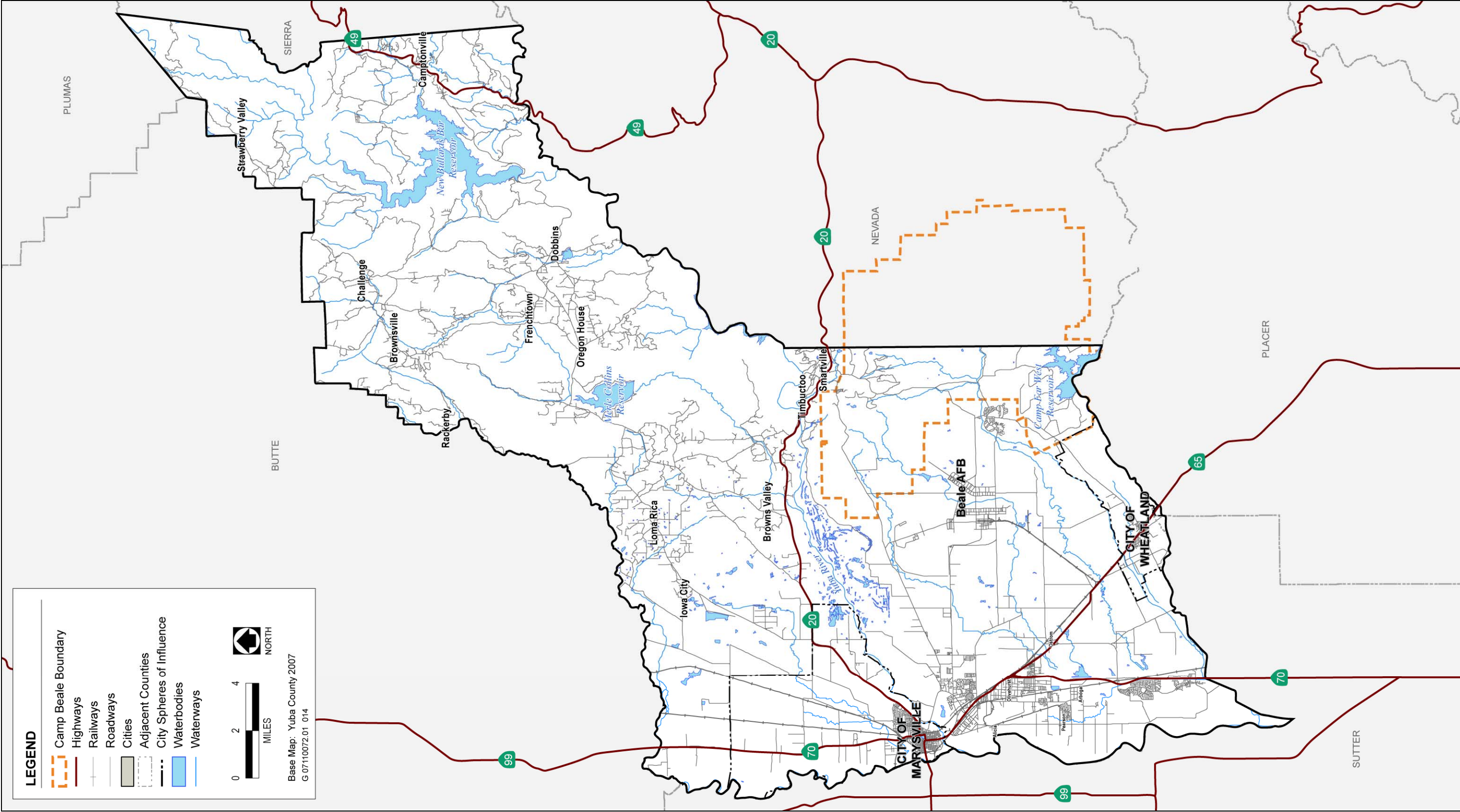


Exhibit Public Health & Safety-10. Camp Beale



Geology and Soils

Yuba County is located within an area of relatively low seismic activity and is not located within a highly active fault zone. No Alquist-Priolo Earthquake Fault Zones are located in the County. Faults include primarily inactive faults of the Foothills Fault System, running south-southeastward near Loma Rica, Browns Valley, and Smartville. Faults include the Prairie Creek Fault Zone, the Spenceville Fault, and the Swain Ravine Fault.

A number of soils within Yuba County are considered to have high potential for erosion. Highly erosive soils can damage roads, bridges, buildings, and other structures. Areas that have erosion hazards with moderate to very severe potential are located in the foothills and mountain areas of the County.

Expansive or shrink-swell soils contain significant amounts of clay minerals that swell when wet and shrink when dry, which can result in damage to foundations, buildings, infrastructure, and other structures. Soils having high shrink-swell potential are more common on the western end of the county, with some soils with moderate shrink-swell potential also located in valleys in the eastern portion of the County.

Landslide susceptibility is a function of various combinations of factors including rainfall, rock and soil types, slope, aspect, vegetation, seismic conditions, and human activities, such as construction. In Yuba County, landslides would likely be limited to foothills and mountain areas where slopes are greater.

Soil liquefaction results from loss of strength during earthquake shaking. The soils most susceptible to liquefaction are clean, uniformly graded, loose, saturated, fine grained sands. Soil layers with high potential for liquefaction include unconsolidated sands and fine-grained material. Foothill and mountain areas have a low potential for liquefaction, except in areas of unconsolidated sediments (generally adjacent to stream channels).

No asbestos is mined in Yuba County, but small areas of potentially asbestos-bearing ultramafic rock are located in foothills and mountain portions of the County.

Goal HS8. Geology and Soils

Reduce risk to people and property from geologic hazards and soil limitations

- Policy HS8.1 Development projects shall implement applicable state and local building code requirements, including structural and seismic safety measures, in order to reduce risks associated with seismic events and unstable or expansive soils.*
- Policy HS8.2 New developments that could be adversely affected by geological and/or soil conditions shall include project features that minimize these risks.*
- Policy HS8.3 A grading permit from the County is required for movement of dirt, soil, rock, debris or other material on over one acre of land and construction of retaining walls, bridges, and fill operations exceeding four feet, unless the activity is listed in the County Code as exempt from grading requirements.*
- Policy HS8.4 Grading permits generally require submittal of grading plans and drainage study for review and approval by the Community Development and Services Agency, and where requested, a revegetation and winterization plan, and geotechnical investigation report.*



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- Policy HS8.5 An erosion and sediment control plan meeting County standards for preventing to increased discharge of sediment is required for:*
- *Projects that propose to grade more than ten thousand (10,000) square feet of area having a slope greater than ten (10) percent;*
 - *Clearing and grubbing areas of one acre or more regardless of slope;*
 - *Projects where more than two thousand five hundred (2,500) square feet will be inadequately protected from erosion during any portion of the rainy season;*
 - *Projects that involve grading will occur within fifty (50) feet of any watercourse; or*
 - *Where the County determines that the grading will or may pose a significant erosion, or sediment discharge hazard for any reason.*
- Policy HS8.6 Project applicants may be required to show evidence of coverage, or application for coverage, under an NPDES general construction permit and a Storm Water Pollution Prevention Plan (SWPPP) with a State issued W.D.I.D. number, if applicable. Grading activities shall be located and designed to avoid contributing to the violation of provisions of any applicable NPDES stormwater discharge permit.*
- Policy HS8.7 Grading activities shall be designed, per County standards, to avoid obstructing or impeding the natural flow of stormwaters, causing accelerated erosion, or aggravating any existing flooding condition.*
- Policy HS8.8 For engineered grading, the peak off-site storm water discharge from the project site shall not exceed pre-construction conditions unless the applicant demonstrates that downstream storm water conveyance systems have sufficient capacity to handle the increased flow rate without exceeding established design standards, subject to County approval.*
- Policy HS8.9 Grading activity and land disturbance shall be conducted such that the smallest practicable area of erodible land is exposed at any one time.*
- Policy HS8.10 Grading activities shall preserve natural features, including vegetation, terrain, watercourses and similar resources, wherever feasible.*
- Policy HS8.11 Grading activities within four hundred (400) feet of a landside levee toe shall require a registered geotechnical engineer to submit a stamped report demonstrating that the proposed action will not have an adverse impact on the integrity of the levee system. Agricultural practices are generally exempt from setback requirements except for the storage of agricultural waste.*
- Policy HS8.12 Proponents of new developments shall notify owners of adjacent and abutting utilities prior to approval of a grading permit. The subject utility must either approve the permit, or, if 30 days pass after notifying the utility, or if the Agency Director waives the need for utility approval, the permit may also be approved.*
- Policy HS8.13 Grading permittees shall be responsible for the prevention of damage to any adjacent public utilities or services and adjacent properties. No person(s) shall excavate or fill close to the property line without supporting and protecting such property from damage which may result. It shall be the responsibility of the permittee to control discharge of sediment and hazardous materials to any watercourse, drainage system, or adjacent property.*



Policy HS8.14 New developments that would involve earth disturbance of areas with slopes exceeding 5 percent shall prepare and implement an erosion control plan, subject to County approval.

Action HS8.1 Grading Permits, Erosion Control Plans, Drainage Studies, and Geotechnical Evaluations

The County will update and maintain standards designed to avoid geologic hazards, mitigate for soils related constraints, reduce impacts to hydrological and drainage conditions, and minimize erosion resulting from site grading and preparation, construction, and ongoing operations. Projects will be conditioned to include measures to avoid geologic and soils related impacts, as necessary.

The County will require a geotechnical evaluation prior to construction of buildings meant for public occupancy in areas with potential risk related to geologic condition or soil limitations, as identified on maps maintained by the County. The geotechnical evaluation shall evaluate all relevant risks, which may include but are not limited to liquefaction, erosion, landslide, expansive soils, subsidence, and seismic activity. Recommendations from the geotechnical evaluation shall be incorporated into the subject project or plan in order to reduce risk to levels acceptable to the County. The County will also incorporate geotechnical evaluations and recommendations into its own public investments, as appropriate.

Related Goals:	Goal HS8, Goal HS3
Agency/Department:	Community Development and Services Agency
Funding Source:	Project applicant funding
Time Frame:	Ongoing, as projects are proposed

Emergency Preparedness and Response

In Yuba County, a number of different agencies and special districts provide emergency response services. The Yuba County Office of Emergency Services was established to coordinate emergency management between the various public safety and service providers.

During General Plan buildout, the County will frequently communicate with emergency service providers on issues of mutual interest. However, the focus of General Plan policy, given the County's jurisdiction and the role of general plans, is on the location of development, design of circulation systems, and other physical elements that are required for emergency response, as opposed to programmatic elements of emergency preparedness and response. For more information, please consult the County's Multi-Hazard Mitigation Plan.²⁴

Goal HS9. Emergency Preparedness and Response

Minimize the loss of life and damage to property from natural and human-caused hazards by ensuring adequate emergency routes and response

Policy HS9.1 The County will review development projects, plans, and public investment decisions to ensure consistency with the Multi-Jurisdictional Multi-Hazard Mitigation Plan.

²⁴ The Multi-Hazard Mitigation Plan is available online at:
<http://www.co.yuba.ca.us/Departments/OES/pdm/background.aspx>.



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- Policy HS9.2 The County will provide public access to emergency response procedures in such locations as the Government Center, the County library, and public schools and will otherwise promote awareness of emergency response and evacuation plans.*
- Policy HS9.3 The County will coordinate with Caltrans to maintain Highways 20, 70, 49, and 65 in the lower half of the County and the County will maintain Marysville Road, Frenchtown Road, and La Porte–Quincy Road in the upper half of the County as primary emergency access and evacuation routes and improve other roads, as necessary, such as Plumas Arboga Road, to create additional evacuation routes (Exhibit Public Health & Safety-11).*
- Policy HS9.4 The County’s development and improvement standards will require a circulation system with multiple access points, adequate provision for emergency equipment access, and evacuation egress.*

Action HS9.1 Emergency Access and Evacuation Routes

The County will seek funding to implement Action Items listed in the Multi-Hazard Mitigation Plan and future revisions to this Plan, including those actions intended to avoid flooding over emergency access routes. The County will consider, as a part of future revisions to the Multi-Hazard Mitigation Plan, whether new growth accommodated under the General Plan will require improvements to circulation or drainage in order to ensure adequate emergency access and evacuation egress, even in the event of a flood. As noted in Action HS1.2, the County will collaborate with Wheatland and Marysville on development of a flood emergency plan.

Related Goals:	Goal HS9
Agency/Department:	County Office of Emergency Services
Funding Source:	Grant funding
Time Frame:	Ongoing, as funding is available

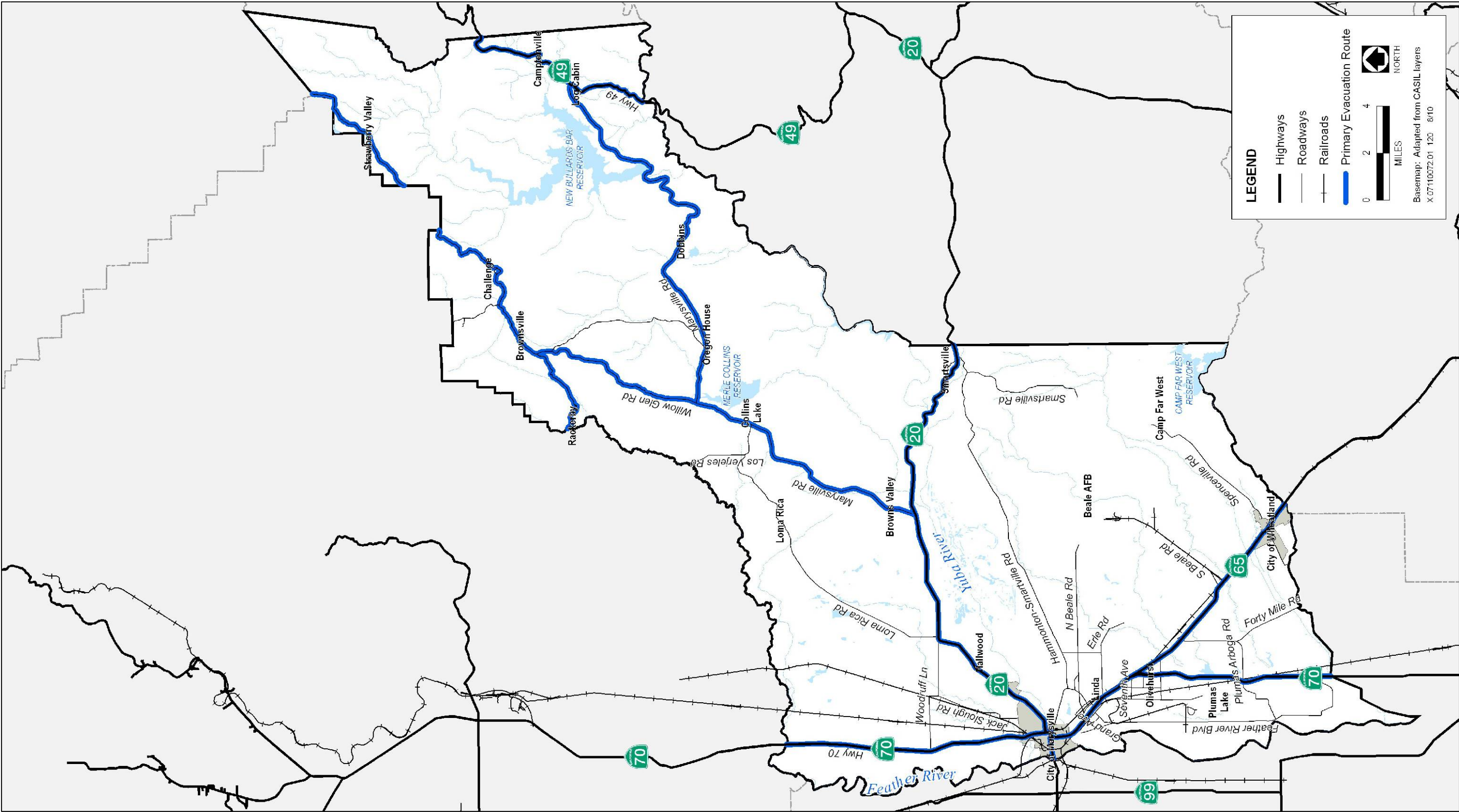


Exhibit Public Health & Safety-11. Primary Evacuation Routes



Noise and Vibration

Unregulated noise can cause stress and strain on the general well-being of the County's residents. With proper planning, mitigation, and cooperation, unwanted noise can be managed to preserve the overall well-being of the people within the County.

Sound pressure levels are expressed in decibels (dB). The dBA scale is used to correlate noise measurement with human sensitivity. Community noise is commonly described in terms of the "ambient," or all-encompassing noise level in a given environment. The Equivalent Noise Level (L_{eq}) and Community Noise Equivalent Level (CNEL) are common community noise descriptors.

- **L_{eq}** (Equivalent Noise Level): The energy mean (average) noise level. The instantaneous noise levels during a specific period of time in dBA are converted to relative energy values. In noise environments determined by major noise events, such as aircraft overflights, the L_{eq} value is heavily influenced by the magnitude and number of single events that produce the high noise levels.
- **CNEL** is an average of 24-hour L_{eq} with a 10 dBA 'penalty' for noise events that occur during noise-sensitive hours of the day (10:00 p.m. to 7:00 a.m.). An additional 5 dBA 'penalty' is added to noise events that occur between 7:00 p.m. to 10:00 p.m.

The County's major transportation corridors are a primary existing source of noise. This includes State Highways 20, 65, and 70, major County roads, and two railroad lines operated by Union Pacific Railroad. The County also includes several ongoing stationary noise sources, including quarries and mining operations, manufacturing operations, agricultural operations, the Marysville Raceway Park, Ostrom Road Landfill, Sleep Train Amphitheater, a concrete plant, Beale Air Force Base, and the County's airports. In addition to the noise contours surrounding the County's major noise sources, ambient noise levels throughout the County were evaluated in a community noise survey conducted to support this General Plan. Specific information on ambient noise levels and noise contour maps can be found in the General Plan Update Noise Background Report, under separate cover.

Vibration is the periodic oscillation of a medium or object. The rumbling sound caused by the vibration of room surfaces is called groundborne noise. Sources of groundborne vibrations include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) or human-made causes (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous, such as factory machinery, or intermittent, such as explosions.

As is the case with airborne sound, groundborne vibrations may be described by amplitude and frequency. Vibration amplitudes are usually expressed in peak particle velocity (PPV) or RMS, as in root mean squared (RMS) vibration velocity. The PPV and RMS velocity are normally described in inches per second. PPV is defined as the maximum instantaneous positive or negative peak of a vibration signal. Although PPV is appropriate for evaluating the potential for building damage, it is not always suitable for evaluating human response. It takes some time for the human body to respond to vibration signals. In a sense, the human body responds to average vibration amplitude. The RMS of a signal is the average of the squared amplitude of the signal, typically calculated over a 1-second period. As with airborne sound, the RMS velocity is often expressed in decibel notation as VdB, which serves to compress the range of numbers required to describe vibration.

The background vibration-velocity level in typical residential areas is approximately 50 VdB. Groundborne vibration is normally perceptible to humans at approximately 65 VdB. For most people, a vibration-velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels.



Noise policies will be used to guide decisions concerning land use and the location of roads, industrial developments, agricultural operations, and other common sources of noise. Noise sensitive land uses will be planned with existing and future estimate noise levels in mind. For the purposes of this Element, noise- and vibration-sensitive uses include: residences; schools; hospitals; rest homes; long-term medical or mental care facilities; and similar uses.

Noise policies seek to avoid the planning mistakes of the past. For example, the County will ensure a network of connected, smaller-volume roadways that disperse traffic and therefore lower noise along such roadways. Buffers should separate noise-sensitive uses from large-volume roadways and railroads. Noise generating industrial and commercial uses should be designed to avoid impacts on noise-sensitive receptors. In general, the County will plan intelligently in order to reduce substantial noise conflicts and avoid the need for soundwalls and other reactive fixes that create unnecessary barriers, prohibit community connectivity and cohesiveness, and reduce the opportunities for casual surveillance.

Goal HS10. Noise and Vibration


Ensure that noise does not substantially reduce the local quality of life


- Policy HS10.1 New developments that generate traffic or are affected by traffic noise shall provide design and mitigation, if necessary, to ensure acceptable daytime and nighttime land use/noise environment at outdoor activity areas of affected properties, as defined in Table Public Health & Safety-1.*
- Policy HS10.2 If existing noise levels exceed the acceptable levels listed in Table Public Health & Safety-1, new developments are required to incorporate mitigation to reduce noise exposure in outdoor activity areas to the maximum extent feasible and include mitigation designed to achieve acceptable interior noise levels, as defined in Table Public Health & Safety-1.*
- Policy HS10.3 New developments that would generate or be affected by non-transportation noise shall be located, designed, and, if necessary, mitigated below maximum levels specified in Table Public Health & Safety-2, as measured at outdoor activity areas of affected noise-sensitive land uses.*





Table Public Health & Safety-1
Maximum Allowable Noise Exposure from
Transportation Noise Sources at Noise-Sensitive Land Uses

LAND USE	INTERIOR SPACES		OUTDOOR ACTIVITY AREAS (DBA L _{DN})					
	DBA L _{DN}	DBA L _{EQ}	55	60	65	70	75	80
Residences	45	-						
Hotels, Motels	45	-						
Schools, Libraries, Museums, Places of Worship, Hospitals, Nursing Homes	45	45						
Theaters, Auditoriums, Concert Halls, Amphitheaters	35	-						
Outdoor Spectator Sports	-	-						
Playgrounds, Parks	-	-						
Golf Courses Riding Stables, Water Recreation, Cemeteries	-	-						
Office Buildings, Retail, and Commercial Services	45	-						
Industrial, Manufacturing, Utilities, Agriculture	-	-						

 **Normally Acceptable** – Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise requirements.

 **Conditionally Acceptable** – New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design.

 **Normally Unacceptable** – New construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirement must be made and needed noise insulation features included in the design.

 **Clearly Unacceptable** – New construction or development clearly should not be undertaken.

Notes: dBA = A-weighted decibels; L_{dn} = day-night average noise level; L_{eq} = energy-equivalent noise level. This table does not apply to existing transportation noise sources affecting existing land uses. Outdoor activity areas are the portion of a property where activities are normally expected. This would include portions of backyards, decks, balconies, pools, sports or game courts, and patios, but would not include front yards, spaces next to parking, roads, driveways, or vehicular loading areas. Hospitals and nursing homes use the L_{dn} interior standard, whereas schools, libraries, museums, and places of worship use a L_{eq} interior standard. Office buildings have an interior standard, but retail and commercial service uses do not have an interior standard.

Source: Governor's Office of Planning and Research 2003 General Plan Guidelines.



Table Public Health & Safety-2
Maximum Allowable Noise Exposure from Non-Transportation Noise
Sources at Noise-Sensitive Land Uses

NOISE LEVEL DESCRIPTOR	DAYTIME (7 A.M.–10 P.M.)	NIGHTTIME (10 P.M.–7 A.M.)
Hourly L_{eq}	60 dBA	45 dBA
L_{max}	75 dBA	65 dBA

Notes: dBA = A-weighted decibel; L_{eq} = energy-equivalent noise level; L_{max} = maximum noise level.

Each of the noise levels specified shall be lowered by 5 dBA for simple tone noises, noises consisting primarily of speech, music, or for recurring impulsive noises. These noise-level standards do not apply to residential units established in conjunction with industrial or commercial uses (e.g., caretaker dwellings). Noise-sensitive land uses include schools, hospitals, rest homes, long-term care facilities, mental care facilities, residences, and other similar land uses.

Table Public Health & Safety-3
Performance Standards for Non-Transportation Noise Sources

CUMULATIVE DURATION OF A NOISE EVENT ¹ (MINUTES)	MAXIMUM EXTERIOR NOISE LEVEL STANDARDS ²	
	DAYTIME dBA L_{MAX} ^{2, 4}	NIGHTTIME dBA L_{MAX} ^{3, 4}
30–60	50	45
15–30	55	50
5–15	60	55
1–5	65	60
0–1	70	65

Notes: dBA = A-weighted decibel; L_{max} = maximum noise level.

1 Cumulative duration refers to time within any 1-hour period.

2 Daytime = hours between 7:00 a.m. and 10:00 p.m.

3 Nighttime = hours between 10:00 p.m. and 7:00 a.m.

4 Each of the noise level standards specified may be reduced by 5 dBA for tonal noise (i.e., a signal which has a particular and unusual pitch) or for noises consisting primarily of speech or for recurring impulsive noises (i.e., sounds of short duration, usually less than one second, with an abrupt onset and rapid decay such as the discharge of firearms).

Policy HS10.4 *If existing noise levels exceed the maximum allowable levels listed in Table Public Health & Safety-2, projects are required to incorporate mitigation to reduce noise exposure in outdoor activity areas to the maximum extent feasible and include mitigation to achieve acceptable interior noise levels, as defined in Table Public Health & Safety-1.*

Policy HS10.5 *The maximum noise level shall not exceed the performance standards shown in Table Public Health & Safety-3, as measured at outdoor activity areas of any affected noise-sensitive land use except:*

- *If the ambient noise level exceeds the standard in Table Public Health & Safety-3, the standard becomes the ambient level plus 5 dBA.*
- *Reduce the applicable standards in Table Public Health & Safety-3 by 5 decibels if they exceed the existing ambient level by 10 or more dBA.*

Policy HS10.6 *New developments shall provide all feasible noise mitigation to reduce construction and other short-term noise and vibration impacts as a condition of approval.*



- Policy HS10.7 New developments shall ensure that construction equipment is properly maintained and equipped with noise control components, such as mufflers, in accordance with manufacturers' specifications.*
- Policy HS10.8 Noise attenuation barriers are strongly discouraged, except to attenuate noise for existing developed uses, and may be used in the context of new developments only when no other approach to noise mitigation is feasible.*
- Policy HS10.9 New developments shall disperse vehicular traffic onto a network of fully connected smaller roadways and minimize funneling of local traffic onto large-volume, high-speed roadways near existing or planned noise-sensitive land uses to the maximum extent feasible.*
- Policy HS10.10 Proposed noise-generating industrial and other land uses shall be located away from noise-sensitive land uses, shall enclose noise sources, or shall use other site planning or mitigation techniques to ensure acceptable noise levels, to the greatest extent feasible.*
- Policy HS10.11 Lands within the 65 CNEL noise contour of Beale Air Force Base, Yuba County Airport, and Brownsville Airport shall be maintained in agricultural, open space, commercial, industrial, or other uses permitted by the subject airport's adopted Comprehensive Land Use Plan (CLUP) and consistent with the recommendations of the Beale Joint Land Use Study, including noise contours associated with future hypothetical missions, as appropriate.*
- Policy HS10.12 The County supports the construction of rail crossings designed to reduce or eliminate the use of rail horn blasts in areas with existing and planned noise-sensitive land uses.*
- Policy HS10.13 New developments that propose vibration-sensitive uses within 100 feet of a railroad or heavy industrial facility shall analyze and mitigate potential vibration impacts, to the greatest extent feasible.*
- Policy HS10.14 Public events, such as school sporting events, festivals, and other similar community and temporary events are exempt from the noise standards outlined in this Element.*
- Policy HS10.15 New developments that would generate substantial long-term vibration shall provide analysis and mitigation, as feasible, to achieve velocity levels, as experienced at habitable structures of vibration-sensitive land uses, of less than 78 vibration decibels.*
- Policy HS10.16 Mining, forestry, and agricultural noise will not be considered a nuisance when generated in areas designated by the General Plan for these uses.*

Action HS10.1 Airport Land Use Planning

The County will coordinate development requests in areas addressed by Airport Comprehensive Land Use Plans (CLUPs) according to the land use restrictions embodied in those plans and will initiate amendments to the General Plan and revisions to zoning, if necessary, following updates to local CLUPs.

Related Goals:	Goal HS10
Agency/Department:	Community Development and Services Agency
Funding Source:	Project applicant funding
Time Frame:	Ongoing, as projects are proposed within zones addressed by local CLUPs



Action HS10.2 Noise Generating Projects

Where development projects or roadway improvement projects could potentially create noise impacts, an acoustical analysis shall be required as part of the environmental review process so that noise mitigation may be included in the project design. Such analysis shall be the financial responsibility of the applicant and be prepared by a qualified person experienced in the fields of environmental noise assessment and architectural acoustics. Mitigation strategies shall emphasize site planning and design over other types of mitigation.

Related Goals:	Goal HS10
Agency/Department:	Community Development and Services Agency
Funding Source:	Project applicant funding
Time Frame:	Ongoing, as projects are proposed

Action HS10.3 Revise County Noise Standards

The County will maintain noise control regulations consistent with the stated policies of this plan and within the capacity of the County to equitably enforce. The County's building, zoning, and subdivision, and public peace & safety codes will be revised to incorporate these policies. The County's code updates will provide construction noise guidance and will define special public events that are exempt from noise policies and standards.

Related Goals:	Goal HS10
Agency/Department:	Community Development and Services Agency
Funding Source:	General fund
Time Frame:	Adopt by 2013, update as needed

Healthy Communities

As noted previously, most issues related to the development of healthy communities are addressed in other sections of this Element, the Community Development Element, and the Natural Resources Element. For example, the County has provided for convenient and safe pedestrian and bicycle access in the Community Development Element. Separation between sensitive and potentially polluting uses (such as agriculture, heavy industry, high-volume roadways, and railroads) is addressed in the Community Development and elsewhere in the Public Health & Safety Element. Water quality, air quality, and climate change are also addressed elsewhere in the Public Health & Safety Element. Recreational open space is covered in the Natural Resources Element. Other public health issues are integrated throughout this General Plan.

The Yuba County Health Committee has been discussing several issues and programs that are important to citizen health and welfare. Topics currently discussed before this committee include:

- Access to healthy food;
- School wellness programs;
- Access to transit;
- Safe walking and bicycling routes to school;
- Recreational programming;
- Agricultural education; and



- Drug abuse prevention.

Many of these topics are related to the General Plan. In particular, ensuring access to recreational open space (Natural Resources Element), encouraging transit access (Community Development), and providing for bicycle and pedestrian travel (Community Development Element) are important points of emphasis for the 2030 General Plan. Water quality and air quality (addressed in this Element) are very important components of healthy communities. This section addresses the County's policy on healthy communities not addressed in other portions of the General Plan.

Healthy community principles can address a wide range of factors, including access to health care, healthy food, recreation, education, and other factors. The County is committed to pursuing healthy community objectives in the context of its decision making and programs, in collaboration with many local and regional partners. It is anticipated that future collaboration would occur between County departments and health care providers, school districts, nonprofit foundations, and other public and private groups.

Goal HS11. Healthy Communities

Improve the overall health of Yuba County's residents

- Policy HS11.1 The County will encourage access to grocery stores in Yuba County's neighborhoods.*
- Policy HS11.2 The County should coordinate with school districts and other local agencies to incorporate local agricultural products into government food programs, including the County jail, as feasible.*
- Policy HS11.3 The County should collaborate with area health providers and other stakeholders to provide targeted education regarding the importance of nutrition and exercise in a healthy lifestyle.*
- Policy HS11.4 County health statistics should be periodically monitored and used to guide the activities and focus of the County Health and Human Services Department.*
- Policy HS11.5 The County's standards will promote the establishment of community gardens, farm stands, and farmer's markets.*



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