PURPOSE

This element describes the breadth of natural and cultural resources present in Amador County, which contribute to its rural character and economic diversity. The purpose of the Conservation Element is to identify the County’s important resources—including water, energy, agriculture and agricultural lands, timber, mineral resources, historic and cultural resources, and clean air—and establish a framework for their conservation and judicious use.

SCOPE AND CONTENT

The Conservation Element includes the following sections:

- **Water**, including a description of the county’s water bodies, source of water supply, and water rights, as well as issues regarding water quality.

- **Energy Resources**. This section briefly describes energy production in the County, including hydroelectric dams and renewable and locally available energy resources.

- **Agricultural Lands**. This section provides an overview of agricultural resources and existing conservation efforts, including descriptions of State-designated Farmlands and Williamson Act properties.

- **Historical and Cultural Resources**. This section presents the county’s known cultural resources, including prehistoric sites, gold-mining sites, and other historic sites that tell the county’s story.

- **Air Quality and Climate Change**. This section summarizes potential effects of air pollutants on county residents, resources, and businesses. It also describes causes and effects of climate change.

- **Mineral Resources**. This section presents the County’s known mineral resources and their locations.

- **Timber Resources**. This section provides an overview of timber resources and operations in the county.

- **Related Plans and Programs**. This section provides an overview of plans and legislation related to the topics covered in this element.
CONSERVATION

Issues, Goals, and Policies. This section identifies natural and cultural resource conservation planning issues in the county. It also describes countywide conservation goals and policies.

The Conservation Element is one of the seven mandated general plan elements required by the California Government Code Section 65300. The information found in this element is supported by background information presented in the Environmental Impact Report (EIR) accompanying the General Plan. Please refer to the EIR for data and maps describing current conditions which are subject to change over the lifetime of the General Plan.

The Conservation Element includes a discussion of water, and goals and policies related to water supply and water quality protection. This portion of the element was prepared to include input from the County’s water providers, including the Amador Water Agency.

Development of the Land Use Diagram (Figure LU-1) designates lands in public ownership for Open-Forest, Open-Wilderness, or Agricultural-General uses. These designations allow for continued stewardship of natural resources on these public lands.

WATER SUPPLY AND WATER QUALITY PROTECTION

The Mokelumne and Cosumnes Rivers are the largest rivers in the county. Each is a tributary to the San Joaquin River. Other significant rivers and streams include: Sutter Creek, Jackson Creek, Dry Creek, Tiger Creek, Panther Creek, Bear River, and Cole Creek. Figure C-1 shows the locations of major water bodies in the county. Amador County lies primarily within the Upper Mokelumne and the Upper Cosumnes watersheds. The far northeastern portion of the County (around Kirkwood) is in the South Fork American River watershed. Snowmelt and rainfall are transported downstream through these watersheds via rivers and their tributaries.

Several water storage reservoirs are used to generate power and supply water along county rivers and streams, although much of the power and water is used outside of Amador County. The Mokelumne River flows into Pardee Reservoir and subsequently, Camanche Reservoir. Both reservoirs are located along the southwestern boundary of Amador County. Pardee Reservoir serves as the primary water supply for the East Bay Municipal Utility District (EBMUD). The Pardee Powerhouse is located at the base of the dam. Camanche Reservoir is located downstream of Pardee Reservoir, on the Mokelumne River. This reservoir is operated jointly with Pardee Reservoir storing water for irrigation and stream-flow regulation, providing flood protection, and storing water to meet the demands of downstream water rights holders. The reservoir also provides significant recreation opportunities.
Lake Amador, also known as Jackson Valley Reservoir, is an impoundment on Jackson Creek located southwest of Jackson. Lake Amador serves as an irrigation water supply for the Jackson Valley area and is managed by the Jackson Valley Irrigation District. Jackson Creek flows out of Lake Amador and eventually into Dry Creek.

In addition, the Bear River Reservoir, Salt Springs Reservoir, and Silver Lake are used to store water for a combination of domestic use, irrigation, and power generation.

**Water Supply**

The Amador Water Agency (AWA) is the largest domestic water purveyor in Amador County. Through the Amador Water System, which was acquired by AWA from Pacific Gas and Electric Company (PG&E) in 1985, AWA provides retail treated water service to Sutter Creek, Ione, Amador City and surrounding areas, wholesale treated water to the cities of Jackson and Plymouth, and to the Community of Drytown, and untreated water service to properties along the Amador Canal. The water supply for the Amador Water System is furnished by PG&E pursuant to a 1985 agreement whereby AWA is entitled to a supply of 15,000 acre-feet of water annually. PG&E holds the water rights to such supply which comes from the Mokelumne River. The water rights have a priority dating back to the 1850s.

AWA owns and operates the Central Amador Water Project, which provides wholesale and retail treated water service to 10 communities in the central portion of the County. The Central Amador Water Project water supply is authorized pursuant to a water right permit issued by the State Water Resources Control Board in 1979 authorizing the annual diversion of 1,150 acre-feet of North Fork Mokelumne River water, with storage of 1,600 acre-feet. AWA uses PG&E facilities for the diversion and storage of the North Fork Mokelumne River water pursuant to an agreement between the parties initially entered into in 1975. The Central Amador Water Project water rights have a 1927 priority. AWA also operates several groundwater wells serving Lake Camanche Village and La Mel Heights, but groundwater makes up only a small portion (about 2 percent) of supply.

Other retail water purveyors in the County include: the cities of Plymouth and Jackson, the community of Drytown, and the River Pines and Kirkwood Meadows Public Utility Districts.

- City of Plymouth
- City of Jackson
- Drytown County Water District
Groundwater from individual wells represents a major water source in the county. In most of Amador County, groundwater-bearing units and aquifers are poorly defined. The majority of available groundwater is transient and found in fractured rock. This fractured bedrock aquifer has not been adequately studied, and no information is available concerning the capacity of the aquifer. The Cosumnes Groundwater Subbasin underlies southwestern Amador County. The Cosumnes Subbasin is in overdraft; in other words, more water is leaving the groundwater basin than entering it.

Typical groundwater inflow sources include:

- natural recharge from precipitation;
- recharge from surface water channels;
- intentional recharge via ponds, ditches, and injection wells and other groundwater recharge programs;
- recharge from percolation of water for agricultural and other irrigation uses;
- unintentional recharge from leaky conveyance pipelines; and
- subsurface inflows from outside groundwater basin boundaries.

Groundwater leaves the basin through subsurface groundwater flows to surface water bodies and springs, and by evaporation. Other outflows include pumping for urban, residential, and agricultural use.
Water Quality

The quality of surface water and groundwater can be affected by a variety of activities. Amador County’s surface and groundwater quality is very high, and the County will maintain water quality by implementing state and federal water quality regulations, including the National Pollutant Discharge Elimination System.

Low Impact Development

New development adds pavement and structures, often altering natural drainage patterns and reducing infiltration and percolation of rain and snow. Using low impact development (LID) strategies helps to reduce the amount of excess runoff generated by new development, and also to improve the quality of the water which drains off a property.

Floodplains and Groundwater Recharge

Figure S-1 in the Safety Element illustrates the locations of floodplains. These areas, as well as areas of riparian habitat along the rivers and streams illustrated on Figure C-1, may accommodate floodwaters for purposes of groundwater recharge and stormwater management.

Energy Resources

The production and use of energy within California has come under increasing scrutiny as the State works to lessen dependence on out-of-state and foreign energy supplies and increase the production and use of renewable energy sources. The goal of increased energy conservation has implications for land use, building design, individual practices, and transportation. The cost of energy is of particular concern to Amador County residents because of the temperature extremes experienced in parts of the county.

Amador County hosts eight power plants, including six hydroelectric facilities, one natural gas plant (at Mule Creek State Prison), and one cogeneration plant/facility (not currently operating). Because of Amador County’s relatively small population and high energy production capacity, the county is a large energy exporter. However, the county imports both oil and gas. Population growth, business expansion, increases in tourism, and energy conservation measures will all have an effect on energy consumption.
Hydroelectric Facilities

Large hydroelectric facilities are located at several creeks, dams, and waterways throughout the county, including Pardee Dam, Tiger Creek, Salt Springs, and Lake Amador Dam (see Table C-1). Most electricity generated in Amador County originates from one of these six hydroelectric facilities. In addition to rivers and streams, small hydroelectric plants can be sited in irrigation canals and water treatment plants.

<table>
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<tr>
<th>Plant Name</th>
<th>Year Online</th>
<th>Service Area</th>
<th>Owner</th>
<th>Online Megawatts</th>
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</thead>
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<td>PG&amp;E</td>
<td>East Bay Municipal Utility District</td>
<td>23.6</td>
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<td>Salt Springs</td>
<td>1931</td>
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<td>Pacific Gas And Electric Company</td>
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<td>Tiger Creek</td>
<td>1931</td>
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<tr>
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<td>1948</td>
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<td>West Point</td>
<td>1948</td>
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<td>Jackson Valley</td>
<td>1982</td>
<td>PG&amp;E</td>
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</tr>
</tbody>
</table>

Source: California Energy Commission, September 2009

Renewable and Locally Available Energy Sources

Amador County has the capacity to further develop renewable energy resources to protect residents from volatile energy prices and reduce the state’s dependence on out-of-state and foreign oil and gas. Solar power and biomass are potential future sources of renewable energy in the county.

Solar power can be harnessed for several applications, including heating and electricity generation. When used to produce energy, the most common method is to use photovoltaic cells, which convert sunlight directly into electricity. Amador County currently does not generate solar power at a large scale. However, individual businesses or home-owners may find smaller-scale solar energy applications beneficial to meet their electricity needs.

Biomass refers to organic material which can be used as fuel. Biomass materials range from wood and crops to trash and manure. Many biomass materials are burned to release their stored energy, either directly like wood burned for home heating or indirectly to generate...
electricity. Additionally, biomass materials can be used to produce biodiesel, ethanol, or methane. Transformation projects (also known as resource recovery projects or “waste-to-energy” development) convert agricultural and municipal wastes to fuel or electricity. Amador County’s agricultural, timber, and building industries provide a direct source of waste products that can be used to generate energy and boost the revenue potential of agriculture.

AGRICULTURAL LANDS

Agriculture is important to the history, character, culture, economy, and environment of Amador County. The County’s primary agricultural policy is to maintain the economic viability of agricultural land uses. For this reason, economic issues related to agriculture are addressed in the Economic Development Element, which also includes the majority of goals and policies for agriculture in the General Plan, and a description of the county’s agricultural areas and produce.

However, in addition to agriculture’s status as one of Amador County’s key industries and economic engines, agricultural lands provide other benefits to Amador County and its residents. When agricultural lands are converted to other uses, the potential future agricultural value of these lands is lost, and so the agricultural land base is an important topic for this Conservation Element.

In 2004, the county contained almost 200,000 acres of agricultural land, the overwhelming majority of which was grazing land (defined in the California Government Code as land on which the existing vegetation, whether grown naturally or through management, is suitable for grazing or browsing of livestock). The county also contained about 10,000 acres of land designated as Prime Farmland, Farmland of Statewide Importance, or Unique Farmland (Farmland) by the State (Please refer to the General Plan EIR for an illustration of areas of Farmland in Amador County). Over a 20-year period (1984 through 2004), the acreage of designated Farmland in the County increased. However, the county has experienced a long-term loss of grazing land since 1984. About 4,500 acres converted from farmland to non-farmland uses between 2002 and 2004.

Farmland

In 1982, the California Department of Conservation launched the Farmland Mapping and Monitoring Program (FMMP) database in response to a critical need to assess the location, quality, and quantity of agricultural lands in the state and to track conversion of these lands over time. FMMP is a non-regulatory program that defines three categories of Farmland:
Prime Farmland: Prime Farmland is land which has the best combination of physical and chemical characteristics for the production of crops. It has the soil quality, growing season, and moisture supply needed to produce sustained high yields of crops when treated and managed, including water management, according to current farming methods.

Farmland of Statewide Importance: Farmland of Statewide Importance is land other than Prime Farmland which has a good combination of physical and chemical characteristics for the production of crops. It must have been used for the production of irrigated crops at some time during the two update cycles prior to the mapping date. It does not include publicly owned lands for which there is an adopted policy preventing agricultural use.

Unique Farmland: Unique Farmland is land which does not meet the criteria for Prime Farmland or Farmland of Statewide Importance that has been used for the production of specific high economic value crops at some time during the two update cycles prior to the mapping date. It has the special combination of soil quality, location, growing season, and moisture supply needed to produce sustained high quality and/or high yields of a specific crop when treated and managed according to current farming methods.

Please refer to the General Plan EIR for a depiction of farmland classifications in Amador County as of 2010. Prime Farmland and some small areas designated as Unique Farmland are located in the Shenandoah Valley and in several areas south and west of Ione.

Williamson Act

The California Land Conservation Act, better known as the Williamson Act, has been the state’s premier agricultural land protection program since its enactment in 1965. Locations of Williamson Act contract parcels as of 2008 are shown in the General Plan EIR.

The Williamson Act supports the conservation of agricultural and open space lands by discouraging premature conversion to urban uses. Under the Act, private landowners contract with the County to voluntarily restrict land to agricultural and open-space uses. The vehicle for these agreements is a rolling term 10-year contract. Unless either party files a "notice of nonrenewal" the contract is automatically renewed each year to cover the next 10 years. Parcels under Williamson Act contracts pay property taxes at a rate consistent with their actual use, rather than potential market value.

In 2006, there were about 93,400 acres of land in Amador County protected by Williamson Act contracts. Most of these lands are located in
the western portion of the county and generally surround the cities of Plymouth, Sutter Creek, Ione, and Jackson.

Conserving and Protecting Agricultural Lands

Agriculture remains a crucial industry for Amador County, both in terms of its economic importance and because farming and ranching lie at the core of the community’s identity and culture. Amador County faces the challenge of ensuring the continued viability of agricultural practices and businesses in the face of increasing development pressure, while respecting the rights of individual landowners.

The County will encourage the continued economic viability of farming and ranching. Agriculture-related businesses and agri-tourism can offer important supplementary sources of income for farmers and ranchers. The County will support continued use of agriculture-related businesses, including wine tasting and roadside stands. Providing adequate water for farming is also a critical need.

Farming and ranching activities can create noise and dust, and lead to the need for aerial spraying. Future residential development which would detract from the ability of farmers and ranchers to maintain their businesses on nearby properties will be restricted. The County’s “Agricultural Lands and Operations” ordinance (Amador County Code Chapter 19.80) protects farming operations from nuisance and other complaints by encroaching residential uses, and requires notices to purchasers of property in agricultural areas.

Farming and ranching do have the potential to degrade water quality. Promoting sustainable farming and ranching practices can help protect the quality of surface water resources.

The Economic Development Element contains goals and policies which support conservation of agricultural lands by encouraging the continued economic viability of farming and ranching. Relevant goals include goals E-8, E-9, and E-10, and E-14.

Historical and Cultural Resources

Cultural resources are important to Amador County because they are reminders and remnants of the rich history of the area and offer physical evidence of the prehistoric and historic occupation and exploitation of the county.
Known Cultural Resources

Amador County has a variety of known cultural and historic resources, including prehistoric sites, gold mining-related sites, and other historic sites. It is important to note that these sites are generally identified in the course of an archaeological survey for a planned development, such as federal projects, new construction, or other similar activities. Therefore, the known sites tend to cluster in regions where development has occurred in the past. Although less information is available for less-developed areas, the density and types of known cultural resource sites are presumed to continue into unexplored areas. Examining groupings of similar site types can help to predict the types and densities of cultural resource sites in similar geographic locations within Amador County.

Prehistoric sites in Amador County include bedrock mortars, occupation sites, and traditional cultural properties (TCPs). Bedrock mortar sites tend to be found in locations that include nearby oak trees, a water source, and bedrock. TCPs can include gathering areas, religious sites, or mythic locations. These locations are important to maintain the continuing cultural identity of Native American communities.

Historic sites in Amador County include mining and prospect locations associated with the Gold Rush, and other sites ranging from historic houses and buildings to locations such as trails, cemeteries, and mills. Gold mining has enormous historical significance in Amador County and has literally shaped the landscape in many areas. Larger mining landscapes might include open pits, sluices, placer-scoured stream channels, ditches, open entries or shafts, tailings piles, and habitation areas. Smaller sites can contain any combination of these features.

The groupings of mines can be interpreted as following gold-bearing geologic strata. Linear ditches and canals are generally found running from a higher-elevation water source down to the mine complex.

At some locations, combinations of different resource types are found, such as historic homestead sites and prehistoric sites. The same types of resources may have been exploited by both the historic and prehistoric occupants, such as nearby water and level land. Thus, these types of sites may be found together. In other instances, it is more likely to be coincidence, such as when prehistoric sites are later intersected by mining or logging efforts.

Cultural Resources Sensitivity Guidance

The known locations of cultural and historic resources, along with historic maps, provide some ability to predict the locations of as-yet unknown cultural resources. Historic gold, clay, silica sand, and coal mines are
located in the western part of the county, and the regions in and around those mines may include similar resources. East of Ione and west of SR 49, there is a north-south belt of copper ore and a series of related mines. SR 49 runs along the Motherlode, a similar north-south belt of gold-bearing quartz veins and thus helps to define a long, narrow series of hard-rock veins. Another large region of gold mining activity exists near the Volcano/Red Corral area. Each of these areas may indicate a higher likelihood of historic resources related to mining or support for mining. Both the Cosumnes and Mokelumne Rivers were also extensively mined.

Prehistoric resources can be found through an association with available natural resources, including water, types of food, or stone outcrops that supply materials for tool-making. With these factors in mind, it would be reasonable that river and creek drainages are more likely to contain prehistoric cultural resources. Based on known information regarding cultural resources, physical geography and mine resources, Figure C-2 illustrates culturally sensitive areas of Amador County.

### AIR QUALITY AND CLIMATE CHANGE

Chronic exposure to air pollutants is a serious health risk to millions of California residents, particularly the young, the elderly, and people with heart disease and respiratory problems. Air pollution also affects local economies by damaging agricultural crops, natural vegetation, buildings, and other materials. General Plan air quality policies are designed to help maintain air pollution to levels consistent with standards set by the state and federal governments. With effective planning, project mitigation, public education and inter-agency cooperation, air quality can be maintained at appropriate levels.

Air quality policies guide land use decisions, including, but not limited to decisions affecting proposed development projects and the location of new roads and transit facilities. Air pollutant levels from existing land uses, including mining, agricultural, and industrial activities, must also be closely tracked to ensure compatibility with state and federal standards, especially where residential and other sensitive receptors have encroached into areas adjacent to these uses. Policies and implementation programs address existing and foreseeable air pollution problems, and set guidelines for compliance with air quality control requirements.

#### Greenhouse Gases

Various gases in the earth’s atmosphere trap solar radiation through the greenhouse effect and play a critical role in determining the earth’s surface temperature. These gases are known as atmospheric greenhouse gases (GHGs). Prominent GHGs include carbon dioxide
(CO₂), methane (CH₄), ozone, nitrous oxide, hydrofluorocarbons, chlorofluorocarbons, and sulfur hexafluoride. Human-caused emissions of these GHGs have exceeded their naturally-occurring levels, intensifying the greenhouse effect, which has led to changes in global climate conditions. GHG emissions are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural economic sectors. In California, the transportation sector is the largest emitter of GHGs, followed by electricity generation. CO₂ emissions are byproducts of fossil fuel combustion. Methane results from off-gassing associated with agricultural practices and landfills, and is 23-times more potent as a GHG than CO₂.

Climate change is a global problem because GHGs are global pollutants, unlike other air pollutants of regional and local concern. Additional resources beyond air quality could be indirectly affected by increased GHG emissions. For example, an increase in the global average temperature is expected to result in a decreased volume of precipitation falling as snow in California and an overall reduction in snowpack in the Sierra Nevada. The Sierra Nevada snowpack provides both water supply (runoff) and storage (within the snowpack before melting), which is a major source of potable water for the state and Amador County in particular. Although current forecasts vary, it is evident that this phenomenon could lead to significant challenges in securing an adequate water supply for a growing population. A shift in precipitation from snow to rain could also lead to increased flooding potential because water that would normally be held in the snowpack until spring could flow into the Central Valley with winter storm events.

**MINERAL RESOURCES**

The discovery of gold in the Sierra Nevada foothills in 1849 led to the settlement of Amador County, and Amador County’s mineral resources remain an important part of the county’s economy and identity.

Currently, mining in the county includes clay, gold, lignite, and aggregate materials, but the county’s mineral products include (among others), clay, sand, gravel, aggregate, quartz sand, copper, silver, gold, soapstone, marble, slate, greenstone, river rip rap, road base, limestone, sandstone, zinc, chromite, talc, lignite, and diamonds.
Figure C-2: Cultural Resource Sensitivity
Mineral Resource Zones

The California Geological Survey identifies several categories of mineral resources in its Mineral Resource Zone (MRZ) classifications. MRZ-2 describes areas where there is adequate information to indicate that significant mineral deposits are present, or have a high likelihood of being present. MRZ-2a describes areas where geologic information indicates significant mineral resources are present, and MRZ-2b describes areas where the presence of significant mineral resources is inferred from geologic information.

Amador County’s mineral resource zones include areas with known or inferred deposits of gold, lode gold, copper, zinc, talc, limestone, sand, silica sand, clay, and lignite. Figure C-3 illustrates the known locations of these mineral resources. The continued viability of mineral and aggregate resources in the county should be a factor when considering future development proposals. Goal E-12 and associated policies in the Economic Development Element address the county’s mineral resources, including protecting their continued viability.

The Ione Formation, located in western Amador County, is a source of mineral products, including primarily clay. The Ione Formation is the only large source of super duty refractory clay in the western United States. This resource is used in the production of heat-resistant brick for high-temperature furnaces.

Amador County is one of the few places in the state where coal mining occurs. Lignite, a form of low-grade coal found in Amador County, is brown, very crumbly, and has been mainly used at the source to generate electricity. The power plant on Coal Mine Road has used lignite coal in its process in the past; as of 2010, this power plant is not in operation.

Timber Resources

Timber harvesting is an important industry in Amador County. Although timber harvesting is often described as an agricultural activity, the cultural importance of timber production in Amador County is distinct from other agricultural production.

Timberland in Amador County is located in areas above approximately 3,500 feet elevation, and includes both privately- and publicly-owned softwood forests. Many of the larger land holdings are located in Timber Production Zones (TPZs). At lower elevations between 2,000 feet and 3,500 feet, Amador County’s softwood forests have been largely converted to rural residential uses.
Amador County supports the continued viability of timber harvesting. Effective management and production of timber resources can also reduce the risk of catastrophic wildfire, especially in the eastern portion of the county. The Economic Development Element includes a goal (E-11) and policies describing conservation and protection of timber resources.

**RELATED PLANS AND PROGRAMS**

**Senate Bill 18, Traditional Tribal Cultural Places**

SB 18 was signed into law by Governor Arnold Schwarzenegger in September 2004 (Chapter 905, Statutes of 2004). SB 18 requires the County to consult with California Native American tribes to aid in the protection of traditional tribal culture through local land use planning. The intent of SB 18 is to provide California Native American tribes an opportunity to participate in local land use decisions at an early planning stage, for the purpose of protecting, or mitigating impacts to, cultural places. SB 18 requires local governments to consult with tribes prior to making certain planning decisions and to provide notice to tribes at certain key points in the planning process. These consultation and notice requirements apply to Amador County’s General Plan.

The principal objective of SB 18 is to preserve and protect cultural places of California Native Americans. SB 18 refers to Public Resources Code Sections 5097.9 and 5097.995 to define cultural places as:

- Native American sanctified cemeteries, places of worship, religious or ceremonial sites, or sacred shrines (Public Resources Code §5097.9).
- Native American historic, cultural, or sacred sites, that are listed or may be eligible for listing in the California Register of Historic Resources pursuant to Section 5024.1, including any historic or prehistoric ruins, any burial ground, and any archaeological or historic site (Public Resources Code §5097.995).

**Assembly Bill 32, the California Global Warming Solutions Act**

In September 2006, Governor Arnold Schwarzenegger signed AB 32, the California Global Warming Solutions Act (Chapter 488, Statutes of 2006). AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. This reduction will be accomplished through an enforceable statewide cap on GHG emissions that will be phased in starting in 2012. To effectively implement the cap, AB 32 directs the California Air Resources Board (ARB) to develop and implement regulations to reduce statewide GHG emissions from stationary sources.
AMADOR COUNTY GENERAL PLAN

Figure C-3: Mineral Resource Zones
AB 32 requires that ARB adopt a quantified cap on GHG emissions representing 1990 emissions levels and disclose how it arrived at the cap; institute a schedule to meet the emissions cap; and develop tracking, reporting, and enforcement mechanisms to ensure that the state achieves the reductions in GHG emissions necessary to meet the cap. AB 32 also includes guidance to institute emission reductions in an economically efficient manner and conditions to ensure that businesses and consumers are not unfairly affected by the reductions.

**Senate Bill 375, Sustainable Communities Strategy**

Promoted as the critical implementation tool for AB 32, SB 375 (Chapter 728, Statutes of 2008) introduced numerous changes in California’s land use and transportation planning process. SB 375 firmly links land use planning, transportation planning, affordable housing, and CEQA to GHG reductions. SB 375 places additional planning responsibilities on Metropolitan Planning Organizations (MPOs) throughout the state, which are now charged with preparing sustainable land use plans known as Sustainable Community Strategies (SCSs). The SCS is a preferred growth scenario designed to achieve certain GHG reduction goals for transportation emissions, and becomes the land use allocation for transportation modeling in future Regional Transportation Plans (RTPs). Future RTP funding decisions are tied to the SCS, creating strong incentive for local governments to participate in these efforts in order to ensure funding for much-needed system improvements. Future development projects that are consistent with adopted SCSs are also eligible for new CEQA exemptions and streamlining provisions established by the law. Amador County does not fall within the jurisdiction of an MPO, and so is not directly subject to the provisions of SB 375.

**Senate Bills 221 and 610**

SB 221 (Chapter 642, Statutes of 2001) requires a county or city to include as a condition of approval of any tentative map, parcel map, or development agreement for certain residential subdivisions a requirement that a “sufficient water supply” be available. Proof of a sufficient water supply must be based on a written verification from the public water system that would serve the proposed development.

SB 610 (Chapter 643, Statutes of 2001) requires a water supply assessment for projects with 500 or more residential units or equivalent. The assessment must document long-term water demand and water supply over a 20-year planning period, including normal years, dry years, and multiple dry years.
ISSUES, GOALS AND POLICIES

The goals and policies of the Conservation Element present strategies to protect and conserve Amador County’s natural resources, including water supply and water quality, energy resources, agriculture and agricultural lands, air quality, timber, mineral resources, historic resources, and cultural resources. The Conservation Element also outlines the County’s GHG reduction and climate change adaptation strategy.

Water Supply and Water Quality

Adequate water supply for the county, including water for residential, agricultural, industrial, and commercial use, is of primary importance. Maintaining the water supply includes providing quality water for to support both current and future development.

Development of reclaimed water should play an important role in providing sustained water supply for appropriate uses and extending finite supplies. Conservation must also be expanded as an important mechanism to extend available water supplies in addition to developing new water supply projects to meet future water demands.

Because surface water is the primary water supply source, preventing pollution from point- and non-point sources is important to the future well-being of the county. Providing adequate sewage treatment capacity is important for maintaining and improving water quality. In addition, residential development generates increased urban runoff to streams, which is a source of pollution. Agricultural practices can also generate pollutants such as eroded material from stream banks and fields, and pesticide, herbicide, and fertilizer runoff. The county’s historic and current mining activities also represent potential sources of pollution to streams and rivers, including heavy metals and eroded soil.

Water planning for Amador County should consider the Urban Water Management Plan and the California State Water Plan as updated and revised periodically. The AWA actively participates in the State Water Plan Updates.

Goal C-1: Ensure that all future development permitted in the county can be provided adequate amounts of water.

Policy C-1.1: Coordinate with the county’s water suppliers to ensure that water is available to serve both current and planned future residential, commercial, industrial, and agricultural needs. Include upland areas in future water management plans.
Policy C-1.2: Guide future development to areas of the county where adequate water supplies can be ensured.

Policy C-1.3: Limit reliance on groundwater wells as sources for community water systems. Where possible, encourage connection of developments to existing water supply systems.

Policy C-1.4: Encourage new development, renovation, landscape, and agricultural projects to include water conservation measures, including use of graywater, reclaimed, or recycled water for irrigation, water-conserving plumbing fixtures, and low-water landscapes.

Goal C-2: Maintain and improve water supply planning and infrastructure.

Policy C-2.1: Encourage integrated management of surface water and groundwater resources, wastewater, stormwater treatment and use, and the development of reclaimed water.

Policy C-2.2: Encourage conjunctive use of groundwater and surface water by water agencies to improve water supply reliability.

Policy C-2.3: Support the county’s water suppliers, including public agencies and private entities within Amador County, in their efforts to protect water rights and water supply contracts.

Policy C-2.4: Pursue management strategies that develop upstream/downstream interregional conjunctive use/water transfer programs to meet future water needs in Amador County.

Policy C-2.5: Support efforts by water and wastewater agencies to respond to state mandates addressing the future challenges posed by climate change.

Policy C-2.6: Reduce erosion and sediment loads which might limit the lifespan of existing water storage facilities.

Policy C-2.7: Promote development patterns and practices which permit the continued use and future development of water storage and power generation facilities on the county’s streams and rivers.

Policy C-2.8: Federal, state, and/or local designations of surface waters in or adjacent to the County (e.g., Federal Wild and Scenic River, National Recreation Area) are considered incompatible with the long term water needs of Amador County.
Goal C-3: Minimize negative effects of sewage treatment on water quality.

Policy C-3.1: Guide future development to areas of the county with the ability to obtain adequate wastewater service and treatment capacity.

Policy C-3.2: Encourage recycling and water-saving features in new development, including use of graywater, recycled, or reclaimed water for irrigation, to limit the water flows to septic systems and leach fields.

Policy C-3.3: Encourage countywide coordination and organizational structures to maximize recycled water reuse opportunities throughout the county.

Policy C-3.4: Work with landowners and wastewater providers to provide alternative systems for inadequate or failing septic and sewer systems.

Goal C-4: Minimize negative effects of point and non-point sources on water quality.

Policy C-4.1: Encourage site plan elements in proposed development such as reduced pavement/cover and permeable pavement, as well as drainage features which limit runoff and increase infiltration and groundwater recharge.

Policy C-4.2: Limit the effects of current and former mining and mineral extraction activities on groundwater and surface water.

Policy C-4.3: Promote agricultural and development practices which limit soil erosion and runoff.

Policy C-4.4: Promote use of protective measures to limit the effects of industrial or hazardous materials sites on surface water resources and groundwater recharge zones.

Goal C-5: Reduce the negative effects of new development on stormwater runoff and non-point source water pollution.

Policy C-5.1: Develop Low Impact Development (LID) standards for new construction, including residential developments of 5 or more units, and commercial or industrial projects. These standards should be incorporated into the County’s development ordinances.
Policy C-5.2: Encourage the use of LID strategies to help Amador County sustain and improve both surface- and groundwater quality.

Energy Resources

Increasing energy efficiency and making better use of current and local energy resources can reduce direct and hidden energy costs in the future, as energy costs rise and sources of energy become more difficult to obtain. Improving energy efficiency and increasing the amount of local, micro-scale energy generation will help reduce energy costs and the effects of our energy use on the environment.

Goal C-6: Reduce energy use and promote renewable and locally available sources of energy.

Policy C-6.1: Encourage new development to be pedestrian-friendly, and located near existing activity centers to limit energy use associated with automobile transportation.

Policy C-6.2: Encourage energy-efficient businesses and manufacturers of green products to locate in Amador County.

Policy C-6.3: Promote increased energy efficiency and green building practices through the County’s use of these practices and through use of incentives.

Policy C-6.4: Encourage development of renewable energy generation options.

Policy C-6.5: Support use of renewable and locally-available sources of energy where feasible.

Historical Resources

Amador County has a rich history, and is characterized by historical structures, districts, and mines dating back to the Gold Rush of 1849. These historical resources offer an important tool for education, help to provide a distinctive “sense of place” to the county, and are vital to promoting tourism. The County will support the preservation of historical resources through both property owner incentives and educational and interpretive opportunities.

The County will explore using building envelopes or cluster development to allow development of properties while also preserving cultural or historical resources located on the property. Cluster development is describes a development pattern where the total improvements (roads and residences) permitted for a property are clustered on a small portion of the original or proposed parcels, instead of being scattered evenly over
the available space. The balance of the parcel is then dedicated to either open space or agricultural use. In addition to preserving land for agricultural or conservation uses, cluster development allows for cheaper and more efficient infrastructure such as roads, water, and sewer service.

**Goal C-7: Preserve the county’s historical resources.**

**Policy C-7.1:** Balance the community’s interest in historic preservation with the rights of individual property owners.

**Policy C-7.2:** Promote use of building envelopes or cluster development as a means of protecting historical resources when land is developed.

**Policy C-7.3:** Support the preservation of historic structures, including rehabilitation and adaptive reuse of structures. Encourage property owners to preserve and maintain historic structures.

**Policy C-7.4:** Promote the preservation of historically significant Gold Rush sites, mining sites and other identified sites.

**Policy C-7.5:** Collaborate with interested groups to develop interpretive materials for historically-important sites.

**Policy C-7.6:** Promote historic preservation as an engine for Amador County’s tourist economy.

**Cultural Resources**

Cultural resources are important reminders and remnants of the rich history of Amador County. These resources offer physical evidence of the prehistoric and historic occupation and exploitation of the county. Cultural resources sites include both prehistoric and mining related sites. Amador County will work with interested groups, including Native American communities, to preserve and protect cultural resources. Incentives and cluster development are two tools which may be used. In addition, an inventory of cultural resource locations maintained by the County can help landowners become aware of the presence of cultural or archaeological resources on their properties, potentially affecting future development. Protecting cultural resources is mandated by the State of California through the California Environmental Quality Act (CEQA) environmental review process and the SB 18 consultation process.
Goal C-8: Preserve the county's cultural resources.

Policy C-8.1: Balance the community’s interest in the protection of cultural resources with the rights of individual property owners.

Policy C-8.2: Encourage project design that will protect cultural and archaeological resources, and consider using incentives to support protection of these resources when land is developed.

Policy C-8.3: Educate local realtors, property owners, and developers regarding the need to protect and preserve cultural resources, with the objective of increasing cultural resource awareness among existing and new property owners.

Policy C-8.4: Encourage other interested groups to develop interpretive materials for culturally and archaeologically important sites.

Air Quality

Air quality is an issue throughout California. Automobile emissions are a major contributor to air quality problems, and efforts to improve air quality are increasingly directed at the relationship between growth, land use activities, and air quality. Land use patterns directly influence transportation demand which, in turn, affects air quality. Amador County can help to maintain its good air quality by modifying development patterns and offering alternative transportation options, as well as encouraging energy conservation and efficiency.

Goal C-9: Maintain and improve air quality.

Policy C-9.1: Encourage development of commercial or industrial businesses which provide jobs for county residents in order to reduce vehicle miles traveled for residents who must drive elsewhere for employment.

Policy C-9.2: Encourage infill development, and development near existing activity centers in order to encourage walking or bicycle use in running local errands.

Policy C-9.3: Promote the separation of emission sources from sensitive receptors such as schools, day care centers, and health care facilities.

Policy C-9.4: Encourage energy conservation and energy efficient design in new development projects.
Policy C-9.5: Promote recycling of waste materials and the use of recycled materials.

Policy C-9.6: Maintain viable public transportation options in Amador County, and provide transit connections such as park-and-ride services to job centers in nearby counties.

Policy C-9.7: Work with state and federal agencies to seek recognition of air pollutant movement from valley to mountain counties as a contributor to reduced air quality.

Greenhouse Gas Emissions

The California Global Warming Solutions Act (AB 32) was passed in September 2006. AB 32 requires that statewide greenhouse gas (GHG) emissions must be reduced to 1990 levels by 2020. The Climate Change Scoping Plan (Scoping Plan) was approved by ARB in December 2008 and outlines California’s plan to achieve the GHG reductions required in AB 32. The Scoping Plan contains the primary strategies California will implement to achieve a reduction of 169 million metric tons of carbon dioxide equivalent, or approximately 28% from the state’s projected 2020 emission levels. Future planning efforts that do not encourage reductions in GHG emissions would conflict with AB 32, impeding California’s ability to comply.

In the Scoping Plan, ARB encourages local governments to adopt a reduction goal for municipal operations emissions and move toward establishing similar goals for community emissions that parallel the State commitment to reduce GHGs. The Plan identifies California’s cities and counties as “essential partners” within the overall statewide effort and recommends that local governments set a GHG reduction target of 15 percent below today’s levels by the year 2020. Though the specific role local governments will play in meeting California’s GHG reduction goals is still being defined, they will nonetheless be a key player.

Statewide, more than 40% of GHG emissions are associated with transportation. Reduction of GHG emissions will thus primarily require a reduction of motor vehicle fuel consumed and vehicle miles traveled (VMT). Other means of addressing global climate change include use of alternative low- or no-emission energy sources at the local and micro scale (i.e., solar cells), since electric power generation also accounts for nearly a quarter of GHG emissions. Conservation efforts which reduce energy use are also effective in reducing GHG emissions associated with electric power generation.
Goal C-10: Reduce GHG emissions associated with automobile travel, electrical power generation and energy use.

Policy C-10.1: Evaluate the potential effects of climate change on the county’s human and natural systems and prepare strategies that allow the County to appropriately respond and adapt.

Policy C-10.2: Develop and adopt a comprehensive strategy to reduce GHGs within Amador County by at least 15 percent from current levels by 2020.

Policy C-10.3: Guide new development to areas where pedestrian and bicycle/NEV access to existing activity centers is possible, in order to reduce the need for automobile travel and VMT.

Policy C-10.4: Work with service providers to ensure that transit offerings in the county are stable or expanding, and that transit is tailored to meet residents’ needs.

Policy C-10.5: Require new development projects to incorporate building placement and design features to increase energy efficiency in new structures.

Policy C-10.6: Support green building through incentives for Leadership in Energy and Environmental Design (LEED) certification of new commercial, industrial, public, and multi-family residential buildings. Promote incentives for compliance with this standard as a way to increase the energy efficiency of new structures. Promote increased energy efficiency and green building practices through the County’s use of these practices.

Policy C-10.7: Support parcel-scale energy generation, including addition of solar panels for residential structures and cogeneration for larger commercial or industrial uses.

Policy C-10.8: Expand recycling and waste minimization efforts, including recycling of construction and demolition materials.
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