

# 5. Resource Production Element

## Agriculture, Timber, Minerals

### Introduction

---

The Resource Production Element is intended to ensure that agricultural, timber and mineral resources will be available when needed, will not become inaccessible as a result of inadequate information during the land-use decision-making process, and are managed accordingly through County policies and programs. Resource values of agriculture, timber, and mineral resources that may be related to wildlife, aesthetics, recreation, watershed protection, or other beneficial purposes are described in the Conservation and Open Space Element.

### Organization

---

**RP 1.1 Background and Setting, Associated Plans and Documents**

Agricultural Resources  
Timber Resources  
Mineral Resources  
Geothermal Resources

**RP 1.2 Goals and Policies**

Resource Production, General  
Agricultural Resources  
Timber Resources  
Mineral Resources  
Geothermal Resources

**RP 1.3 Implementation Programs**

Resource Production, General  
Agricultural Resources  
Timber Resources  
Mineral Resources  
Geothermal Resources

## RP 1.1 Background and Setting, Associated Plans and Documents

### Agricultural Resources

#### Background and Setting – Agricultural Resources

Approximately 42% of the County's 663,000± acres are in agricultural production with 30% of that total in farmland and rangeland and 12% in timber production (USDA, 2012). Non-timber agricultural lands are primarily under private ownership in Calaveras County although a portion of the Stanislaus National Forest and U.S. Bureau of Land Management lands are leased for grazing. Approximately half of land grazed in the County is owned by local ranchers with the remainder leased from resident, non-resident, public, and private landowners.<sup>1</sup>

---

<sup>1</sup> Personal communication, September 27, 2013 - Kevin Wright, Agricultural Commissioner

Historically, cattle and timber have been the leading agricultural commodities in the County. Cattle and calves, wine grapes and walnuts are the County's three largest non-timber agricultural commodities by gross production value. Other agricultural products with a long history in the County include poultry, apiary, sheep, hay, olives and apples.

The general agricultural gross production values for non-timber agricultural commodities have been on an uptrend since 2008 due to rising demand for beef, wine and walnuts, although total farmland has declined by approximately 18% since 1999. Total Williamson Act contract land has increased by approximately 4% since 1999 and stood at 143,000± acres in 2012.

Cattle, wine grapes and walnuts are expected to continue as leading agricultural products. "Calaveras Grown" products are expected to increase in popularity as small producers find expanding retail markets in the region, and efforts from marketing groups such as The Wine Grape Alliance attracts visitors to the county who seek out a "grape to the glass" experience. Williamson Act contracted land acreage is expected to remain relatively constant.<sup>2</sup>

Factors affecting the distribution of many agricultural crops include elevation, soils, and water access and availability. Local agricultural operations depend on both wells and irrigation water drawn from rivers. The availability and access to water will continue to play an important part in agricultural production and the distribution of crops.

There are no state-designated prime, unique, or other important farmlands in Calaveras County.<sup>3</sup>

#### Associated Plans and Documents: Agricultural Resources

The County maintains the following text, maps, reference materials and diagrams identifying the quantity, distribution, ownership, trends, economic importance, variety and production values of agricultural commodities and agricultural lands in Calaveras County. Text, maps and diagrams are updated on a regular basis.

- *Report of Agriculture, Calaveras County Department of Agriculture 1993-2012* (aka Crop Reports). Past and current reports are available online at <http://www.co.calaveras.ca.us/> under the Calaveras County Environmental Management Agency Department of Agriculture

- *USDA National Ag Statistics* (available online at <http://www.nass.usda.gov/>)

The following agricultural data is available at the Calaveras County Planning Department at 891 Mountain Ranch Road, San Andreas, CA 95249:

- Summaries of statistics applicable to Calaveras County from County Crop Reports and the USDA are located in the General Plan Background Document.
- Calaveras County Resolution #75-489, governing agricultural preserves.
- Calaveras Code Chapter 17.18 pertaining to Williamson Act contracted lands.
- Calaveras Code Chapter 14.02 addressing Agricultural lands and Operations and the County's Right-to-Farm Ordinance.
- Calaveras Code Section 16.10.110 addressing livestock nuisances.
- Calaveras Code Title 17 (various agricultural zoning districts with varying degrees of agricultural use permitted)

---

<sup>2</sup> Ibid

<sup>3</sup> The California Department of Conservation's Farmland Mapping and Monitoring Program (FMMP) excludes Calaveras County and other foothill counties

## Timber Resources

### Background and Setting - Timber Resources

Timberland in Calaveras County is under both public and private ownership and is concentrated in the eastern portion of the County generally at elevations above 2,500± feet. Sierra Pacific Industries (SPI) has the largest private ownership of timberlands in the County with 72,541± acres. The U.S. Forest Service manages 75,072± acres in Calaveras County in the Stanislaus National Forest and allows timber harvesting on a portion of those lands. Timber harvesting on private land is governed by the California Forest Practice Rules<sup>4</sup> as they apply to the Southern Forest District, the region encompassing Calaveras County.

Timber production values have fluctuated widely in the County. In 1999, timber production represented more than half of the total agricultural production value countywide. Since then, timber production values have represented less than half of total agricultural production values reaching a low of 8.4% in 2010. These fluctuations can be attributed to the economy, fluctuating timber prices, wildfires, pests, drought, and similar influences. These fluctuations are expected to continue. Timber activity, near term, is expected to decline as fires in nearby counties now require the salvage of damaged trees. Longer term timber harvests should mirror the economy.

### Associated Plans and Documents: Timber Resources

The County maintains the following text, maps and diagrams identifying the quantity, distribution, ownership, trends, economic importance, variety and production values of timberlands. Text, maps and diagrams are updated on a regular basis.

- *Report of Agriculture, Calaveras County Department of Agriculture 1997-2012* (aka Crop Reports). Past and current reports are available online at <http://www.co.calaveras.ca.us/> under the Calaveras County Environmental Management Agency Department of Agriculture
- *USDA National Ag Statistics* (available online at <http://www.nass.usda.gov/>)

The following agricultural data is available at the Calaveras County Planning Department at 891 Mt. Ranch Road, San Andreas, CA 95249:

- Summaries of statistics applicable to Calaveras County from County Crop Reports and the USDA are located in the General Plan Background Document.
- Calaveras County Code Chapter 14.02 broadly addresses timber production as an activity protected by the County's Right-to-Farm Provisions, although the chapter primarily focuses on non-timber agricultural operations.
- Calaveras County Code Chapter 17.14 pertaining to the Timber Production (TP) zone.

## Mineral Resources

### Background and Setting – Mineral Resources

Calaveras County has a long history of mining with a rich array of mineral resources due to its location within the Sierra Nevada foothills and the Mother Lode Belt. Though mining activity has slowed in recent years, much of the early development in the County revolved around extracting mineral resources such

<sup>4</sup> Title 14, California Code of Regulations Chapters 4, 4.5 and 10. Compiled by The California Department of Forestry and Fire Protection Resource Management, Forest Practice Program

as gold and copper among other minerals. Minerals commonly extracted in more modern times include clay, sand, and gravel. Mineral extraction from mine tailings also is common.

In Calaveras County, mining activities occur on both public (U.S. Bureau of Land Management and U.S. Forest Service) and private lands. Per the State Mining and Geology Board, as of 2013, there are no lands designated in Calaveras County as mineral areas of regional or statewide significance. As mineral resources are depleted, however, there is an increased likelihood of future designations statewide.

#### Associated Plans and Documents: Mineral Resources

The County maintains the following text, maps and diagrams identifying the location and relative importance of mineral lands countywide and the County's adopted policies for managing those resources. Text, maps and diagrams are updated on a regular basis. Current versions available at the Calaveras County Planning Department at 891 Mountain Ranch Road, San Andreas, CA 95249, include:

- Mineral information classified by the State Geologist (General Plan Background Report)
- Calaveras County Code Chapter 17.56 (Mineral Extraction Zone) addressing mineral resource management policies and fulfilling the requirements of the Surface Mining and Reclamation Act relative to maintaining a mining ordinance in accordance with state statutes.<sup>5</sup>

## **Geothermal Resources**

#### Background and Setting – Geothermal Resources

The California Department of Conservation Division of Oil, Gas, and Geothermal Resources (DOGGR) identifies one geothermal resource in Calaveras County, a low-temperature geothermal underground body of water that could be used for heat exchange near Valley Springs.

#### Associated Plans and Documents: Geothermal Resources

The County maintains the following text and map identifying the location and nature of identified geothermal resource(s) countywide. The text and map may be updated by the state from time to time. Current versions available at the Calaveras County Planning Department at 891 Mountain Ranch Road, San Andreas, CA 95249, include:

- Map, California Department of Conservation Division of Oil, Gas, and Geothermal Resources (DOGGR) – Geothermal Resources, Calaveras County (General Plan Background Report)

---

<sup>5</sup> Ordinance No. 2571, adopted by the Calaveras County Board of Supervisors in 1999 was certified by the State Mining and Geology Board (SMGB) on 11/10/1999 pursuant to SMGB Resolution 99-19.

## RP 1.2 Goals and Policies

### Goal and Policies: General

#### Goal

---

**RP-1:** Long term viability and economic productivity of Resource Production Lands within the County.

#### Policies

---

- RP 1.1** Apply consistent evaluation criteria and mitigation for discretionary actions involving the conversion of resource production lands to non-resource production uses and/or for proposed land uses on or adjacent to active or potentially active resource production lands.
- RP 1.2** Limit the intrusion and encroachment of incompatible uses onto Resource Production Lands.
- RP 1.3** Require newly created or adjusted parcels adjoining Resource Production Lands be of adequate size and compatibly zoned to minimize potential conflict between the uses or potential uses on Resource Production Lands.
- RP 1.4** Buffer Resource Production Lands through setbacks or other measures to prevent non-compatible uses from impacting resource production uses.
- RP 1.5** Support water and wastewater agencies and districts in the development and acquisition of short term and long term water supplies and the use of reclaimed and raw water on Resource Production Lands.
- RP 1.6** Use a wide variety of conservation tools, such as conservation easements, long term conservation leases, transfer of development rights, density bonuses, urban in-fill, mitigation banking, cluster development, Williamson Act land conservation contracts, and agricultural enterprise zones to encourage the long-term productivity of Resource Production Lands.
- RP 1.7** Public facilities that are not compatible with, or constrain the use of, the current and future productivity of Resource Production Lands shall not be located on or adjacent to Resource Production lands unless no other suitable site is available to meet the public service needs.
- RP 1.8** The following land uses are not intended to comprise open space nor be consistent with the general plan's goals for providing open spaces:
- Timber land that has been harvested and not re-planted or that is expected to undergo additional harvesting or clear cutting
  - Mineral land that has not been reclaimed or is currently being mined

- Agricultural lands with 25% or more coverage by buildings (e.g., processing facilities, warehouses)

## Goal and Policies: Agricultural Resources

### Goal

---

**RP- 2** Long term viability of agricultural lands and resources within the County recognizing their economic, aesthetic, cultural, and other values.

### Policies

---

**RP 2.1** Continue participation in the California Land Conservation Act of 1965 (Williamson Act/agricultural preserve program), and other agriculture-related long term conservation programs.

**RP 2.2** Obtain input from the County's Agricultural Advisory Committee regarding potential impacts to agricultural uses, including timber, prior to approval of a discretionary entitlement on or adjacent to Resource Production Lands.

**RP 2.3** Allow for innovative land use practices, including marketing, that support agriculturally-related economic development based on the "Calaveras Grown," "Farm to Table," and similar concepts.

**RP 2.4** Support educational and voluntary stewardship programs that promote recognition of agriculture's importance to Calaveras County, encourage implementation of best management practices, enhance the economic viability of the County's agricultural industry, or provide for multiple or alternative beneficial uses of agricultural lands.

**RP 2.5** Continue to maintain a County Right-to-Farm Ordinance recognizing the right of agricultural uses to operate, so long as such uses are carried out in a manner consistent with generally accepted agricultural standards and practices, despite inherent conflicts with residential land uses.

**RP 2.6** Promote a compatible relationship between agricultural and non-agricultural activities.

## Goal and Policies: Timber Resources

### Goal

---

**RP-3** Long term viability of timber lands and timber resources within the County recognizing their economic, aesthetic, cultural, and other values.

### Policies

---

**RP 3.1** Continue participation in the Z'berg-Warren-Keene-Collier Forest Taxation Reform Act of 1976 and the Timber Productivity Act of 1982 (timber production zone) and other long term timber-related conservation programs.

- RP 3.2** Continue to maintain a Timber Production Zone district as necessary to identify and protect valuable timberland resources and to implement the provisions of the Forest Taxation Reform Act of 1976.
- RP 3.3** Recognize and encourage the well-managed use of timber resources for multiple beneficial purposes.
- RP 3.4** Support educational and voluntary stewardship programs that promote recognition of timber's importance to Calaveras County, encourage implementation of best management practices, enhance the economic viability of the County's timber industry, or provide for multiple or alternative beneficial uses of timber lands.
- RP 3.5** Harvesting of timber shall be done in a manner that protects water quality, controls erosion and flooding, and preserves the viewshed.

## Goals and Policies: Mineral Resources

### Goal

---

- RP-4** An effective and comprehensive mining and reclamation program that acknowledges the long history of mining in Calaveras County and encourages the production and conservation of valuable mineral resources.

### Policies

---

- RP 4.1** Acknowledge the importance of mineral resources as finite and unique natural resources, and that the responsible protection and development of these resources is vital to the economic well-being of the state, the County, and the needs of society.
- RP 4.2** Balance the interests of the County's mining industry and County residents and minimize conflicts between existing and planned land uses.
- RP 4.3** Conserve potential mineral resource lands for future use of mineral resources.

### Goal

---

- RP-5** Mined lands reclaimed to a useable condition readily adaptable for subsequent land uses.

### Policies

---

- RP 5.1** Require reclamation of mined lands to a usable condition readily adaptable for subsequent land uses in conjunction with discretionary reviews of proposed surface and subsurface mining operations; consider recreational, watershed, wildlife, range and forage, and aesthetic values; prevent or minimize adverse environmental effects; and eliminate residual hazards to the public health and safety.

- RP 5.2** Implement reclamation planning in a manner that acknowledges the potential for ongoing and/or future mining activities while providing for the subsequent beneficial use of the mined land.
- RP 5.3** Mimic the natural, undisturbed condition of land when creating or restoring plant or wildlife habitats and aesthetically blend the reclaimed site into the surrounding area.
- RP 5.4** Do the following in conjunction with discretionary reviews of proposed mining operations: Consider recreational, watershed, wildlife, range and forage, and aesthetic values; prevent or minimize adverse environmental effects; eliminate residual hazards to the public health and safety; and reclaim mined lands to a usable condition readily adaptable for subsequent land uses.

## **Goal and Policies: Geothermal Resources**

### **Goal**

---

- RP-6** Long term viability and economic productivity of geothermal resources within the County.

### **Policies**

---

- RP 6.1** Provide for the discovery, development, and use of geothermal resources in a manner that safeguards life, health, property, and the public welfare, and encourages maximum economic use.

## RP 1.3 Implementation Programs

### Programs: General

#### RP 1-A County Code Amendments

Amend the County Code to:

- Incorporate guidelines and standards for the development and maintenance of setbacks or other measures designed to minimize conflicts between activities conducted on Resource Production Lands and the encroachment of incompatible uses
- Establish minimum parcel size standards for new lots to be created adjacent to Resource Production Lands.
- Incorporate guidelines for clustering residential development on Resource Production Lands
- Establish procedures for implementing a Transfer of Development Rights (TDR) program allowing for the transfer of development rights from Resource Production lands to off-site parcels.
- Expand the types of agricultural tourism and other compatible non-traditional activities allowed on Resource Production Lands to enhance their economic viability.

#### RP 1-B Findings for Approval

Amend the County Code to include mandatory findings to be made in conjunction with the approval of a discretionary entitlement establishing that:

- The proposed conversion of Resource Production Lands to non-resource production uses will not hinder the long-term viability and productivity of remaining agricultural, timber or mineral resources in the County.
- New or expanded uses proposed on or adjacent to Resource Production Land(s) will neither be incompatible with nor hinder the present or future productivity of Resource Production Lands.

#### RP 1-C Public Facilities on Resource Production Lands

Evaluate the potential compatibility of public facilities on the current and future productivity of Resource Production Lands when such facilities are proposed on or adjacent to Resource Production Lands.

### Programs: Agricultural Resources

#### RP 2-A Significance Criteria for Agricultural Land Conversions

The Calaveras County Department of Agriculture, Planning Department, and the Agricultural Advisory Committee shall establish a consistent methodology for evaluating the potential significance of agricultural land conversions to non-agricultural uses pursuant to the California Environmental Quality Act (CEQA) for use in conjunction with evaluating proposals requiring a discretionary entitlement subject to CEQA.

#### RP 2-B Mitigation for Agricultural Land Conversions

The Calaveras County Department of Agriculture, Planning Department, and the Agricultural Advisory Committee shall establish consistent mitigation standards for the conversion of agricultural lands to non-agricultural uses.

**RP 2-C**            **Solar Easements**  
Amend the County Code to incorporate required findings and procedures for implementing state legislation relative to solar easements affecting Williamson Act Contracts.<sup>6</sup>

**RP 2-D**            **Right-to-Farm Ordinance**  
Update the County's Right-to-Farm Ordinance (Chapter 14.02) or associated code sections to:

- Reference the County's "Right to Farm" provisions on parcel and subdivision maps approved for locations in or adjacent to agricultural lands;
- Re-define *protected agricultural land* to include land designated as Resource Production in the General Plan or zoned agricultural per the County Code;
- Cross-reference and ensure consistency between multiple code sections addressing agricultural uses.

**RP 2-E**            **Williamson Act Implementation**  
Consider amending the County Code relative to Agricultural Preserves for consistency with state Williamson Act standards including:

- Reduce minimum parcel size standards to 10 acres for prime and 40 acres for non-prime agricultural lands<sup>7</sup> to qualify for a Williamson Act Contract
- Implement the Farmland Security Zone Tax Incentive program.

**RP 2-F**            **Agricultural Best Management Practices, Education and Stewardship**  
Undertake the following activities:

- Investigate interest in establishing a Calaveras County Resource Conservation District<sup>8</sup> to facilitate the identification, acquisition, and promotion of programs and funding in support of these programs.
- Continue to maintain and update the Calaveras County Department of Agriculture's website content identifying the nature and extent of invasive species threats; consider including links to Integrated Pest Management programs and other technical and educational support through the Agricultural Commissioner's Office, USDA Natural Resources Conservation Service, University of California Cooperative Extension and associated organizations.

**RP 2-G**            **Agritourism**  
Update the County Code to:

---

<sup>6</sup> Implementation guidelines available from the California Department of Conservation Division of Land Resource Protection relative to Government Code Section 51255.1 (Solar Easements)

<sup>7</sup> Williamson Act grazing lands in Calaveras County normally are classified as non-prime while Williamson Act lands such as winegrapes are classified as prime. These designations of prime and non-prime are not equivalent to state-designations for prime and non-prime agricultural lands (state classifications have not been assigned to Calaveras County lands).

<sup>8</sup> A Resource Conservation District (RCD) differs from an RC&D (Resource Conservation and Development district or organization). Generally an RCD focuses on a single county or city, is composed primarily of local agricultural representatives and addresses local issues relevant to the jurisdiction with an emphasis on on-the-ground activities generally involving agriculture and general conservation stewardship. In contrast, an RC&D tends to be multi-jurisdictional (often covering multiple counties). RC&Ds often emphasizes strategic planning (area plans-frequently at a watershed level) and stimulating economic opportunities in conjunction with stewardship programs. Both entities work with the U.S. Department of Agriculture Natural Resources Conservation Service (NRCS) – formerly the Soil Conservation Service.

- Allow seasonal, small-scale produce sales in the Residential Agriculture (RA) zoning district;
- Support the development of small-scale and/or mobile processing facilities for locally produced foods;
- Allow temporary use of vacant buildings for agricultural purposes (e.g., indoor farmer's markets) or using barns for limited ag-related events
- Support the development of new and existing agricultural marketing and tourism programs and integrate them with County economic development efforts to attract business through agricultural/ecological tourism.

**RP 2-H**

**Agricultural Advisory Committee**

Continue to maintain an Agricultural Advisory Committee to review and recommend action to the Board of Supervisors concerning California Land Conservation Contracts (Williamson Act) and to promote a compatible relationship between agricultural and non-agricultural activities and to ensure that appropriate provisions are incorporated as necessary into new land use proposals to preserve ongoing agricultural operations.

**Programs: Timberland Resources**

**RP 3-A**

**County Code**

Amend Chapter 17.14 of the County Code:

- To permit compatible uses provided for in the Timber Productivity Act on Resource Production Lands zoned for forest and timber production including but not limited to those uses related to, tree and timber production, fuels reduction, mineral resource extraction, wildlife habitat, energy production, agriculture/grazing, and recreation.
- To achieve consistency with the 1976 Forest Taxation Reform Act including procedures for immediate rezoning from Timber Preserve (TP).<sup>9</sup>
- To identify activities to be protected pursuant to the County's "right-to-farm" provisions on timberlands as "Timber operation compatible uses"
- To protect timber operations conducted in compliance with the forest practice rules adopted by the State Board of Forestry and Fire Protection (CAL FIRE).<sup>10</sup>
- To ensure that Timberland Conversion Permits and/or Timber Harvest Plans, or their equivalent, are secured from the California Department of Forestry and Fire Protection (CAL FIRE) prior to cutting and removing commercial timber species in conjunction with or in anticipation of site preparation for development involving a discretionary entitlement.

**RP 3-B**

**Review of Timber Harvest Plans**

Continue to review and provide input to CAL FIRE on timber harvest plans to ensure that measures are included to protect water quality, control erosion and flooding, and preserve the viewshed.

**RP 3-C**

**Significance Criteria - Timberlands**

In consultation with affected parties, establish a consistent methodology for evaluating proposed land uses on or adjacent to timberlands and/or the potential significance of

<sup>9</sup> California Government Code Sections 51133 and 51134

<sup>10</sup> California Government Code Section 51115.5

timberland conversions to non-timberland uses in conjunction with proposals requiring a discretionary entitlement subject to CEQA. In addition to the use of Timber Production zoning, recommend criteria for Timber Production lands based on site class as follows:

| Site Class           | Timberland Value                  |
|----------------------|-----------------------------------|
| Site Class 1 or II   | High Value Timberlands (Prime)    |
| Site Class III or IV | Timberlands of Local Importance   |
| Site Class V         | Timberlands of Limited Importance |

## Programs: Mineral Resources

### RP 4-A

#### County Code

Amend the County Code to:

- Address the use and development of geothermal resources
- Update the ME combining zone district to be consistent with the State's mineral classification scheme.
- Clarify that a conditional use permit is required for all surface and subsurface mining activity unless specifically exempted pursuant to Section 17.56.040 (or equivalent).
- Include notification procedures for designating mineral reserve areas.
- Use the ME Combining Zone to designate existing permitted and grandfathered mining operations, to identify lands with commercial mineral potential and to allow owners of land containing commercially valuable mineral resources to apply for mineral extraction permits.
- Address changes to state law and regulations from the State Mining and Geology Board.
- Incorporate California Mineral Land Classifications in Table RP-1.

### RP 4-B

#### Subsurface Mining

Amend the Calaveras County Code to establish permitting procedures and standards for subsurface mining operations and activities that are not addressed pursuant to County Code Section 17.18.030 [i.e., are outside the Mineral Extraction (ME) zone].

### RP 4-C

#### Mineral Resource Information

Adopt a procedure for incorporating new Mineral Classification Reports from the State Geologist into general plan map land use maps within 12 months of receipt to reflect newly classified valuable mineral resources.

### RP 4-D

#### Development On or Near Designated Mineral Reserves

Establish criteria addressing development of designated mineral reserves in close proximity to existing or proposed residential development; high occupancy structures; drinking water supplies; designated federal, state, or County landmarks (other than historic mining resources) or other sensitive land uses. Include findings for approving land use proposals that could eliminate mineral extraction in designated mineral reserves. Consider alternative uses and reduced parcel sizes on mineral resource lands which do not contain commercially valuable mineral resources if consistent with mining on nearby or adjacent properties.

### RP 4-E

#### Mining Advisory Committee

Consider establishing a Mineral Advisory Committee to make recommendations to the Board of Supervisors related to the management of mineral reserves countywide, to consider appropriate non-mining uses on mineral reserve lands, to review requests for

general plan amendments on lands identified as containing important mineral reserves, and to review other actions related to mining operations in Calaveras County.

**RP 4-F**

**Abandoned/Historic Mines**

Use guidelines from the Abandoned Mine Lands Unit of the Department of Conservation and reference this agency as a source of funding for remediating abandoned/historic mines.

**RP 4-G**

**Water Supply for Mining Operations**

Adopt standards for addressing water supply in conjunction with evaluating and permitting mining operations. Standards and guidelines should address:

- Conserving on-site water during mining operations
- Documenting pre-mining surface and subsurface water supply levels
- Addressing potential impacts associated with removing underground water by pumping

**RP 4-H**

**Mineral Resource Zones**

Consider petitioning the State Mining and Geology Board to prioritize additional areas of significant mineral resources in the county for consideration and designation as Mineral Resource Zones. Identify through appropriate zoning important mineral lands identified in State Classification Reports from the State Geologist to assist in their conservation for future use.

**RP 5-A**

**Reclamation**

Continue to require a reclamation plan and financial assurances, consistent with state law including SMARA and adopted rules and regulations for the implementation of SMARA (California Code of Regulations California Code of Regulations, Title 14, Division 2, Chapter 8, Subchapter 1, and as may be amended), and other applicable state and federal standards, for all mining operations that are not otherwise expressly exempted by state law. Reclamation shall:

1. Prevent, mitigate, or minimize adverse effects on the environment.
2. Encourage the production and conservation of minerals.
3. Provide for the protection and subsequent beneficial use of mined and reclaimed land.
4. Eliminate residual hazards to the public health and safety.
5. Ensure that mined lands are reclaimed on a timely basis to a usable condition that is readily adaptable for alternative land uses.
6. Avoid the environmental and legal problems created by improperly abandoned mines.

## **Programs: Geothermal Resources**

**RP 6-A**

**County Code**

Amend the Calaveras County Code to recognize the development of geothermal resources and their related land uses, identify procedures and standards for evaluating land use proposals with the potential to adversely affect geothermal resources, and refer proposals involving or affecting geothermal resources to the California Department of Conservation Division of Oil, Gas and Geothermal Resources.

**Table RP-1: California Mineral Land Classification Diagram**

| California Mineral Land Classification Diagram |   |  |  |  |                             |   |
|--|---|--|--|--|-----------------------------|---|
| Economic Value                                 | Areas of <u>NO</u> Mineral Significance | Areas of <u>Identified</u> Mineral Resource Significance |  | Areas of <u>Undetermined</u> Mineral Resource Significance |                             | Areas of <u>Unknown</u> Mineral Resource Significance |
|  | Demonstrated, measured, or indicated    | Demonstrated, measured, or indicated                     | Inferred                                 | Known Mineral Occurrence                                   | Inferred Mineral Occurrence |   |
| Economic                                       | [Hatched Area]                          | <b>MRZ-2a</b>  | MRZ-2b<br>Inferred Resources             | <b>MRZ-3a</b>  | MRZ-3b                      | <b>MRZ-4</b>  |
| Marginally Economic                            |   | <b>MRZ-2a</b>  | MRZ-2b<br>Inferred Marginal Resources    |  |                             |   |
| Sub-Economic                                   |   | <b>MRZ-2b</b>  | MRZ-2b<br>Inferred Subeconomic Resources |  |                             |   |
| Non-Economic                                   | <b>MRZ-1</b>                            |  |  |  |                             |   |

Definitions:

- MRZ-1 Areas where adequate geologic information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence. This zone is applied where well developed lines of reasoning, based on economic-geologic principles and adequate data, indicate that the likelihood for occurrence of significant mineral deposits is nil or slight
- MRZ-2a Areas underlain by mineral deposits where geologic data show that significant measured or indicated resources are present. As shown on the diagram of the California Mineral Land Classification System, MRZ-2 is divided on the basis of both degree of knowledge and economic factors. Areas classified MRZ-2a contain discovered mineral deposits that are either measured or indicated reserves as determined by such evidence as drilling records, sample analysis, surface exposure, and mine information. Land included in the MRZ-2a category is of prime importance because it contains known economic mineral deposits. A typical MRZ-2a area would include an operating mine, or an area where extensive sampling indicates the presence of a significant mineral deposit.
- MRZ-2b Areas underlain by mineral deposits where geologic information indicates that significant inferred resources are present. Areas classified MRZ-2b contain discovered deposits that are either inferred reserves or deposits that are presently sub-economic as determined by limited sample analysis, exposure, and past mining history. Further exploration work and/or changes in technology or economics could result in upgrading areas classified MRZ-

2b to MRZ-2a. A typical MRZ-2b area would include sites where there are good geologic reasons to believe that an extension of an operating mine exists or where there is an exposure of mineralization of economic importance.

- MRZ-3a Areas containing known mineral deposits that may qualify as mineral resources. Further exploration work within these areas could result in the reclassification of specific localities into the MRZ-2a or MRZ-2b categories. MRZ-3a areas are considered to have a moderate potential for the discovery of economic mineral deposits. As shown on the diagram of the California Mineral Land Classification System, MRZ-3 is divided on the basis of knowledge of economic characteristics of the resources. An example of a MRZ-3a area would be where there is direct evidence of a surface exposure of a geologic unit, such as a limestone body, known to be or to contain a mineral resource elsewhere but has not been sampled or tested at the current location.
- MRZ-3b Areas containing inferred mineral deposits that may qualify as mineral resources. Land classified MRZ-3b represents areas in geologic settings which appear to be favorable environments for the occurrence of specific mineral deposits. Further exploration work could result in the reclassification of all or part of these areas into the MRZ-3a category or specific localities into the MRZ-2a or MRZ-2b categories. MRZ-3b is applied to land where geologic evidence leads to the conclusion that it is plausible that economic mineral deposits are present. An example of a MRZ-3b area would be where there is indirect evidence such as a geophysical or geochemical anomaly along a permissible structure which indicates the possible presence of a mineral deposit or that an ore-forming process was operative.
- MRZ-4 Areas where geologic information does not rule out either the presence or absence of mineral resources. The distinction between the MRZ-1 and MRZ-4 categories is important for land-use considerations. It must be emphasized that MRZ-4 classification does not imply that there is little likelihood for the presence of mineral resources, but rather there is a lack of knowledge regarding mineral occurrence. Further exploration work could well result in the reclassification of land in MRZ-4 areas to MRZ-3 or MRZ-2 categories.

This page intentionally blank.