Appendix 4: Conservation & Open Space

4A Mineral Resources in the Angels Camp Sphere of Influence
General Mineral Resources, Lode Gold Mines & Prospects
Calaveras County Preliminary Mineral Resource Area Designations

4B Statewide Mineral Land Classification System

4C Resources for *Best Management Practices*

4D Biological Resources Occurring in and around the Angels Camp Sphere of Influence
Special Status Plant and Animal Species - Defined
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Special Status Plant Species

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General Soils Characteristics of Soils
Soil Permeability, Drainage and Erosion Potential
Soils and Soil Characteristics
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4F Creek Preservation and Management Plan Resources

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4H Timber Production Values of Soils in the City's Sphere of Influence

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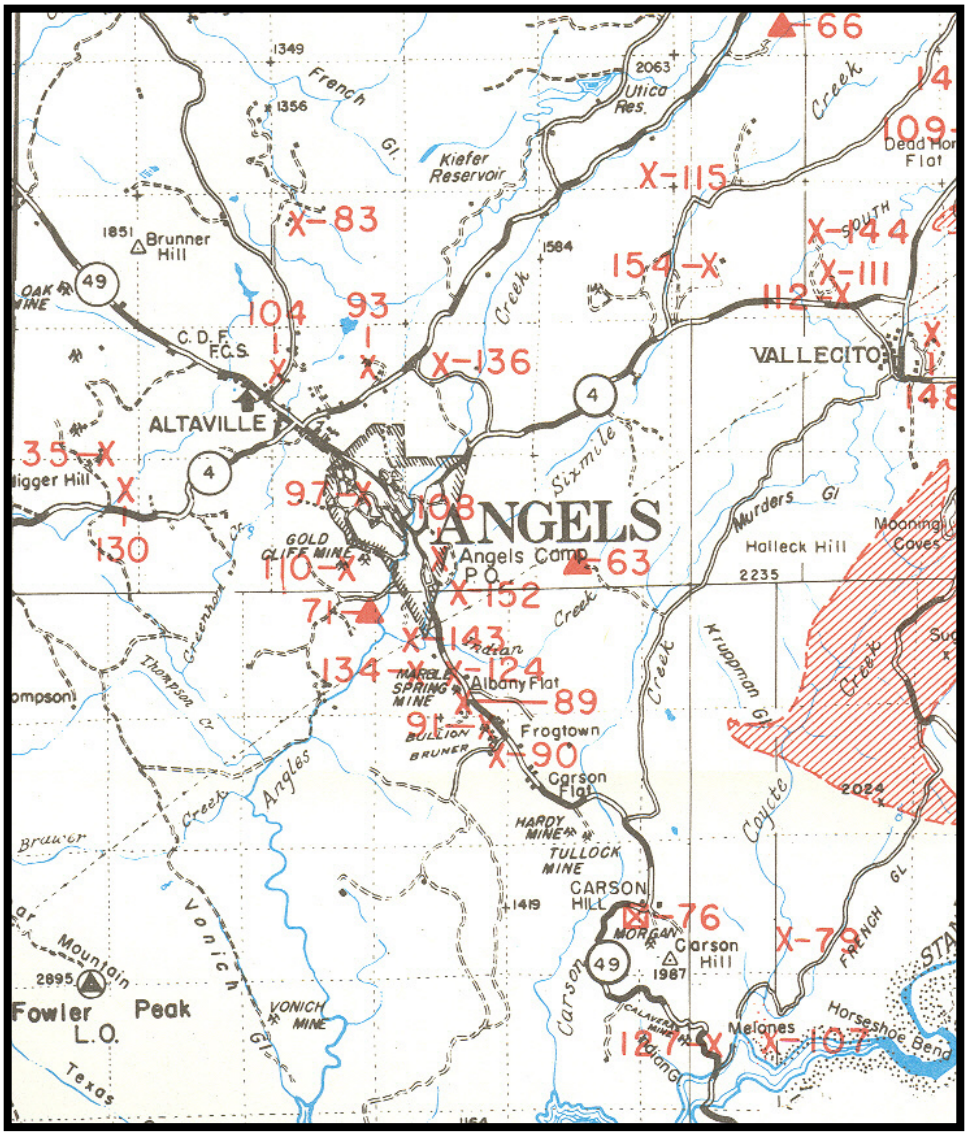
4K Public Open Space Inventory Map

Appendix 4A: Mineral Resources in the Angels Camp Sphere of Influence

General Mineral Resources
City of Angels Sphere of Influence, 1962

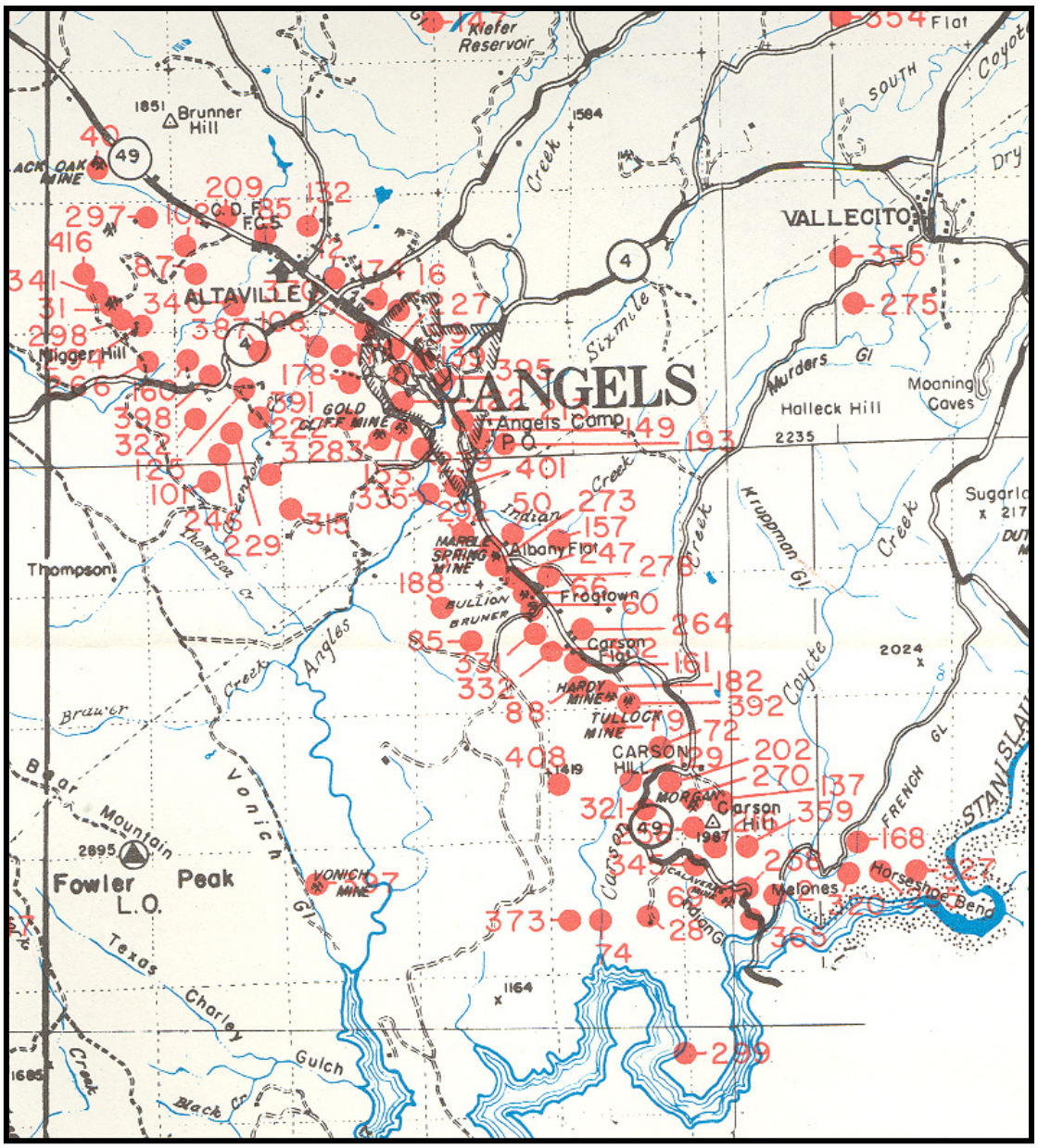


General Mineral Resources
Angels Camp Sphere of Influence

Map # (preceding page)/a/	Location		Mineral Type
	T (N)	R (E)	
35	3	13	Stone
63	3	13	Manganese
66	3	14	Manganese
71	2	13	Manganese
76	2	13	Silica
79	2	14	Stone
83	3	13	Stone
89	2	13	Stone
90	2	13	Stone
91	2	13	Stone
93	3	13	Stone
97	3	13	Stone
104	3	13	Stone
107	2	14	Stone
108	3	13	Stone
110	3	13	Stone
111	3	14	Stone
112	3	14	Stone
115	3	13	Stone
124	2	13	Stone
127	2	14	Stone
130	3	13	Stone
134	2	13	Stone
136	3	13	Stone
143	2	13	Stone
144	3	14	Stone
148	3	14	Stone
152	2 / 3	13	Stone
154	3	14	Stone

/a/ Not all numbers appear in map on preceding page.
Map is an excerpt of a larger map

Lode Gold Mines & Prospects Within the Angels Camp Sphere of Influence



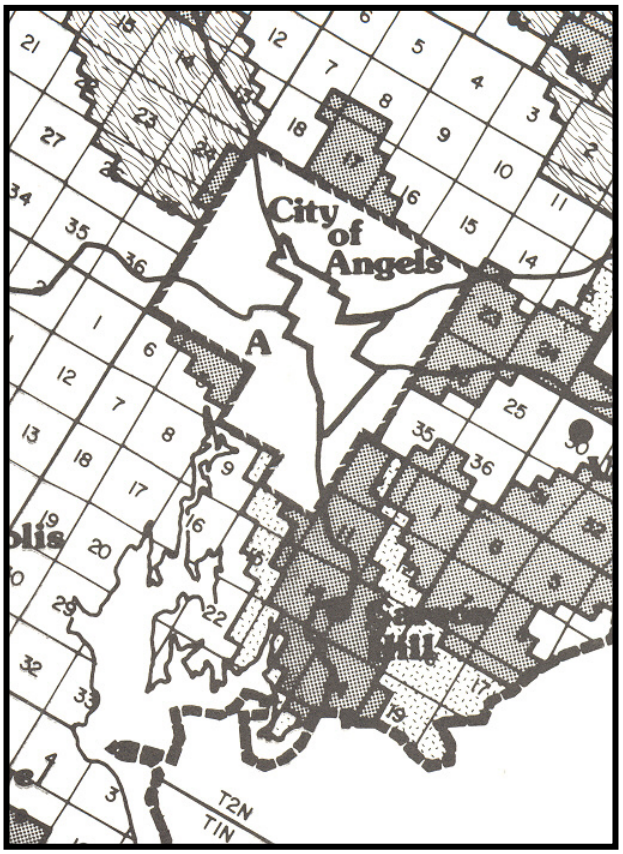
Source: Mines & Mineral Resources of Calaveras County, CA
County Report #2 – CA Division of Mines & Geology, 1962

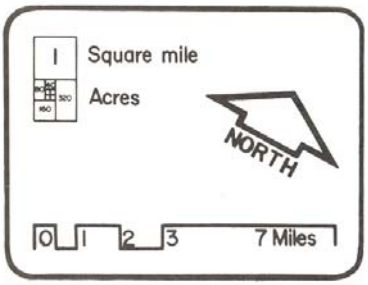
Lode Gold Mines & Prospects Within the Angels Camp Sphere of Influence

Map # (preceding page)	Mine Name	Location		
		Section	Twp. (N)	Range (E)
2	Adelaide	24	2	13
3	Adelia	5	2	13
12	Altaville	28	3	13
16	Angels	33	3	13
17	Angels Deep	33	3	13
28	Bell	23	2	13
31	Benson	30	3	13
40	Black Oak Mine	19	3	13
50	Bolitha	3	2	13
60	Brunner	10	2	13
66	Bullion	10	2	13
69	Calaveras	24	2	13
72	California Ophir	14	2	13
74	Carson Creek	23	2	13
79	Chaparral Hill	14	2	13
85	Claude	*10*	2	13
87	Collier	1	3	14
88	Columbia	11	2	13
99	Crystal	33	3	13
101	Curiosity	5	2	13
102	Curtis	29	3	13
108	Demarest	33	3	13
122	Etna King	33	3	13
125	Evening Star	32	3	13
129	Extension	14	2	13
132	Fazzi	28 & 29	3	13
137	Finnegan	2	13	13
139	Foster	33	3	13
147	German Ridge & Jupiter	15 & 16	3	13
149	Ghost	34	3	13
153	Gold Cliff	33	3	13
157	Golden Star	2	2	13
160	Gold Hill	32	3	13
161	Gold Hill	11	2	13
168	Multiple numbers (Unknown)	--	--	--
174	Great Western	28	3	13
178	Hale	33	3	13
182	Hardy	11 & 14	2	13
188	Hicks	10	2	13
193	Holey Ghost	34	3	13
202	Iron Rock	14	2	13
209	Keystone	29	3	13
213	Last Chance	34	3	13
222	Lindsey	33	3	13
227	Multiple numbers (Unknown)	--	--	--
229	Longworth	32	3	13
239	Madison	33	3	13
246	Marble Faye	32	3	13

Map # (preceding page)	Mine Name	Location		
		Section	Twp. (N)	Range (E)
247	Marble Springs	10	2	13
258	Mexican	24	2	13
256	Melones	13 & 24	2	13
264	Missouri	11	2	13
266	Mohawk	31	3	13
270	Morgan	13	2	13
273	Mother Lode Central	10	2	13
275	Mount Nebo	30	3	14
278	Nellie	3	2	13
283	North Star	33	3	13
292	Oriol Cons	3	2	13
294	Osborne	30	3	13
297	Panuga	30	3	13
298	Parnell	30	3	13
299	Patsy Bob	25 &26	2	13
315	Pure Quill	4	2	13
320	Red Hill	19	2	14
321	Relief	14	2	13
322	Reisler Ranch	32	3	13
327	Rising Sun	19	2	14
331	Romaggi & Costa	10	2	13
332	Romaggi & Family	*11*	2	13
335	Multiple numbers (Unknown)	--	--	--
340	Sacramento	29	3	13
341	Safe Deposit	30	3	13
345	Multiple numbers (Unknown)	--	--	--
354	Smith	18	3	14
355	Smythe	30	3	14
359	South Carolina	24	2	13
365	Stanislaus	24	2	13
370	Sultana	33	3	13
373	Sunnyside	23	2	13
387	Tollgate	32	3	13
391	Triple Lode	32	3	13
392	Tulloch	11 & 14	2	13
395	Utica	33 & 34	3	13
397	Vonich	21	2	13
398	Wagon Rut	32	3	13
401	Waterman	3	2	13
408	Whittle	14	2	13
416	Yellowstone	30	3	13

Calaveras County Preliminary Mineral Resource Area Designations
Calaveras County General Plan, 1985





Preliminary
Mineral Resource Areas

MRA~1 Mineral Resource Area 1
(unclassified)
Lands not known to contain significant mineral deposits. Isolated mineral occurrences may be shown within this area.

MRA~2A Mineral Resource Area 2A
(intensive area)
Lands that are being, or have been intensely mined, and/or that have promise of further mineral production.

MRA~2B Mineral Resource Area 2B
(light area)
Lands that have had some mineral production in the past and/or that may be expected to have some mining in the future.

MRA~3 Mineral Resource Area 3
(potential area)
Lands that might contain mineable deposits, but that up to now have not yet been sufficiently developed to demonstrate this.

Appendix 4B: Statewide Mineral Land Classification System

California Mineral Land Classification Diagram

	Identified Areas of Mineral Resource Significance		Undetermined Areas of Mineral Resource Significance		Unknown Areas of Mineral Resource Significance
	Demonstrated, Measured and/or Indicated	Inferred			
Economic	**MRZ-2a** Reserves	**MRZ-2b** Inferred Resources	**MRZ-3a** Known Mineral Occurrence	**MRZ-3b** Inferred Mineral Occurrence	**MRZ-4** No Known Mineral Occurrence
Marginally Economic	**MRZ-2a** Marginal Reserves	**MRZ-2b** Inferred Marginal Reserves			
Sub-Economic	**MRZ-2a** Demonstrated Subeconomic Resources	**MRZ-2b** Inferred Subeconomic Resources			

Appendix 4C: Resources for Best Management Practices

Best Management Practices to Prevent Stormwater Pollution from Construction-Related Activities . www.mcstoppp.org/acrobat/Blueprint04.pdf

Best Management Practices Websites for Business. A list of best management practices for grading, construction and related activities from multiple jurisdictions throughout California. www.thinkblue.org/brochures/BMP_websites.htm

Best Management Practices for Vegetation and Erosion Control. www.dep.state.fl.us/water/nonpoint/docs/erosion/Chapter6.pdf

California Stormwater Quality Association. Best Management Practices handbooks for construction, industrial development, commercial development and redevelopment**.** www.cabmphandbooks.com, organization site: www.casqa.org

Clark County Regional Flood Control District Stormwater Quality Management Committee. Best management practices for general construction, heavy equipment use, miscellaneous runoff and more from Clark County, Las Vegas, NV. www.lvstormwater.com/bmps.html, www.bmps_construction.html

Department of Environmental Quality, Michigan. Index of Individual Best Management Practices. BMPs for grading, construction, detention basins. www.michigan.gov/deq/

Lodi, City of. *Storm Drain Detectives***.** Citizen volunteer and education program for monitoring water quality along the lower Mokelumne River and Lodi Lake. www.lodi.gov/Storm%Drain%20Detectives/index.htm

Northeast Regional Agricultural Engineering Service (NRAES) and the University of Wisconsin *Home*A*Syst/Farm*A*Syst Program.* Model stewardship-based programs for homeowners and farmers assisting in the conservation of agricultural and natural resources. For more information: NRAES, Cooperative Extension, 152 Riley-Orb Hall, Ithaca, NY 14853-5701; (607) 255-7654. www.nraes@cornell.edu, www.homeasys@uwis.edu

Sacramento, City of. *City of Sacramento Stormwater Management Program*. Good information regarding stormwater management including programs for volunteers to protect water quality. www.sacstormwater.org

San Joaquin County Resource Conservation District. *Lower Mokelumne River Watershed Owner's Manual*. Stewardship-based program for homeowners to assist in reducing non-point source pollution. www.sjcrcd.org

San Joaquin County Resource Conservation District. *Lower Mokelumne River Watershed Stewardship Plan*. General plan for a watershed-stewardship community-based plan. www.sjcrcd.org

United States Environmental Protection Agency – Stream Monitoring: On-line guide for developing a citizen water-quality monitoring program, *Volunteer Stream Monitoring*. www.epa.gov/volunteer/stream/index.html

United States Environmental Protection Agency Office of Water Watershed Protection Division. Includes funding, databases, publications, outreach and other information links for watershed planners. www.epa.gov/wowo/watershed/

United States Environmental Protection Agency. *Surf Your Watershed*. Excellent resource for assessing the size, boundaries, water quality, threats, land uses within your watershed. www.epa.gov/surf/

United States Environmental Protection Agency Watershed Information Network (WIN). Roadmap to information and services for protecting and restoring water resources. www.epa.gov/win/

Urban Water Resource Research Council. National Stormwater Best Management Practices Database. Database of best management practices performance data for over 150 BMP studies. www.bmpdatabase.org

Yolo County Resource Conservation District. *Know Your Natives: A Pictorial Guide to California Native Grasses*. www.yolorcd.ca.gov

Yolo County Resource Conservation District: *Bring Farm Edges Back to Life! How to Enhance your Agriculture and Farm Landscape with Proven Conservation Practices for Increasing the Wildlife Cover on Your Farm*. www.yolorcd.ca.gov

Appendix 4D: Biological Resources Occurring in and around the Angels Camp Sphere of Influence

Special Status Plant and Animal Species - Defined

Special-Status Plant Species

- Plants listed or proposed for listing as threatened or endangered under the Federal Endangered Species Act (ESA) (50 CFR 17.12 for listed plants and various notices in the Federal Register for proposed species).
- Plants that are candidates for possible future listing as threatened or endangered under the Federal (ESA) (64 FR 205, September 19, 1999; 49397-49411).
- Plants that meet the definitions of rare or endangered species under the California Environmental Quality Act (CEQA) (*CEQA Guidelines*, Section 15380).
- Plants considered by the California Native Plant Society (CNPS) to be "rare, threatened, or endangered" in California (Lists 1B and 2 in Skinner and Pavlik [1994]).
- Plants listed by CNPS as plants about which we need more information and plants of limited distribution (Lists 3 and 4 in Skinner and Pavlik [1994]).
- Plants listed or proposed for listing by the State of California as threatened or endangered under the California ESA (14 CCR 670.5).
- Plants listed under the California Native Plant Protection Act (California Fish and Game Code 1900 et seq.).
- Plants considered sensitive by other federal agencies (i.e., U.S. Forest Service, Bureau of Land Management) or state and local agencies or jurisdictions.
- Plants considered sensitive or unique by the scientific community or occurring at the limits of its natural range (*CEQA Guidelines*, Appendix G).

Special-Status Animal Species

- Animals listed or proposed for listing as threatened or endangered under the Federal Endangered Species Act (50 CFR 17.11 for listed animals and various notices in the Federal Register for proposed species).
- Animals that are candidates for possible future listing as threatened or endangered under the Federal Endangered Species Act (54 CFR 554).
- Animals that meet the definitions of rare or endangered species under the CEQA (*CEQA Guidelines*, Section 15380).
- Animals listed or proposed for listing by the State of California as threatened and endangered under the California ESA (14 CCR 670.5).
- Animal species of special concern to the California Department of Fish and Game (Remsen [1978] for birds; Williams [1986] for mammals).
- Animal species that are fully protected in California (California Fish and Game Code, Section 3511 [birds], 4700 [mammals], and 5050 [reptiles and amphibians]).

Special Status Animal Species Occurring or with the Potential to Occur Within the Angels Camp Sphere of Influence

Species Name/a/	Status/b/
Invertebrates	
Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus)*	FT
Reptiles	
Western pond turtle (*Clemmys marmorata*)	SSC
Amphibians	
California tiger salamander (*Abystoma californiense*)	FC, SSC
California red-legged frog (*Rana aurora draytonii*) /c/	FT, SSC
Foothill yellow-legged frog (*Rana boylii*)	SSC
Western spadefoot (*Scaphiopus hammondi*)	SSC
Birds	
Cooper's hawk (*Accipiter cooperi*)	SSC
Sharp-shinned hawk (*Accipiter striatus*)	SSC
Tricolored blackbird (*Agelaius tricolor*)	SSC
Golden eagle (*Aquila chrysaetos*)	SSC, BGEPA
Ferruginous hawk (*Buteo regalis*)	SSC
Northern harrier (*Circus cyanus*)	SSC
Willow flycatcher, nesting (*Empidonax traillii extemis*)	FE
White-tailed kite (*Elanus leucurus*)	SA, FPS
Merlin (*Falco mexicanus*)	SSC
Bald eagle – wintering (*Haliaetus leucocephalus*)	FT, BGEPA
Loggerhead shrike (*Lanius ludovicianus*)	SSC
California horned lark (*Phrynosoma coronatum frontale*)	SSC
Burrowing owl (*Speotyto cunicularia*)	SSC
Mammals	
Pallid bat (*Antrozous pallidus*)	SSC
Ringtail (*Bassaricus astutus*)	FPS
Greater western mastiff bat (*Eumops perotis californicus*)	SSC
Western red bat (*Lasiurus blossevilli*)	SSC
Pale big-eared bat (*Plecotus townsendii pallescens* aka *Corynorhinus townsendii pallescens*)	SA
Pacific western big-eared bat (*Plecotus townsendii townsendii* aka *Corynorhinus townsendii townsendii*)	SA

/a/ The following species are likely to occur within the city's Sphere of Influence, but do not occupy the area during a critical period of their life cycle (e.g., rookery, nesting):
Great blue heron, common egret

/b/ See page 14 for status key

/c/ Likely extirpated within the Sphere of Influence

Special Status Plant Species Occurring or with the Potential to Occur Within the Angels Camp Sphere of Influence

Species name	Status
Plants	
Ione manzanita (*Arctostaphylos myrtifolia*)	CNPS 1B, FT
Chinese Camp brodiaea (*Brodiaea pallida*)	CNPS 1B, FT, SE
Hoover's calycadenia (*Calycadenia hooveri*)	CNPS 1B
Mariposa cryptantha (*Cryptantha mariposae*)	CNPS 1B
Tuolumne button celery (*Eryngium pinnatisectum*)	CNPS 1B
Parry's horkelia (*Horkelia parryi*)	CNPS 1B
Veined water lichen *(Hydrothyria venosa)*	USDA
Ahart's dwarf rush (*Juncus leiospermus* var. *ahartii*)	CNPS 1B
Stebbin's lomatium (*Lomatium stebbinsii*)	CNPS 1B
Pansy monkeyflower (*Mimulus pulchellus*)	CNPS 1B
Whipple's monkeyflower (*Mimulus whipplei*)/a/	CNPS 1A
Tongue-leaf copper moss (*Scopelophila cataractae*)	CNPS 2

/a/ Believed extirpated

Status key:

CNPS 1A — California Native Plant Society, List 1A: Presumed extinct in California, but may occur or be re-discovered during the life of the plan.

CNPS 1B — California Native Plant Society List 1B: Plants rare, threatened or endangered in California or elsewhere

CNPS 2 — California Native Plant Society List 2: Plants rare, threatened or endangered in California, but more common elsewhere

CNPS 3 — California Native Plant Society List 3: More information needed

FT: Federally listed, threatened (Federal Endangered Species Act)

FE: Federally listed, endangered (Federal Endangered Species Act)

FC: Federal candidate for listing (Federal Endangered Specie Act)

SE: State listed, endangered (California Endangered Species Act)

SSC: Species of Special Concern (California Department of Fish and Game)

SA: California Natural Diversity Database Special Animal (California Department of Fish and Game). May include animals considered endangered or rare pursuant to Section 15380(d) of the CEQA guidelines; animals that are biologically rare, very restricted in distribution or declining throughout their range; population(s) in California that may be peripheral to the major portion of the animal's range, but which are threatened with extirpation in California; and animals closely associated with habitat that is declining in California (e.g., wetlands, riparian, native grasslands); this category may apply to species at specific life stages (e.g., wintering, breeding, nesting).

BGEPA: Bald and Golden Eagle Protection Act (United States Code Sections 668-668d)

FPS: Fully protected species, California Department of Fish and Game (CA Fish and Game Code Section 4700 of Chapter 8; Section 5050 of Chapter 2, Division 6; and Chapter 1, Section 5515)

USDA: United States Department of Agriculture, Forest Service, Sensitive Species

Appendix 4E: Soils within and around the Angels Camp Sphere of Influence

General Soils Characteristics
Of Soils within the Angels Camp Sphere of Influence
(Primary soils occurring within the City Limits are shaded)

Map Symbol	Soil Name	Slopes	Parent Material	Depth (inches)
GB-Sl-CF	Guenoc-Stonyford Association	5-50%	Partly weathered greenstone	12-55
Jp-Mh-CE	Josephine-Mariposa Association	5-30%	Partly weathered metasedimentary rock	40-100
Sr-BE	Supan Association	2-30%	Partly weathered andesite tuff	30-50
Fo-RL-CF	Forward-Rockland Association	5-50%	Partly weathered rhyolite tuff	20-30
AK-AB-BE	Auburn-Argonaut Association	2-30%	Partly weathered greenstone	12-30
Pn-BD	Perkins Acid Variant Association	2-15%	Partially weathered gravels of mixed origin	45-60
Mh-JP-EG	Mariposa/ Josephine Association	15-75%	Partially weathered metasedimentary rock	15-25
Wg-AK-CE	Whiterock/ Auburn Association	5-30%	Partially weathered slates and schists	6-12

Soil Permeability, Drainage and Erosion Potential
For Soils within the City's Sphere of Influence
(Primary Soils occurring within the City Limits are shaded)

Map Symbol	Soil Name	Natural Drainage	Permeability	Erosion Hazard
GB-Sl-CF	Guenoc-Stonyford Association	Good	Moderately slow	Slight-Moderate
Jp-Mh-CE	Josephine-Mariposa Association	Good	Moderately slow to slow	Slight to Moderate
Sr-BE	Supan Association	Good	Moderately slow	Slight to Moderate
Fo-RL-CF	Forward-Rockland Association	Good	Moderately rapid	Moderate
AK-AB-BE	Auburn-Argonaut Association	Good to Moderately good	Moderate to slow	Slight to Moderate
Pn-BD	Perkins Acid Variant Association	Good	Moderately slow	Slight to Moderate
Mh-JP-EG	Mariposa/ Josephine Association	Good	Moderate	Medium to Rapid
Wg-AK-CE	Whiterock/ Auburn Association	Good	Moderate	Slight to Moderate

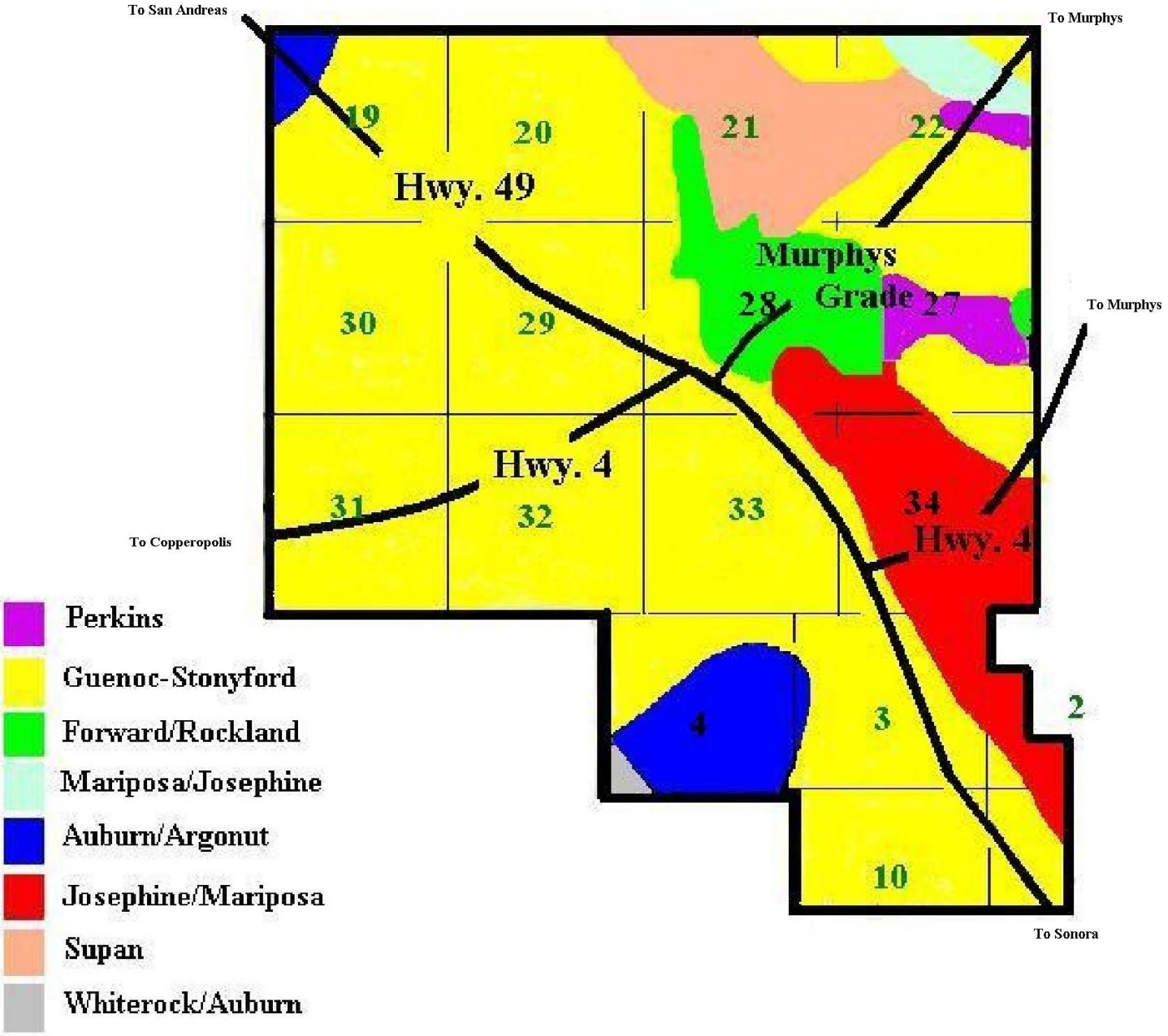
Appendix 4E: Angels Camp Sphere of Influence Soils and Soil Characteristics (Listed most common to least common)

Map Symbol	Soil Name	Slopes	Parent Material	Natural Drainage	Permeability	Erosion Hazard	Depth (inches)	Suitable for Cultivation ?	Timber	Range	Group
GB-Sl-CF	Guenoc-Stonyford Association	5-50%	Partly weathered greenstone	Good	Moderately slow	Slight-Moderate	12-55	No (VI, VII)	--	Best (1)	5
Jp-Mh-CE	Josephine-Mariposa Association	5-30%	Partly weathered metasedimentary rock	Good	Moderately slow to slow	Slight to moderate	40-100	No (VII) Unless irrigated (IV)	High to Low Group 2, 7	--	6
Sr-BE	Supan Association	2-30%	Partly weathered andesite tuff	Good	Moderately slow	Slight to moderate	30-50	No (VI)	--	Best (1)	5
Fo-RL-CF	Forward-Rockland Association	5-50%	Partly weathered rhyolite tuff	Good	Moderately rapid	Moderate	20-30	No (VI, VIII)	Low Group 7	--	9
AK-AB-BE	Auburn-Argonaut Association	2-30%	Partly weathered greenstone	Good to Moderately good	Moderate to slow	Slight to Moderate	12-30	If irrigated (IV)	--	Mod (2)	4
Pn-BD	Perkins Acid Variant Association	2-15%	Partially weathered gravels of mixed origin	Good	Moderately slow	Slight to Moderate	45-60	If irrigated (IV)	High, Group 1	--	2
Mh-JP-EG	Mariposa/ Josephine Association	15-75%	Partially weathered metasedimentary rock	Good	Moderate	Medium to rapid	15-25	No (VII) Unless irrigated (IV)	High to Low Group 2, 7	--	6
Wg-AK-CE	Whiterock/ Auburn Association	5-30%	Partially weathered slates and schists	Good	Moderate	Slight to Moderate	6-12	No (VII) Unless irrigated (IV)	--	Mod to Unsuitable 2, 9	4

/a/Group Key:

2 Areas dominated by shallow to deep, gravelly, medium textured soils with finer textured subsoils on old terrace deposits
4 Areas dominated by shallow very rocky medium textured soils over slate and serpentine rock
5 Areas dominated by moderately deep to deep, medium textured soils with finer textured subsoils over greenstone, limestone, andesitic conglomerate and granitic gneiss
6 Areas dominated by acid, medium textured soils over slate rock
9 Areas dominated by rock outcroppings or mining debris

Soils: Angels Camp SOI



Rangeland Values
Angels Camp Sphere of Influence
(Shaded Rows indicate Soils Within the City Limits)

Map Symbol	Soil Name	Range Value
GB-Sl-CF	Guenoc-Stonyford Association	Best (1)
Jp-Mh-CE	Josephine-Mariposa Association	--
Sr-BE	Supan Association	Best (1)
Fo-RL-CF	Forward-Rockland Association	--
AK-AB-BE	Auburn-Argonaut Association	Mod (2)
Pn-BD	Perkins Acid Variant Association	--
Mh-JP-EG	Mariposa/Josephine Association	--
Wg-AK-CE	Whiterock/Auburn Association	Mod (2) to Unsuitable (9)

Soils Potentially Suitable for Cultivation Within
the Angels Camp Sphere of Influence
(Shaded Rows indicate Soils Within the City Limits)

Map Symbol	Soil Name	Suitable for Cultivation?
GB-Sl-CF	Guenoc-Stonyford Association	No - (VI, VII)
Jp-Mh-CE	Josephine-Mariposa Association	No (VII) - Unless irrigated IVe1
Sr-BE	Supan Association	No (VI)
Fo-RL-CF	Forward-Rockland Association	No (VI, VIII)
AK-AB-BE	Auburn-Argonaut Association	If irrigated - IVe4, IVe3
Pn-BD	Perkins Acid Variant Association	If irrigated - IVe1
Mh-JP-EG	Mariposa/Josephine Association	No (VII) - Unless irrigated - IVe1
Wg-AK-CE	Whiterock/Auburn Association	No (VII) - Unless irrigated - IVe4

Key

IVe1: Normally upland areas, potentially usable for timber production, but may be suitable for irrigated orchard and forage crops.
IVe3: Primarily for range use; with irrigation can be used for pasture.
IVe4: Primarily for range, occasionally cropped to grain in rotation with volunteer pasture

Appendix 4F: Creek Preservation and Management Plan Resources

California Coordinated Resource Management and Planning Technical Advisory Council. *California Coordinated Resource Management and Planning CRMP Handbook, "A Local Approach*," June, 1996

Federal Interagency Stream Restoration Working Group. *Stream Corridor Restoration Principles, Processes, and Practices,* October, 1998.

Napa County Resource Conservation District. *Napa River Watershed Owner's Manual,* 1996.

National Park Service Rivers, Trails and Conservation Assistance Programs (RTCAP) ***Economic Impacts of Protecting Rivers, Trails and Greenway Corridors***

National Park Service Rivers, Trails and Conservation Assistance Programs (RTCAP) ***Creek Care Guide for Residents and Businesses.***

National Park Service Rivers, Trails and Conservation Assistance Programs (RTCAP) http://www.nps.gov/pwro/rtca/rtca.htm

Oregon State University Extension Service. *Watershed Stewardship--A Learning Guide*. EM 8714, July, 1998.

San Joaquin County Resource Conservation District. *Lower Mokelumne River Watershed Stewardship Plan*. www.sjcrcd.org

San Joaquin County Resource Conservation District. *Lower Mokelumne River Watershed Owner's Manual*. Stewardship-based program for homeowners to assist in reducing non-point source pollution. 2002. www.sjcrcd.org

Santa Rosa, City of. Citywide Creek Master Plan http://ci.santa-rosa.ca.us/default.aspx?PageId=1216

United States Environmental Protection Agency Office of Water. *Monitoring Water Quality, Volunteer Stream Monitoring, A Methods Manual;* Office of Water 4503F, EPA 841-B-97-003; November, 1997.

United States Environmental Protection Agency. *Top 10 Watershed Lessons Learned.* Office of Water, Office of Wetlands, Oceans and Watersheds (4501F), EPA 840-F-97-001. October, 1997

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William M. Kier Associates. *Watershed Restoration-- A Guide for Citizen Involvement in California.* December, 1995. United States Department of Commerce National Oceanic and Atmospheric Administration - NOAA Coastal Ocean Program, Science for Solutions, Decision Analysis Series No. 8 (CERES/WITS)

Creek Restoration, Enhancement and Preservation Plans - Samples

Source: National Park Service Rivers, Trails & Conservation Assistance Program
www.nps.gov/pwro/rtca/acmplsh.htm

CALIFORNIA

Alhambra Creek Enhancement Organized creek awareness events to assist restoration and enhancement of this San Francisco Bay Area creek; published a self-guided tour booklet of its central historic district, neighborhoods and baylands environs, and a guide of practical creek care information for neighboring homes and business owners.

Bay Area Ridge Trail
Ongoing trail planning, organizational development and community outreach in support of this 400-mile ridge-top trail encircling San Francisco Bay.

California Rivers Assessment
A public and private cooperative project to create a Geographic Information System-based approach for collecting, integrating, analyzing and exchanging river-related information on a statewide basis in order to conserve California's remaining natural river systems.

Dry Creek Parkway
Planning for the establishment of a greenway and 70-mile loop trail to address flood control, recreation and habitat preservation needs in a rapidly suburbanizing area.

East Palo Alto Open Space Project
Creation of a community vision to preserve the rural character, unique neighborhoods, open spaces and economic viability of this changing San Francisco Bay Area community.

Gaviota Coast Conservation Project
An effort to establish permanent protection of the Gaviota Coast in Santa Barbara County and its unique natural, scenic, agricultural, recreational and cultural resources. RTCA will provide ongoing assistance in the areas of community outreach and conservation planning. The primary cooperator is the Gaviota Coast Conservancy.

Joshua Tree Regional Trails Project
Evaluation of access points for trails into Joshua Tree National Park and development of a conceptual plan for regional trails connecting to neighboring communities.

Los Angeles Greenways
Assessment of opportunities by the City of Los Angeles for greenway development on publicly-owned rights-of-way, with particular emphasis on urban greening and neighborhood revitalization efforts.

Los Angeles River Master Plan
A planning effort to discover and illustrate environmental, recreational, aesthetic and economic opportunities along the Los Angeles River, and to recommend projects and implementation strategies for realizing them.

Los Angeles Urban Resources Partnership
A coalition of federal and local agencies working together to make government resources available to community-led environmental projects in the Los Angeles area.
Merced River Trail Analyzed opportunities and constraints for a 28-mile section of proposed trail on an abandoned railroad bed along the Merced River; 14 miles of trail are in place.

Napa River Trail
Prepared a concept plan for a riverside trail in the City of Napa with opportunities for walking, fishing, boating or wildlife viewing.

Napa River Trail in Calistoga
Prepared a feasibility study for a bicycle and pedestrian pathway along the Napa River.

Otay Valley Regional Park
Convened and facilitated an interjurisdictional team to plan and implement an 11-mile greenway in one of the last major open space corridors in southern San Diego County; over 275 acres have been acquired for inclusion in the Otay Valley Regional Park.

Richmond Rail-Trail Greenway
Conversion of a 2.5 mile, 32 acre abandoned railroad right-of-way into a community garden and greenway in the center of Richmond, California. RTCA is developing a brochure describing potential benefits of greenways and encouraging local residents to become involved in the planning effort. Cooperators include the Rails to Trails Conservancy, the Community Youth Council for Leadership and Education, City of Richmond, and Urban Ecology.

Salinas River Coordinated Resources Management Planning
Facilitated community planning workshops to promote coordinated management of natural resources and river corridor uses in San Luis Obispo County; initiated a "River Watch" program between landowners and agencies to encourage river stewardship; and helped produce a written summary of resource information and planning issues.

San Francisco Bay Trail
Conducted public forums to enhance community support to realize a 400-mile network of multiple-use shoreline trails ringing San Francisco Bay; the Bay Trail is about one-third complete.

San Francisco Urban Resources Partnership
Providing coordinating technical assistance to close-to-home recreation and urban conservation projects in the Southeast Waterfront area of San Francisco, California. Cooperators include the City of San Francisco, the San Francisco League of Urban Gardeners, the Trust for Public Land, the U.S. Forest Service, the Natural Resources Conservation Service-San Francisco Urban Team, and several other public and non-profit agencies.

San Leandro Creek Awareness Project
Formed a new "friends" group to host education, information and creek restoration efforts.

Santa Ana River Trail
Served as a catalyst for developing a vision and master plan for a 90-mile Santa Ana River trail to address the recreational needs of the 16 million people in this tri-county Southern California area.

Santa Clara River Enhancement and Management Plan
Developed an inventory of river-related recreation resources as part of a multi-objective resource study and management planning process for this 100-mile river corridor in Ventura and Los Angeles counties.

Santa Cruz Circle Trail
Developed a preliminary concept and feasibility study for a continuous 30-mile, multi-use trail encircling Santa Cruz, providing citizens, organizations, businesses, landowners and land managing agencies with an opportunity to work together toward a common vision.

Santa Margarita River Watershed Management Program
Helped convene over 40 agencies and organizations grappling with resource protection and development issues in the rapidly urbanizing watershed of a nationally significant river; published a resource study and profiles of watershed management entities; leveraged funding for additional technical studies and stream restoration projects.

Santa Monica Mountains Area Recreation Trails Project
A forum for trail managing agencies and trail-related interest groups to work together on trails inventories and linkages, trail construction guidelines and signage, as well as reduction of trail user conflicts in the Santa Monica Mountains National Recreation Area.

Santa Rosa Creek Master Plan
Provided organizational, educational and technical support for creation of a vision and "blueprint" to restore and enhance 13 miles of Santa Rosa Creek in and near downtown Santa Rosa; over $5 million in stream channel restoration and creekside trail projects are being implemented.

Sausal Creek Watershed Awareness Project
A partnership project with the Aquatic Outreach Institute to help the Friends of Sausal Creek increase awareness about and protect Sausal Creek.

HAWAII

Hawai'i Stream Assessment
Created the first centralized base of stream-related data of the state's 376 perennial streams along with a user-friendly access system; identified candidate streams for protection.

Kalihi Valley Watershed Project
In this stream cleanup and awareness project in urban Honolulu, engagement of residents from the low-income, multi-ethnic Kalihi neighborhood posed a special challenge. RTCA helped design an outreach strategy bolstering written materials and events with a video production starring local residents and their stories. Production of the video has been funded by the EPA.

NEVADA

Carson River Planning
Facilitated a workshop and task force meetings to help identify and address natural resource, security and public access issues for 22 miles of river within Carson City.

Lahontan Valley Trails
A locally based planning effort to create a multi-use trail system linking parks, natural, and cultural resources, and local points of interest throughout the Lahontan Valley. Approximately 5 miles of trail are complete today.

Peavine Mountain Trails
Coordinated with local agencies to map trails and access points in the Peavine Mountain area in Reno, Nevada. The resulting map provides the public with much needed information about trails in this rapidly growing area.

Truckee River Strategy
A quarterly exchange among agencies to support ongoing planning and restoration projects on the Truckee River, and efforts to share this information with the interested public.

Appendix 4G: Sample Right-to-Farm Ordinance & Guidelines

Calaveras County Right-to-Farm

Calaveras County Ordinance No. 2144 (1990)

14.02.010 Definitions

As used in this chapter, the following terms shall have the following meanings:
A. "Agricultural land" means real property within the unincorporated areas of Calaveras County currently used for agricultural operations or upon which agricultural operations may in the future be established.
B. "Agricultural operations" means the use of land for the purpose of producing an agricultural commodity for commercial purposes, including, but not limited to, cultivation and tillage of the soil; burning of agricultural waste products; lawful and proper use of agricultural chemicals, including but not limited to the application of pesticides and fertilizers; protection against frost damage and bird damage; irrigation, production, pruning, growing, harvesting and processing of any agricultural commodity, including horticulture, timer, viticulture, wine production, apiculture, the raising of livestock, dairy, fish, poultry; and commercial practices, structures and appurtenant facilities incident to or used in conjunction with such agricultural operations, including preparation for market, delivery to storage or market, or to carriers or transportation to market. (Ord. 2144 §1(part), 1990).

14.02.020 Findings and policy
It is the declared policy of Calaveras County to conserve and protect agricultural land and to encourage agricultural operations within the county. Where nonagricultural land uses, especially residential development, extend into agricultural areas or are adjacent to agricultural areas, agricultural operations may become the subject of nuisance complaints, due to a lack of knowledge about the operations. As a result, agricultural operations are sometimes forced to cease or curtail operations and people are discouraged from making investments in farm improvements to the detriment of agricultural operations and the economic viability of the county's agricultural industry as a whole. It is the purpose and intent of this chapter to reduce the loss to the county of its agricultural resources by clarifying the circumstances under which agricultural operations may be considered a nuisance. The further purpose of this chapter is to promote a good neighbor policy by advising purchasers and residents of property near agricultural operations of the inherent potential problems associated with such purchase or residence. Such concerns may include, but are not limited to, the sounds, odors, dust, chemicals, and traffic that may accompany agricultural

operations. Purchasers and residents should understand the inconvenience that accompany living side-by-side with present or future agricultural operations and be prepared to accept such problems as the natural result of living in or near agricultural lands. (Ord. 2144 §1(part), 1990).

14.02.040 Nuisance

No pre-existing or future commercial agricultural operation conducted or maintained for and in a manner consistent with accepted agricultural practices and standards on agricultural land shall become or be a nuisance, public or private, due to any change in land uses in or about the locality thereof. The provisions of this section shall not apply whenever a nuisance results from agricultural operations inconsistent with accepted practices and standards or contrary to local, state and federal ordinances, laws and regulations. (Ord. 2144 §1(part), 1990).

14.02.060 Disclosure

A. To make Calaveras County landowners aware of the policies set forth in Section 14.02.040, the written disclosure statement set forth in subsection B of this section shall be:

1. Provided by the transferor of real property located in the unincorporated areas of Calaveras County to the transferee of such property upon any transfer of real property by sale, exchange, installment, land sale contract, lease with an option to purchase, any other option to purchase, ground lease coupled with improvements, or residential stock cooperative improved with dwelling units. The transferor shall require the transferee to sign a written disclosure statement set forth in subsection B of this section;
2. Provided by the Calaveras County planning department to applicants for discretionary development permits including but not limited to subdivision and conditional use permits for use on or adjacent to agricultural land. Each discretionary development permit shall include a condition that the owner of the property shall be required to sign a disclosure statement containing the language set forth in subsection B of this section acknowledging that the owners have been informed of the county's agricultural lands policy.

B. The disclosure statements shall read as follows:

Real property within or adjacent to areas zoned for agricultural operations or areas in zones which permit agricultural operations may be subject to inconveniences or discomfort arising from such operations. Calaveras County has determined that the use of real property for agricultural operations is a high priority and a proper and necessary use, and will not consider the inconveniences or discomforts arising from agricultural operations as a nuisance if such operations are consistent with accepted agricultural practices and standards.
(Ord. 2144 §1(part), 1990).

14.02.080 Severability

If any section, subsection, sentence, clause or phrase of this chapter is for any reason held to be invalid or unconstitutional by the decision of a court of competent jurisdiction, it shall not affect the remaining portion of this chapter. (Ord. 2144 §1(part), 1990).

14.02.100 Dispute resolution

The policy set forth in this chapter only applies to agricultural operations which are consistent with accepted agricultural practices and standards. If an agricultural operation is being conducted in a manner which does not appear to be consistent with accepted agricultural practices and standards, any person may file a complaint with the office of the county agricultural commissioner within thirty days of the date of the complained-of activity. Upon receipt of a written complaint pursuant to this section, the Calaveras County agricultural commissioner shall convene a committee consisting of the agricultural commissioner, the Calaveras County farm adviser, the Calaveras County planning director, and two members of the public appointed by the board of supervisors. Pursuant to procedural rules adopted by the committee, the committee shall hear the dispute and determine whether the agricultural practices comply with accepted agricultural practices and standards. The committee shall render a written decision and the decision of the committee shall be advisory to the parties involved and may be appealed to the board of supervisors. (Ord 2144 §1(part), 1990).

17.16.015 Right -to-farm

Any legally existing agriculture land use (farming, ranching, orchard, livestock, row crops, food processing) is considered to have a right to enjoy the productive and economic fruits of labors without fear of infringement on this right by encroaching residential or other nonagriculture development on adjoining parcels and lands in the general vicinity. The right to farm shall take precedence over all other adjoining and nearby land uses. (Ord. 1807 §1(part), 1986).

17.18.015 Right-to-farm

Any legally existing agriculture land use (farming, ranching, orchard, livestock, row crops, food processing) is considered to have a right to enjoy the productive and economic fruits of labors without fear of infringement on this right by encroaching residential or other nonagriculture development on adjoining parcels and lands in the general vicinity. The right to farm shall take precedence over all other adjoining and nearby land uses. (Ord. 1807 §1(part), 1986).

Guidelines: Overview of Right-to-Farm Ordinance

University of California Agricultural Issues Center
AIC Issues Brief Number 15, May, 2001

County Right-to-Farm Ordinances in California: An Assessment of Impact and Effectiveness

Matthew Wacker, Alvin D. Sokolow and Rachel Elkins[1]

When first adopted by California local governments in the 1980s, right-to-farm ordinances were seen by many farm leaders, real estate people, and public officials as an easy response to the problem of urban growth encroaching on adjacent farm operations. Such measures have little regulatory effect, but seek to reduce the opposition of urban neighbors to commercial agriculture as a nuisance generator. Most ordinances require that homebuyers who move to parcels adjacent to or near working farms and ranches be notified about the possible negative impacts of agricultural activities. In this way, the theory goes, new residents, especially those unfamiliar with rural living, would effectively learn about the realities of modern farming and would be less inclined to complain, or even go to court, about sprays, dust, odors, noise and other aspects of agricultural activities. The normal practices of farmers and ranchers would thus be protected.

The local ordinances are now widespread throughout California's agricultural regions. About 40 counties and 50 cities currently have these measures. Despite their popularity, questions are frequently raised about the effectiveness of right-to-farm ordinances in protecting agricultural operations and reducing farm-urban edge conflicts. The two principal reasons are: (1) considerable variation in implementation from one jurisdiction to another, and (2) the generally benign and undemanding character of disclosure requirements, as compared to the more stringent regulatory tools of zoning, buffers, and subdivision review.

This assessment is based on a comparative study of county-adopted ordinances and their implementation in 15 agricultural counties[2] located in Central Valley and coastal regions[3].

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[2] The counties are Butte, Colusa, Fresno, Mendocino, Merced, Monterey, Napa, San Benito, San Joaquin, Solano, Sonoma, Stanislaus, Sutter, Tulare, and Yolo.

[3] The project was funded by an internship grant from the California Communities Program at UC Davis, and was initiated at the request of agricultural and other leaders in Lake County. This report benefits from

(This study does not cover city ordinances which apply just to areas within incorporated boundaries.) We examined each of the county ordinances and conducted phone interviews with about 40 knowledgeable local persons, including agricultural commissioners, county planners, agricultural (Farm Bureau) leaders, real estate representatives, and UC Cooperative Extension staff.

Following a description of ordinances, this Issues Brief summarizes local perceptions about the performance of the ordinances in the 15 sample counties and then examines in greater detail the provisions that deal with grievance procedures and disclosure requirements.

Origins and Content

As a tool to protect farmers from nuisance lawsuits by neighbors, right-to-farm ordinances have existed for almost 40 years in the United States. Local ordinances in California date from the early 1980s. Although they fall within the regular police powers (the ability to regulate) of county and city governments, the local measures were partly stimulated by passage in 1981 of a state statute (Sect. 3482.5 of the California Civil Code) that declares that a farm in operation for more than three years is not to be considered a nuisance due to changed conditions (urbanization) in the area. In 1989 the legislature went further by allowing counties and cities to require realtors to disclose to property buyers particular conditions of the property, including the possible negative impacts of nearby farming (Civil Code Section 1102.6a). The California Farm Bureau prepared a model right-to-farm ordinance at about that time, and most counties and cities have since followed the model language in adopting their own ordinances.

Most county right-to-farm ordinances thus have similar contents. Four major provisions are common: (1) a statement of purpose, (2) definitions of agricultural operations and farmland, (3) limitation on agricultural nuisances, and (4) agricultural disclosure requirements. A few ordinances also provide for a formal grievance procedure. **Box 1** describes these ordinance provisions, and **Box 2** shows a sample disclosure requirement from the Farm Bureau model.

Within this common framework, ordinances differ from county to county in detail and added topics. Disclosure provisions, for example, vary a great deal according to when and how notification about nearby agricultural conditions is supposed to be provided. As adopted and sometimes changed by boards of supervisors, county legislative bodies. Ordinance language is a product of local priorities and political pressures.

Suggestions made by several outside reviewers, including a county ag commissioner and staff attorneys of the CFBF.

Box 1: **Common Ordinance Provisions**

Statement of Purpose
Generally a policy statement outlining the intent of the ordinance to preserve agricultural operations, promote a good-neighbor policy between farm and other landowners, or to affirm the county's commitment to agriculture as a component of the local economy.

Definitions
For legal clarity, an agricultural operation is defined according to the state code. Farmland is defined by location in an agricultural zone; a few counties define it more broadly as land that currently or potentially supports active agricultural operations.

Nuisance
Usually a reference to the state code that prohibits a nuisance finding if the agricultural operation is conducted according to established farming practices, has existed at the same location for more than three years, and does not infringe upon a public right-of-way. Some counties reduce the time requirement to one year.

Disclosure
A requirement that a potential purchaser of property near farming or the developer of residential property in such an area be notified of the impacts of the agricultural operation.

Grievance Procedures
Formal procedures in some counties for resolving complaints against agricultural operations, usually involving mediation by a committee whose organization and timing may be specified.

Perceived Impacts

What do county officials and others say about the operations and impacts of the right-to-farm ordinances in their communities? In brief phone interviews, we asked 40 persons in the 15 sample counties about their understanding of the provisions of the local ordinance, their perceptions of the impacts, benefits, and limitations of the ordinance, and their views of how it related to land use issues pertaining to the agricultural-urban edge. Here is a summary of their comments about several key aspects of the ordinances and their implementation.

Right-to-farm ordinances are primarily education tools.
The ordinances mainly serve to inform and educate residents about the local value of agriculture, according to the great majority of persons we interviewed. The major intention is to tell homebuyers about the consequences of locating in agricultural areas, but the

audiences of the information also include the community at large and farmers themselves. The ordinances generally seem to accomplish this purpose, although their informational impacts vary by county and depend on specific provisions and implementation. A county agricultural commissioner and a Farm Bureau leader, respectively, described the benefits in these terms:

> *"(The ordinance) reminds the public and the Board of Supervisors that the county wishes to preserve agriculture. It sets the tone, raises awareness."*
>
> *"It puts buyers on notice that the county values agriculture and there are certain things they have to be prepared to accept."*

Ordinances are a useful tool for county officials who deal with complaints about agricultural practices.

The local public officials we interviewed liked that the ordinances asserted as a policy matter the importance of agriculture in their counties. This gave county officials a firm factual basis on which to respond to complaints from residential neighbors, when combined with the nuisance and disclosure language. An agricultural commissioner noted:

> "*It gives me a way to frame the discussion between growers and residents....to try to get people to talk as neighbors."*

Often this meant that minor complaints could be prevented from escalating into major issues and even lawsuits.

A right-to-farm ordinance is not a substitute for good land use planning.

Whatever its benefits, none of our respondents believed that a right-to-farm ordinance was a technique for determining land uses or defining urban-agricultural edges. The ordinances are not regulatory tools; they lack the planning and urban development power of agricultural zoning, general plans, and subdivision controls.

Right-to-farm ordinances do not insulate farmers from lawsuits nor do they provide farmers with rights not already codified in state law.

While a right-to-farm ordinance may serve to resolve many small complaints, it will not prevent a farmer from being sued over an agricultural practice, even one that is covered under the ordinance as a normally accepted farming practice. As a Farm Bureau representative indicated, if a neighbor wants to sue a farmer over an agricultural nuisance complaint, there is nothing a right-to-farm ordinance can do to prevent that action. We also heard from local officials who believed the term "right-to-farm" was a misnomer, wrongly implying that farmers have all the rights and homeowners have none in edge conflicts. One Farm Bureau leader suggested "agricultural awareness" as a more appropriate label.

There is no clear evidence that the right-to-farm ordinances have reduced the volume of litigation and complaints.
Our respondents were not able to give us a definitive answer to the question of whether lawsuits or other complaints directed against agricultural practices in their counties have decreased in number since the ordinances were adopted. No one could detect a decrease in litigation, although several respondents said they thought formal complaints to county bodies had declined, but without providing specific information. In fact, lawsuits on agricultural nuisances in California have been rare, whether before or after the appearance of right-to-farm ordinances. Respondents in only six of our 15 sample counties could recall such cases. According to staff attorneys for the California Farm Bureau Federation, only one farm nuisance suit has been decided by a California appellate court in recent years, and that case involved farm operators as both plaintiff and defendant.

County governments exercise little oversight over the implementation of ordinances.
While boards of supervisors enact and revise right-to-farm ordinances, county governments pay little attention to how their provisions are carried out. Respondents were especially critical of the implementation of disclosure requirements for real estate transactions, which is left largely to realtors and title companies. None of the county agencies in our 15 sample counties regularly monitors this process. When disclosure is applied to development approvals or building permits, however, planning and building departments are usually involved. A more general comment about limited oversight concerns the lack of coordination among different county departments. At one time or another, the various county agencies that may be involved in ordinance creation, revision, and execution include the board of supervisors, agricultural commissioner, planning and building, assessor, county counsel, and sheriff.

Grievance Procedures, Formal and Informal

Formal mediation procedures for handling complaints against farm practices are found in the ordinances of six (Colusa, Monterey, San Benito, Solano, Stanislaus, Yolo) of the 15 counties we surveyed. The grievance-handling bodies outlined in these ordinances are either committees drawn from citizens appointed by the board of supervisors, ex officio bodies (agricultural commissioner, planning director, etc.), or a combination of the two. The exception in one county is the planning commission. At least one county (San Joaquin) uses its agricultural advisory committee for this purpose, although it is not designated in the right-to-farm ordinance.

The formal mediation bodies in the six counties have had little work. Respondents in only two of the counties could recall instances of committee activity in recent years. Solano's group last handled a complaint in 1994, one involving a noisy diesel pump. The committee in Yolo has had only one case, also a noise issue, since it was established in 1991.

Complaints from residential neighbors about agricultural practices actually are more frequent then these committee records suggest. They are handled and usually resolved in the course

of the routine business of county departments. Most come to the agricultural commissioners because of their heavy involvement in the agricultural sector through the regulation of chemical use on farms. In the process of dealing with objections to the pesticide spray practices of particular farmers, the commissioners also pick up complaints about noise, dust, odor, and other nuisances. The standard approach is to resolve these complaints through informal methods. One agricultural commissioner explained:

> *"A lot of my efforts in these issues go to trying to get people to talk as neighbors and work things out like most civilized people should be able to. Often the urban resident just wants to know what's going on. When they hear a noise at night they will know what's going on, or they will know to close their windows at certain times of the day to avoid sprays and dust."*

Variations in Disclosure Requirements

Most discussion about the performance of right-to-farm ordinances in individual counties is focused on the disclosure requirements. How thoroughly affected residents are informed about the consequences of living near agricultural operations depends on the audience and the manner in which notices are distributed. According to the ordinances we reviewed, there are three general approaches to providing disclosure:

- In the annual tax bills sent to all or a portion (typically just in unincorporated areas) of a county's property owners;
- In connection with new development located near agricultural activity, usually when subdivision or parcel maps are approved or building permits are issued by county government;
- As part of a real estate transaction in which residential or other property located near agricultural activity is sold, generally at the time escrow is closed signifying the completion of the purchase.

The notified audience differs - a countywide one composed of all or many property owners in the case of tax bill statements, primarily developers or builders in the instance of development-related notification, and new purchasers of property in the case of real estate transactions. Likewise, the location or degree of responsibility within county government for administering these processes varies. Assessors' offices send out the annual property tax bills and planning and building departments manage development approvals and building permits. For notification through property sales, however, there is no clear county government involvement or oversight. In these cases realtors and title companies handle agricultural disclosures as part of their normal process of working with sellers and buyers to complete transactions.

Ordinances also differ in whether or not they require that the developer/builder or purchaser sign the disclosure notice and it is recorded in the county recorder's office as a designation attached to the property deed. Recordation provides a formal record of the disclosure and ensures that the information will be transmitted to future buyers of the property through the title search process.

As **Table 1** shows, the 15 county ordinances we reviewed vary greatly in the mix of disclosure methods used. Most employ only one or two of the methods, although recordation is required by 10 of the ordinances. All three approaches are used by three sample counties: Napa, Stanislaus, and Sonoma, with Napa and Sonoma also requiring recording. Sonoma and Napa counties have had additional, unique components in their disclosure programs. Sheriff's deputies in Sonoma distribute pamphlets about county agriculture to residents, while the Napa Farm Bureau has sent pamphlets to new residents.

Two counties have substantially revised the disclosure requirements in their right-to-farm laws in recent years. In 1994 the Monterey County Board of Supervisors eliminated entirely the disclosure provisions of its ordinance, at the urging of the local real estate industry. On the other hand, the Sonoma County Board of Supervisors in 1999 added disclosure requirements for both development actions and real estate transactions to the original tax bill provision, primarily at the request of the local Farm Bureau.

Illustrated here are the ongoing differences between the views of real estate and farm interests in many agricultural counties over the extent of disclosure requirements. Farmers generally support strong and mandated forms of notification as a way of heading off problems with urban neighbors. Realtors, on the other hand, generally see required notification as discouraging potential home sales and adding to their paperwork burdens, and so prefer minimal or non-mandated disclosure provisions.

In at least six of the sample counties, according to respondents, the local real estate industry successfully opposed more detailed or stronger disclosure provisions when the ordinances were first adopted or at later times when changes were proposed. Some title companies also have been reluctant to get involved in the disclosure process because of perceived procedural burdens. The concerns revolve largely around how disclosures are inserted into real estate transactions. Several of the county officials we interviewed worried about the lack of county government oversight over the private actions of realtors and title companies. A few respondents, however, noted that realtors were obligated under state law and their licenses to disclose such information in the case of other property-related conditions such as potential hazards. They suggested that even in the absence of local ordinance requirements, many realtors would voluntarily reveal to property buyers the nature of nearby agricultural operations as legal protection against future lawsuits from dissatisfied homebuyers. This seems to be the case in Lake County where most realtors use disclosure statements when selling residential properties in rural areas, although few seem to be aware of a county requirement for agricultural notices.

Timing is also an issue in the adequacy of agricultural disclosures in real estate sales. Disclosures are usually provided at the completion of a transaction, when escrow is closed. Many of our respondents said this was too late in the transaction for new information to have much impact, since it comes some time after the basic decision to buy has been made. The impact of the information is further diluted by the numerous other documents purchasers must read and sign at this stage, making it difficult to highlight the importance of the agricultural disclosure. Noted an agricultural commissioner:

> *"People when they are buying real estate are really stressed, and they don't pay much attention to the disclosure. They have lots of forms to look at."*

As a result, other respondents said, some homeowners who later come before county bodies to complain about nearby agricultural nuisances have to be reminded about the agricultural disclosure forms they signed.

Conclusions

What makes for an effective county right-to-farm ordinance? Judging from the comments of the persons we interviewed in 15 counties, the key lies in specific disclosure requirements and how they are implemented. Formal grievance procedures are far less essential, considering their limited use in the counties that have them and the greater importance of informal methods for resolving farmer-resident conflicts.

An effective ordinance is one that fully informs both directly affected parties and the community at large about the importance of maintaining productive agriculture in the face of urban growth. For homeowners and other residents in edge areas, those considering purchase and those already living there, this means acquiring a full appreciation of the consequences of residing next to commercial farm operations that from time to time generate noise, dust, odor, and other negative effects. Prospective home buyers then can consider the pertinent tradeoffs, weighing the negative impacts against the scenic, cost, and other benefits of living in the rural community.

Right-to-farm ordinances are a limited answer to the problems of conflict and incompatible land uses at the agricultural-urban edge. The solution also depends on other and more active measures, especially the planning and design of urban development that is sensitive to agricultural operations and appropriate modifications in farm practices at the edge. But as an informational technique, the ordinances are an important part of the overall strategy for achieving a more peaceful coexistence of agricultural and urban neighbors.

Table 1. Disclosure Requirements in Right-to-farm Ordinances

County	Property Tax Bill	Development Approval	Real Estate Transaction
San Benito	Mailed annually to all real property owners in unincorporated county.	Not required.	Required for all real property transfers. Disclosure must be signed by buyer and seller and recorded with the County Recorder's office. All leases must also incorporate the disclosure statement.
Solano	Not required.	Not required.	Disclosure statement included with any property deed and recorded with County Recorder. Buyer/seller are not required to physically sign disclosure statement.
Monterey	Not required.	Not required.	Not required.
Merced	Not required.	Notice required on all final parcel maps for all parcels within 1000 feet of an ag zone and dwelling unit over 500 square feet. Acknowledgment required for building permit.	Not required.
Tulare	Not required.	Notice must be recorded for all parcel/subdivision maps; notice provided to all applicants for building permits; County Recorder includes notice with any deed or land sale contract.	Signed disclosure between buyer and seller.
Stanislaus	Mailed annually to all real property owners in unincorporated county.	Notice must be recorded for all parcel/subdivision maps; notice provided to all applicants for building permits; County Recorder includes notice with any deed or land sale contract.	Signed disclosure between buyer and seller.
San Joaquin	Not required.	County provides building permit applicants with copy of disclosure statement. Not a condition of development approval. Builder's responsibility to deliver copy to owner of building.	Not required.
Butte	Not required.	Acknowledgment must be signed and recorded as a condition of obtaining a building permit.	Not required.
Sutter	Not required.	Acknowledgment must be signed and recorded as a condition of obtaining a building permit.	Disclosure required between buyer and seller. No form to sign.
Colusa	Not required.	Disclosure required on all building permits and other development approval	Disclosure must be signed by buyer and seller and recorded with the County Recorder's office.

County	Property Tax Bill	Development Approval	Real Estate Transaction
		documents.	
Mendocino	Not required.	Acknowledgment must be signed and recorded as a condition of obtaining a building permit.	Disclosure required between buyer and seller. No form to sign.
Yolo	One-time mailing	County-prepared notice included with preliminary title reports.	Not required.
Napa	Mailed annually to all real property owners in unincorporated county.	Signed form filed with Planning Department for all subdivision approvals and development permits.	Disclosure required between buyer and seller. No form to sign.
Sonoma	Mailed annually to all real property owners in unincorporated county.	Disclosure required for all development approvals and recorded with County Recorder.	Signed disclosure between buyer and seller
Fresno	Not required.	Notice must be filed with County Recorder for subdivision map approvals.	Not required.

Box 2: Disclosure Notice - Farm Bureau Model Ordinance, Section 4 (b)

The County of _____ permits operation of properly conducted agricultural operations within the County. If the property you are purchasing is located near agricultural lands or operations or included within an area zoned for agricultural purposes, you may be subject to inconveniences or discomfort arising from such operations. Such discomfort or inconveniences may include, but are not limited to: noise, odors, fumes, dust, smoke, insects, operation of machinery (including aircraft) during any 24 hour period, storage and disposal of manure, and the application by spraying or otherwise of chemical fertilizers, soil amendments, herbicides and pesticides. One or more of the inconveniences described may occur as a result of any agricultural operation which is in conformance with existing laws and regulations and accepted customs and standards. If you live near an agricultural area, you should be prepared to accept such inconveniences or discomfort as a normal and necessary aspect of living in a county with a strong rural character and an active agricultural sector.

University of California
Agricultural Issues Center
One Shields Avenue
Davis, CA 95616-8514

■ E-mail: agissues@ucdavis.edu
■ Internet: http://aic.ucdavis.edu
■ Phone: 530-752-2320
■ Fax: 530-752-5451

Appendix 4H: Timber Production Values of Soils in the City's Sphere of Influence

Timber Production Values of Soils in the City's Sphere of Influence

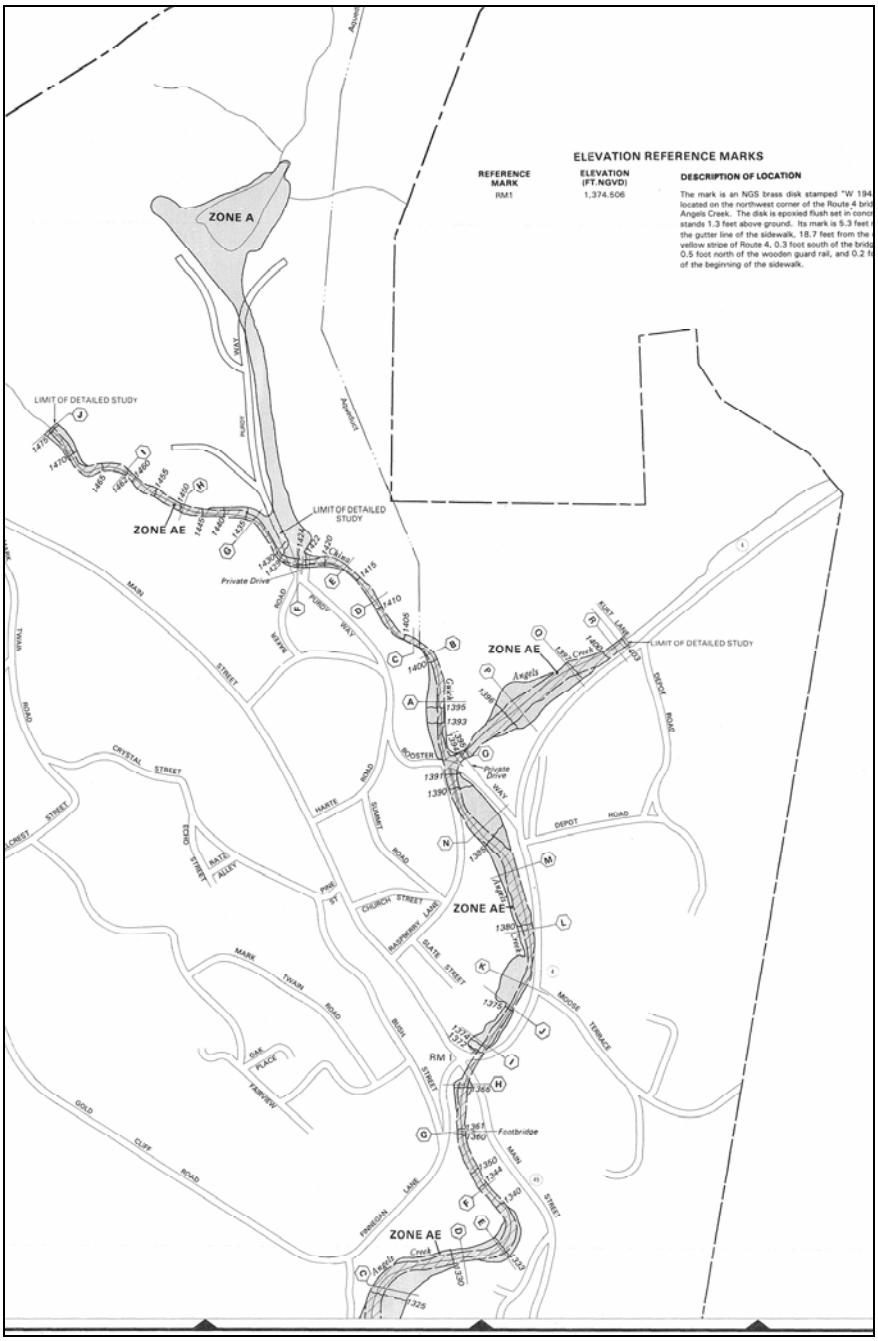
(Soils occurring within the City Limits are shaded)

Map Symbol	Soil Name	Value for Timber Production
GB-Sl-CF	Guenoc-Stonyford Association	--
Jp-Mh-CE	Josephine-Mariposa Association	High to Low; Group 2, 7
Sr-BE	Supan Association	--
Fo-RL-CF	Forward-Rockland Association	Low - Group 7
AK-AB-BE	Auburn-Argonaut Association	--
Pn-BD	Perkins Acid Variant Association	High - Group 1
Mh-JP-EG	Mariposa/ Josephine Association	High to Low - Group 2, 7
Wg-AK-CE	Whiterock/Auburn Association	--

Appendix 4I: Flood Hazard Zones

Angels Camp Designated Flood Zones

Federal Emergency Management Agency Flood Insurance Rate Map
Community Panel # 0600210001D, 1997 - EXCERPT

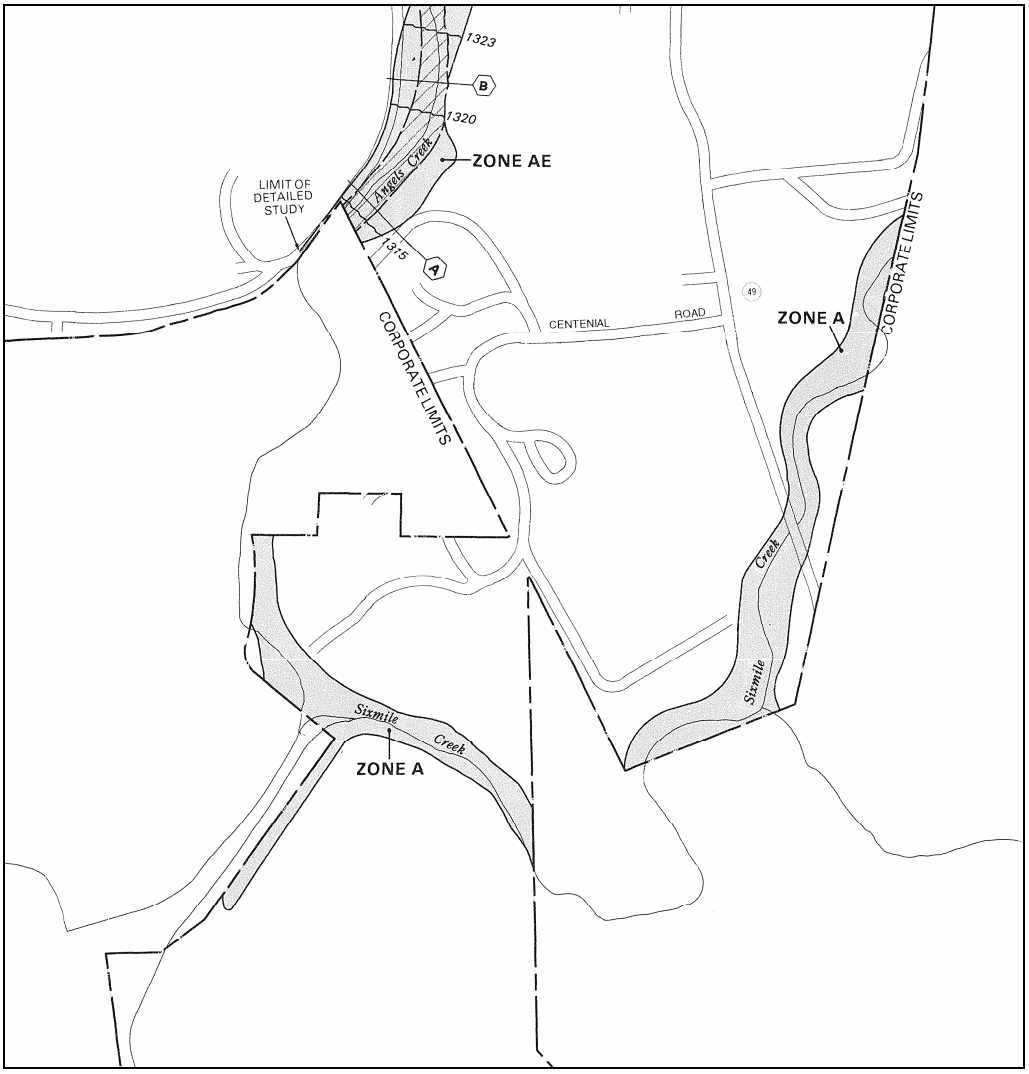


For Key, see next page

Draft August 2006

Angels Camp Designated Flood Zones

Federal Emergency Management Agency Flood Insurance Rate Map
Community Panel # 0600210002D, 1997 EXCERPT



Key:
Special Flood Hazard Areas Inundated by 100-Year Flood
Zone A: No base flood elevations determined
Zone AE: Base flood elevations determined
Non-Flood Hazard Areas
Zone X: Areas determined to be outside the 500-year flood plain

Appendix 4J: Sources and Types of Non-Point Source Discharges Common in Urban Runoff Which Could be Present in City's Waterways as Runoff

Per the United States Geological Survey National Water-Quality Assessment (NAWQA), program non-point source chemical contamination of watersheds is an issue both for agricultural and urban (residential, public agency and commercial) land uses.

"Water quality conditions and aquatic health reflect a complex combination of land and chemical use, land-management practices, population density and watershed development, and natural features, such as soils, geology, hydrology and climate. Contaminant concentrations vary from season to season and from watershed to watershed. Even among seemingly similar land uses and sources of contamination, different areas can have very different degrees of vulnerability and, therefore, have different rates at which improved treatment or management can lead to water-quality improvements."

The first step in maintaining and improving water quality, is to identify the potential sources of non-point source pollution that may adversely affect the watershed. Based on the USGS surveys of 35 urban and 120 agricultural watersheds, the contaminants listed in the following table have the potential to occur within the drainages within the Angels Camp Sphere of Influence.

USGS Identified Man-Made Contaminants with the Potential to Occur in Urban Watersheds

Potential Contaminants	Description
Fecal Coliform Bacteria	Commonly exceeded in areas providing water-contact recreation
Phosphorous	Generally as high in urban streams as in agricultural streams. More than 70% of sampled urban streams exceed USEPA goals for preventing nuisance plant growth
Insecticides (e.g., diazinon, carbaryl, chlorpyrifos, malathion and others)	Usually occur at higher concentrations in urban streams than in agricultural streams. Levels in urban streams rarely exceed USEPA drinking water standards, but concentrations exceeded at least one guideline established to protect aquatic life in every urban stream sampled.
Herbicides (e.g., atrazine, simazine, prometon and others)	Detected in 99% of urban streams sampled and in 50% of sampled wells. Most common sources are herbicide applications on lawns, golf courses and road right-of-ways.
Pesticides (e.g., insecticides: diazinon and chlorpyrifos and herbicides: simazine and prometon)	Commonly occur in mixtures. Approximately 80% of sampled urban streams contained 5 or more pesticides.
DDT, chlordane, dieldrin, organochloride pesticides in sediments	Associated with higher frequencies of occurrence of DDT, chlordane, and dieldrin and higher concentrations of chlordane and dieldrin than sediments in agricultural streams. 36% of sampled streams exceeded sediment quality guidelines for organochloride pesticides.
Volatile organic compounds (VOCs)	Source: plastics, cleaning solvents, gasoline and industrial operations. Most frequently identified in urban groundwater: commercial and industrial solvents [trichloroethene (TCE), tetrachloroethene (PCE) and methylene chloride]; gasoline additive methyl tert-butyl ether (MTBE); and the solvent and disinfection by-product of water treatment: trichloromethane (aka chloroform).
Trace elements: cadmium, lead, zinc and mercury	In populated urban settings, believed to originate from emissions from industrial and municipal activities and motor vehicles.
Zinc and polycyclic aromatic compounds (PAHs)	PAHs result from fossil fuel combustion. Sediment samples from streambeds and reservoirs indicate Zinc and PAHs concentrations are increasing probably due to increasing use of motor vehicle traffic in watersheds.
Organochlorine compounds	Detected in 97% of whole fish samples collected at urban sites; exceeded guidelines to protect wildlife at nearly 10% of urban streams.
PCBs	Detected in more than 80% of whole fish samples, exceeded guidelines to protect wildlife at nearly 70% of urban streams.

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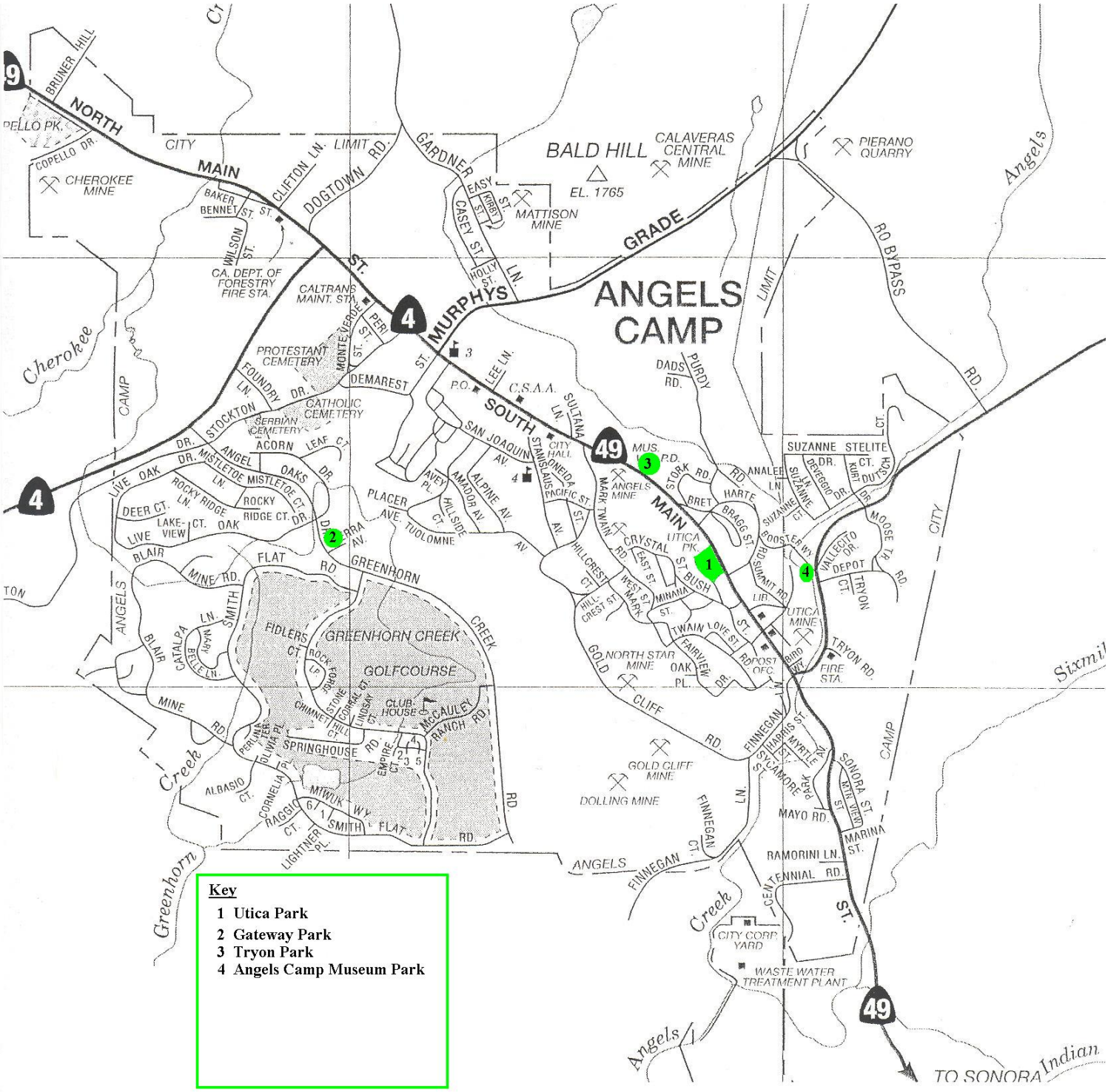
In addition to "man-made" sources of potential contaminants, the following are some naturally-occurring potential contaminants that may adversely affect water quality as a result of soil leaching, erosion, sedimentation, and other causes:

Naturally-Occurring Contaminants that May Affect Water Quality within the Angels Camp Sphere of Influence

Potential Contaminant	Source
Nitrogen (Ammonium, nitrate)	Fixation of nitrogen gas by plants and certain bacteria; Additions of organic matter; Weathering rocks
Phosphorous (Phosphate)	Weathering of igneous rock; Soil leaching; Additions of organic matter
Calcium	Weathering rocks (especially limestone); Soil leaching
Magnesium	Weathering rocks (especially igneous and carbonate rocks like limestone and dolomite); Soil leaching
Sodium	Weathering rock (especially igneous and sedimentary); Leached easily into surface and groundwater and remains in solution
Potassium	Weathering of igneous rocks; Leaching of clays and glacial material
Manganese	Weathering of igneous rocks; Soil leaching
Sulfur (Sulfate)	Leaching/weathering of gypsum and other common igneous and sedimentary rocks; Found in rainfall frequently above 1 mg/l and sometimes greater than 10 mg/l (a source of air pollution)

4K Public Open Space Inventory Map (Angels Camp City Limits)