Chapter IV.

ENVIRONMENTAL RESOURCES

WATER RESOURCES ELEMENT

PURPOSE

The Water Resources Element addresses water quality, availability and conservation for the City's current and future needs. The Element also discusses the importance of on-going coordination and cooperation between the City, Banning Heights Mutual Water Company, High Valley Water District, San Gorgonio Pass Water Agency and other agencies responsible for supplying water to the region. Topics include the ground water replenishment program, consumptive demand of City residents, and wastewater management and its increasingly important role in the protection of ground water resources. The goals, policies and programs set forth in this element direct staff and other City officials in the management of this essential resource.

BACKGROUND

The Water Resources Element is directly related to the Land Use Element, in considering the availability of water resources to meet the land use plan; and has a direct relationship to the Flooding and Hydrology Element, in its effort to protect and enhance groundwater recharge. Water issues are also integral components of the following elements: Police and Fire Protection, Economic Development, Emergency Preparedness, and Water, Wastewater and Utilities.

The Water Resources Element addresses topics set forth in California Government Code Section 65302(d). Also, in accordance with the California Environmental Quality Act (CEQA), Section 21083.2(g), the City is empowered to require that adequate research and documentation be conducted when the potential for significant impacts to water and other important resources exists.

Watersheds

The westernmost part of the planning area is located at the summit of the San Gorgonio Pass, which divides two major watersheds: the San Jacinto River Watershed to the west and the Salton Sea watershed to the east. The majority of the City drains east into the Salton Sea Watershed. The drainage divide generally runs north-south near Highland Springs Avenue, ending in the San Bernardino Mountains to the north and the San Jacinto Mountains to the south. Elevations within the planning area rise to approximately 5,560 feet to the north and 2,880 feet to the south. East of the divide, in the southeast portion of the planning area, elevations fall to approximately 1940 feet. The southern portions of the planning area are located on the floor of the San Gorgonio Pass, with the northern portions extending into the San Bernardino Mountains. The San Gorgonio River has cut through this area, forming the Banning Canyon. Adjoining the Banning Canyon to the west is a plateau referred to as the Banning Bench.

History of Water Claims

The first recorded claims to waters of Banning Canyon date back to 1875. The Banning Water Company was incorporated in 1884 to provide for delivery of domestic and irrigation water to various customers in the City. In 1913 the Banning Water Company began to operate as a public utility under the rules of the Railroad Commission (now Public Utilities Commission). In 1957, an order was issued establishing rates for both general metered services and measured irrigation services. The City of Banning acquired the Banning Water Company in 1967. In 1997 the City of Banning purchased the Mountain Water Company. The City of Banning provides water services to all areas of the City except for the northern portion, which is serviced by the Banning Heights Mutual Water Company.

The Banning Heights Mutual Water Company serves the Banning Bench extending through Banning Canyon. The source of water for this agency is a concrete flume that starts high in the San Bernardino Mountains at the northern most end of the Banning Canyon, diverting water from the source of the Whitewater River to the Banning Heights Mutual Water Company treatment plant. This company diverts water from the Whitewater River by a pipe/reservoir system to their service area on the Banning Bench. Their largest user of water is crop irrigation.

WATER RESOURCES

The City of Banning is within the boundary of the Coachella Valley Hydrologic Unit. The Coachella Valley Groundwater Basin is underlain by several large subsurface aquifers, known as subbasins, with boundaries that are generally defined by faults that restrict the lateral movement of water. The Basin extends from Banning easterly to the Salton Sea. The City of Banning is underlain by the San Gorgonio Pass Subbasin. Within the City boundary, the San Gorgonio Pass Subbasin is divided into a series of storage units: the Banning Canyon Storage Unit, the Banning Bench Storage Unit, the East and West Banning Storage Units, the Beaumont Storage Unit, and the Cabazon Storage Unit. To the west of the San Gorgonio Pass Subbasin is the Beaumont Groundwater Basin.

Groundwater basins are naturally recharged through the percolation of runoff, direct precipitation, subsurface inflow, and artificial recharge. The Banning Canyon area receives water from percolation of canyon flows through the gravelly soils of the canyon bottom. In addition, a stone ditch running southerly though the Banning Canyon provides intake areas to distribute water to spreading ditches, which interconnect with spreading ponds to enhance percolation. The San Gorgonio Subbasin is also recharged naturally with runoff from the adjacent San Jacinto and San Bernardino Mountains.

San Gorgonio Pass Subbasin

The San Gorgonio Pass Subbasin is the westerly most subbasin of the Coachella Valley Hydrologic Unit. Approximately 15 miles long, this subbasin is located in an east-west trending narrow valley between the San Jacinto and San Bernardino Mountains. Beaumont is at the western end of the subbasin, just outside the summit of the drainage area. From the summit, the basin drains most of the pass area tributary to the Coachella Valley. A prominent bedrock ridge projecting from the flank of the San Jacinto Peak creates a constriction in the basin, defining the subbasin boundary at the east end of the San Gorgonio Pass.

The floor of the pass contains coarse sandy alluvial fill throughout most of its area. West of the City, the pass is underlain by deeply weathered, coarse, alluvial soil that is being eroded by streams. The San Gorgonio Pass Subbasin occurs as an unconfined groundwater body, with depth to groundwater ranging from 100 to 500 feet.

Historically, the City's main water source for groundwater has been wells in the Banning Canyon, which includes the Upper and Middle Banning Canyon Basins. According to the City of Banning 2002 Water System Hydraulic Modeling Report, groundwater wells in Banning Canyon were producing 2,000 gallons per minute (gpm) in 2002, with a capacity to produce as much as 10,000 gpm, and had experienced flows of 4,500 gpm as recently as 2001. The depth to groundwater in the Banning Canyon Storage unit ranges between 8 and 160 feet below the ground surface (fbgs). The City currently operates 8 wells with a combined capacity of 4,000 gpm in this storage unit. The total possible extraction from this storage unit is 5.8 million gallons per day (mgd).

Upper Banning Canyon Basin

The Upper Banning Canyon Basin is located in the northern most portion of the City and is partially located in the County of San Bernardino. Static water levels in this basin range from 8 to 75 fbgs. The City currently operates 4 wells with a combined capacity of 2,000 gpm in this area. The total possible extraction from this storage unit is 2.88 million mgd.

Middle Banning Canyon Basin

The Middle Banning Canyon Basin is located south of the Upper Banning Canyon Basin. Groundwater levels throughout the Middle Banning Canyon Basin typically respond rapidly to precipitation and recharge because of the high permeability and limited groundwater storage in this basin. Bedrock in this portion of the canyon is located approximately 200 feet below the ground surface, with groundwater depths ranging from 25 feet to 160 feet below the surface. The City currently operates 4 wells with a combined capacity of 2,000 gpm in this area. The total possible extraction from this storage unit is 2.88 million mgd.

Banning Bench Storage Unit

The Banning Bench Storage Unit (also known as the Lower Banning Canyon Basin) is the southern most storage unit in the Banning Canyon. This storage unit is located north of the City in an area of alluvial fill distinctly higher than that of the San Gorgonio Pass area, against the rugged foothills of the San Bernardino Mountains. The Banning Bench is 160 feet high and approximately 1.5 miles wide above the stream channel at the mouth of the San Gorgonio River Canyon. Groundwater from this storage unit tends to flow south into the Banning and Beaumont Storage Units. Depth to groundwater within this storage unit ranges from 50 feet to 100 feet. The City operates 3 wells in the Banning Bench Storage Unit, with a combined capacity of 1,800 gpm. Total possible extraction from this storage unit is 2.6 mgd.

East Banning Storage Unit

The Banning Storage Unit is located south of the Banning Bench Storage Unit, immediately north and south of I-10, near the City's downtown and East of the McMullen Fault. This storage unit encompasses approximately 7.6 square miles and serves the area at the base of the Banning

Bench and the southern portion of the City. Depth to groundwater within this storage unit ranges from 398 feet to 530 feet. The City operates 1 well in the East Banning Storage Unit with a capacity of 1,000 gpm. Total possible extraction from this storage unit is 1.4 mgd.

West Banning Storage Unit

The West Banning Storage Unit is located west of the East Banning Storage Unit, south of the Banning Bench Storage Unit, immediately north and south of I-10, west of the City's downtown and the McMullen Fault. This storage unit encompasses approximately 4.4 square miles and serves the area at the base of the Banning Bench and the southwestern portion of the City. Depth to groundwater within this storage unit ranges from 310 feet to 350 feet. The City operates 5 wells in the West Banning Storage Unit with a combined capacity of 4,500 gpm. Total possible extraction from this storage unit is 6.5 mgd.

Beaumont Storage Unit

The Beaumont Storage Unit covers approximately 28.0 square miles, bounded on the north by Cherry Valley and on the south, east and west by postulated faults of the Banning Fault System. A portion of the Beaumont Storage Unit is located in the Banning City limits, though this storage unit is primarily located within the City of Beaumont. Both the Beaumont-Cherry Valley Water District and the City of Banning pump water from this storage unit. Depth to groundwater within this storage unit ranges from 373 feet to 395 feet. The City operates 5 wells in the Beaumont Storage Unit with a combined capacity of 6,000 gpm. The City is adjudicated to withdraw approximately 4,000 acre-feet annually from this storage unit[1]. Total possible extraction from this storage unit is 8.6 mgd.

Cabazon Storage Unit

The Cabazon Storage Unit encompasses approximately 11 square miles. The Cabazon Storage Unit is located in the Hathaway and Potrero Sub Units near the eastern boundary of the City, southeast of the Banning Bench Storage Unit and northeast of the Banning Storage Unit. The City does not currently operate any wells in the Cabazon Storage Unit.

The following table illustrates the well data and range of pumping of each of the storage units in the City of Banning.

[1] "Case No. RIC 389197, Stipulation for Entry of Judgment Adjudicating Groundwater Rights in the Beaumont Basin," Exhibit C, San Timoteo Watershed Management Authority, June 11, 2003.

Table IV-1
Existing Pumping and Capacity of City Water Facilities

Source/Storage Unit	Number Of Wells	Design Capacity (gpm)	Minimum Reliable Capacity (gpm)	1993 Pumping (af/yr)	2003 Pumping (af/yr)
Upper Banning Canyon Storage Unit	4	2,000	520	41	280
Middle Banning Canyon Storage Unit	4	2,000	1,500	3,636	2,089
Banning Bench Storage Unit	3	1,800	1,400	1,245	877
East Banning Storage Unit	1	1,000	1,000	0	0
West Banning Storage Unit	5	4,500	4,500	445	2,724
Beaumont Storage Unit	5	5,600	5,600	1,743	4,083
Cabazon Storage Unit	0	0	0	0	0
Total	**22**	**16,900**	**14,820**	**7,110**	**10,053**

Source: Determination of Maximum Perennial Yield for the City of Banning," Geoscience Support Services, Inc., November 12, 2003.

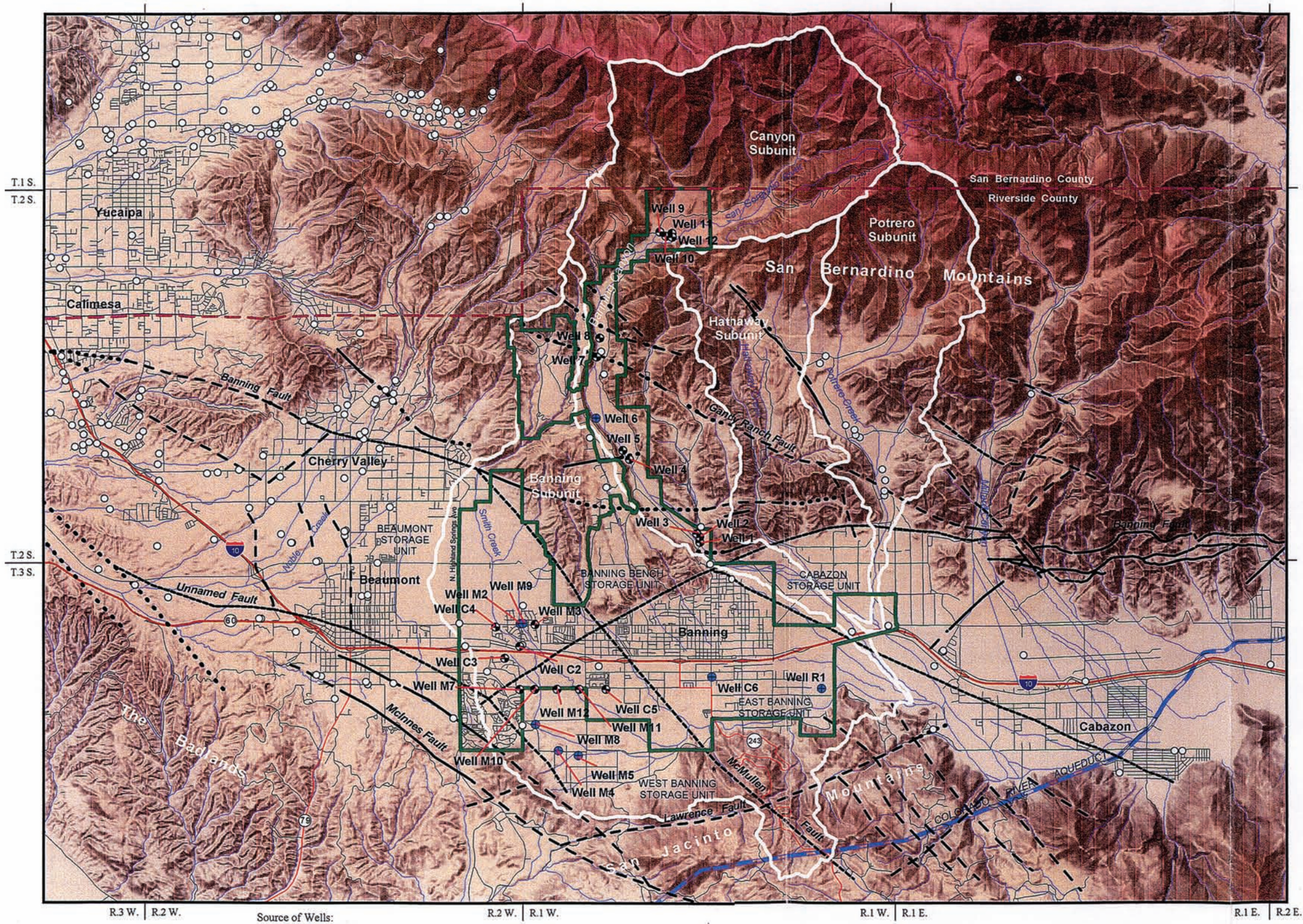
Distribution Facilities

The City of Banning Public Works and Utilities Department provides domestic water service to the City of Banning. The City owns and operates wells, reservoirs, and a distribution line system to deliver domestic water within the Banning planning area. The City provides municipal water service to an area of approximately 23 square miles, including approximately 25,000 people, via 10,188 metered service connections.[2] Well locations and hydrologic subunit boundaries are illustrated on Exhibit IV-1 Groundwater Storage Units in the Study Area.

[2] George Thacker, Assistant Director of Public Works, Personal Communication April 2, 2004.

CITY OF BANNING

DETERMINATION OF MAXIMUM PERENNIAL YIELD FOR THE CITY OF BANNING



WELL LOCATIONS

EXPLANATION

City of Banning Well Classification

- Active
- Inactive
- Well in United States Geological Survey Database
- white line — Hydrologic Subunit Boundary and Designation
- City of Banning Boundary
- County Boundary

Road Classifications

- Freeway
- State Highway
- Street
- River or Creek

Faults

- Approximate
- Concealed
- Mapped at Surface
- Inferred

Prepared by: DWB

Map Projection:
UTM 1927 (Zone 11)
Central Meridian: -117 degrees

Source of Wells:
GEOSCIENCE Field Survey, 2003;
United States Geological Survey Database, 2003.
Source of Faults:
Modified from R.M. Bloyd, Jr. USGS Water Supply Paper 1999-D, Plate 1, 1971.

NORTH

0 1 2 Miles

12-NOV-03

GEOSCIENCE

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E-mail: email@geoscience-water.com

TERRA NOVA®
Planning & Research, Inc.

Banning General Plan
Ground Water Storage Units in the Study Area

Exhibit
IV-1

The City provides water to its customers with water produced from local groundwater wells, as there is no current source of imported water available to the City. However, facilities have recently been constructed to convey State Water Program (SWP) water to the Beaumont-Banning area for groundwater recharge, agriculture or processed for potable use. Groundwater recharge in the region is possible with the SWP facilities, in addition to the continued recharge from natural runoff and percolation.

Areas of low permeability, fault barriers and constrictions in basin profiles limit the movement of groundwater. To assure a continuous supply of domestic water to meet demand, ground water replenishment programs have been proposed and wastewater reclamation strategies have been implemented.

As demonstrated above, City of Banning currently operates and maintains 22 potable groundwater production wells. Most of these wells are located in the Banning Canyon, with the remaining wells in the East and West Banning Storage Units and the Beaumont Storage Unit. The City also has 6 unequipped wells located in the East and West Banning Storage Units and the Beaumont Storage Unit.

The Banning Heights Mutual Water Company provides water services to the northern half of the planning area. Water delivered to its service area is primarily utilized for irrigation, and originates from the Whitewater River.

WATER DEMAND

The City of Banning currently relies on groundwater that is recharged by precipitation and runoff from the adjacent mountains. Hydrographs dating back to 1964 indicate the historic steady decline of the water table and the apparent lack of seasonal fluctuations in the San Gorgonio Subbasin. Records of average water use for the past 13 years (1991 through 2003) are shown in the following table.

Table IV-2
Average Water Demand

Year	Total Average Water Demand (af/yr)
1991	7,376
1992	6,719
1993	7,110
1994	7,056
1995	7,300
1996	8,443
1997	8,454
1998	8,180
1999	9,280
2000	9,528
2001	10,025
2002	9,752
2003	10,053

Source: George Thacker, Assistant Director of Public Works, Personal Communication April 2, 2004.

Depletion of the groundwater in storage has continued with the expansion of development of the City of Banning. Groundwater pumped by the City is used primarily for domestic purposes and golf course irrigation. Water pumped by the Banning Heights Mutual Water Agency is used primarily for domestic purposes and irrigation.

The total amount of groundwater in storage within the City of Banning area, including the Beaumont Storage Unit, is estimated between 1.4 and 2.6 million acre feet.[3] Groundwater production by the City of Banning is increasing at a rate of approximately 180 af/yr.[4] The increase production, combined with the below average rainfall from 1999 through 2003 has led to declines in the groundwater levels in the Banning subunits. This depletion of groundwater in the Banning area has led to a condition known as overdraft, in which the demand for groundwater exceeds the amount of recharge into the groundwater basin over a period of time.

[3] "Determination of Maximum Perennial Yield for the City of Banning," Geoscience Support Services, Inc., November 12, 2003.
[4] Ibid.

Overdraft conditions can result in significant adverse social, environmental and economic impacts, including an increased potential for land subsidence, which can result in ground fissuring and damage to buildings, sidewalks, and subsurface pipelines. Other adverse impacts resulting from overdraft include increased infrastructure and energy costs associated with drilling deeper wells and installing larger pumps, and the threat of a diminishing long-term water supply.

In order to avoid an overdraft condition, a maximum perennial yield that ranges from 6,500 to 10,400 acre-feet per year was calculated for the existing water sources in the planning area.[5] The maximum perennial yield is defined as the maximum amount of ground water that can be extracted on an average annual basis without causing environmental damage or adverse impacts. Table IV-3 below lists the maximum perennial yield for the planning area by subunit.

Table IV-3
Recommended Range of
Maximum Perennial Yield[1]

Subunit		Recommended Range Max Perennial Yield (acre feet/year)
Banning[2]	East Banning And Banning Bench	900 – 1,200
	West Banning	300 – 400
Canyon		4,000 – 6000
Hathaway		600 – 1,000
Potrero		700 – 1,800
Total		**6,500 – 10,400**
Banning Share of Beaumont Storage Unit		2,700[3]
Grand Total		**9,200-13,100**

[1]Source: "Determination of Maximum Perennial Yield for the City of Banning," Geoscience Support Services, Inc., November 12, 2003.
[2] Excludes the Beaumont Storage Unit.
[3] "City of Banning Draft Urban Water Management Plan 2005 Update," Prepared by Wildermuth Environmental Inc., March 22, 2005.

In order to determine the total capacity of the City's existing water sources, the current annual demand and the City's existing land use mix were determined, divided between residential and other uses. The resulting percentage was then applied to the 2003 demand for water of 10,053, to establish the water usage by land use type. The Table below describes the number of residential units and the amount of commercial acreage which can be built in the City within both the low and the high range of the perennial yield shown in Table IV-3, above.

[5] "Determination of Maximum Perennial Yield of the City of Banning," Geoscience Support Services, Inc. November 12, 2003.

Table IV-4
Remaining Capacity of Existing Water Sources

	Existing AF/Y	% of total Water Use	Remaining AF/Y till MPY	Existing Unit Count	AC/Y/ Unit	Future Units	Total Units at Buildout	Additional Water with Beaumont Storage Unit	Additional Units with Beaumont Storage Unit	Total Future Units with all existing water sources	Total Existing Plus Future Units with all existing water sources
High MPY Residential	4,077.51	68.3%	3,025.69	10,404	0.66	1,997	12,401	1,639	2,484	4,481	14,885
Low MPY Residential	4,077.51	68.3%	361.99	10,404	0.66	239	10,643	1,639	2,484	2,723	13,127
	Existing AF/Y	% of total Water Use	Remaining AF/Y till MPY	Existing Acreage	AF/A/Y	Additional Acres	Total Acres	Additional Water with Beaumont Storage Unit	Additional Acreage with Beaumont Storage Unit	Total Future Acres with all existing water sources	Total Existing Plus Future Acres with all existing water sources
High MPY Commercial/ Industrial/ Other	1,892.49	31.7%	1,404.31	801	3.98	353	1,154	761	191	544	1,345
Low MPY Commercial/ Industrial/ Other	1,892.49	31.7%	519.01	801	3.98	130	931	761	191	322	1,123

Table IV-4 shows that without the use of the Beaumont Storage unit, an additional 239 to 1,997 residential units and 130 to 353 acres of commercial/industrial land may be built in the City within the maximum perennial yield for its water resources. In addition, the Beaumont Storage Unit can accommodate an additional 2,484 residential units and 191 acres of commercial/industrial land. In total, therefore, 2,723 to 4,481 residential units and 322 to 544 acres of commercial/industrial land can be constructed in the City without the use of additional water sources.

ADDITIONAL WATER SOURCES

Imported Water

The San Gorgonio Pass Water Agency (SGPWA) is currently working in cooperation with the San Bernardino Valley Municipal Water District and the California Department of Water Resources Division of Engineering to construct the East Branch Extension Project of the State Water Project (SWP). The East Branch Extension Phase I has been completed and may bring up to 8,650 acre-feet per year (af/y) of water to the San Gorgonio Pass Subbasin. A Phase II is planned, and would bring an additional 8,650 af/y of water to the subbasin. SGPWA plans to use

the imported water to recharge the Beaumont Storage Unit, via the Noble Creek spreading grounds in Cherry Valley. The City is entitled to 3,287 af/y per phase, for a total of 6,574 af/y.

The SWP water may be used for any combination of uses, including aquifer recharge, irrigation, or, with treatment, potable uses.

Reclaimed Water

The City of Banning Wastewater Reclamation Plant is located at 2242 East Charles Street. The City contracts with United Water Services for the operation and maintenance of the water reclamation plant. Recent upgrades of the plant resulted in an increase in secondary treatment capacity to 3.6 mgd, including the addition of several plant parts that could accommodate future capacity to approximately 5.8 mgd. On a daily basis, the plant receives an average flow of approximately 2.3–2.4 mgd.

The City has considered the use of recycled water sources to provide additional supplies to those customers that could use reclaimed water for irrigation. These users include golf courses and landscaped areas of new homes, and could also include Caltrans and Banning Unified School District irrigation. A design has been completed on an irrigation pipeline that would allow the City to deliver reclaimed water to irrigation customers. Phase I of the City's proposed recycled water system would make 3.6 mgd (4,033 af/y) available for irrigation purposes. In addition, Phase II of the City's proposed recycled water system would make an additional 3.0 mgd (3,361 af/y) available for irrigation. Reclaimed water from the City's wastewater treatment plant and untreated SWP water from SGPWA constitute the potential supplies of non-potable water currently available to the City. The use of non-potable water could reduce the demand for potable supplies and help maintain supply reliability.

New technologies are also becoming available which allow individual property owners to reuse water for irrigation and other non-potable uses. This reuse includes gray water reclamation systems, which includes the reuse of water from sources such as sink drains, dishwashers and washing machines for irrigation purposes. These technologies can also be implemented, independent of City facilities, to augment the City's reuse of water, thereby increasing overall conservation. When recycled water from City facilities is made available, those users who have implemented on-site systems should be encouraged to connect to the City's facilities.

Total Additional Resources Available

The Table below illustrates the potential additional residential units and commercial/industrial acreage that could be supported by the SWP and recycled water programs, when implemented.

Table IV-5
Capacity of Additional Water Resources

Water Source	Available Water (af/y)	Potential Residential Units at 68.7% of Water Use	Potential Commercial/ Industrial/Other Acreage at 37.1% of Water Use
SWP Phase I	3,287	3,421	262
SWP Phase II	3,287	3,421	262
Recycled Water Phase I	4,033	4,198	321
Recycled Water Phase II	3,361	3,498	268
Total	**13,968**	**14,539**	**1,113**

WATER QUALITY

Groundwater quality is dependent upon a number of factors, including the water source, type of water-bearing materials in which the water occurs, water depth, proximity to faults, presence of surface contaminants, and quality of well maintenance. Drillers' logs indicate very coarse and poorly sorted materials more than 1,000 feet thick in the San Gorgonio Pass Subbasin. However, west and south of Banning, reddish-brown clayey sands and gravels are present. No wells that reached bedrock were located within the basin. Water quality in the City of Banning is considered excellent.

Total Dissolved Solids

Water wells within the Banning Canyon contain a total dissolved solids (TDS) concentration ranging from 185 to 360 milligrams per liter (mg/L). Studies of these wells indicated that water quality is within State limits for all chemical constituents, with the exceptions of calcium and bicarbonate. High bicarbonate levels are typical of runoff from the San Bernardino Mountains. In general, the TDS concentrations are lowest at the head of Banning Canyon at 185 to 200 mg/L. At the Canyon's base and at the valley floor TDS concentrations increase slightly to 185 to 360 mg/L.[6]

Nitrates

Another impact on area groundwater is contamination associated with long-term discharge from on-lot septic systems. The Riverside County Health Department and California Regional Water Quality Control Board have also acknowledged that septic tanks have the potential to adversely impact groundwater supplies. The greatest impacts to groundwater quality are expected to occur where septic systems serve large populations in high densities. Well-maintained community sewer systems provide excellent protection of groundwater resources, as they provide for the prompt removal of sewage materials.

[6] Ibid.

While much of the development in the City of Banning is connected to the community sewer system, development in outlying areas continues to utilize individual septic systems. Scattered residential sites in the northern parts of the City continue to rely on private septic systems for the disposal of wastewater. Many of these systems will be abandoned over time, as future development occurs and infrastructure is expanded.

WATER QUALITY REGULATION

A variety of federal and state legislation has been enacted to assure adequate planning, implementation and enforcement of water quality control efforts. Federal water quality legislation includes the Clean Water Act and the National Environmental Policy Act (NEPA). State statutes and administrative laws applicable to water quality include the California Water Code, California Environmental Quality Act (CEQA), California Code of Regulations, and other codes such as the Health and Safety Code, Fish and Game Code and Public Resources Code.

The California Regional Water Quality Control Board (CRWQCB) implements federal and state laws pertaining to water quality. In the San Gorgonio Pass area, the CRWQCB primarily addresses issues regarding agricultural drainage, impacts of geothermal power, and concerns about the Salton Sea, Tahquitz Creek and other sources of surface water. The CRWQCB also monitors leaking fuel storage tanks, illegal discharges of human or animal waste, and sites on which hazardous and toxic materials have been inappropriately disposed.

National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) implements the federal Clean Water Act and was adopted in 1990. The NPDES mandates that plans and programs for storm water management be developed, adopted and implemented to assure that municipalities "effectively prohibit non-storm water discharge into the storm drain and require controls to reduce the discharge of pollutants from storm water systems to waters of the United States to the maximum extent possible." Pollutant control measures are exempt from CEQA analysis. The City of Banning Public Works Department manages the city's NPDES program.

WATER CONSERVATION EFFORTS

With increasing demands on water supplies in the City of Banning, efforts to reduce per capita consumption are a priority. One of the best opportunities for water conservation is the implementation of water-efficient landscaping design and management. The City has adopted a Water-Efficient Landscape Ordinance, as required by the California Water Conservation in Landscaping Act of 1990. The ordinance establishes minimum water-efficient landscape requirements for all new and rehabilitated public and private landscape projects. It requires that project proponents submit landscape palettes to the Planning Department for approval. It also requires that construction plans, grading plans, irrigation design plans and landscape maintenance schedules be submitted for review and approval by the Public Works Department. In some cases, landscape irrigation audits and soils analyses are required. The City also complies with State law, which since 1992 has mandated the installation of low-flush toilets and low-flow showerheads and faucets in new construction.

FUTURE DIRECTIONS

The conservation and wise use of water resources will continue to be a central theme of community development planning in southern California. The City of Banning has developed programs that encourage and/or require water-efficient landscaping and irrigation design, as well as water-conserving home appliances and fixtures. The City can also implement new technologies as they become available and improve existing facilities in order to improve water conservation efforts. Finally, the continued education of residents and business people in water conservation will also aid in preserving the resource for future generations. The City is committed to assuring that development occurs only at levels which assure that water resources are sustained, and will not allow development to exceed the water resource's capacity.

Groundwater subbasins do not respect jurisdictional boundaries, and the threat of groundwater pollution or contamination must be viewed from both a regional and local perspective. Effective storm water management will help protect groundwater quality, and protection of the region's major mountain watersheds will help assure long-term natural recharge to the San Gorgonio Pass Subbasin and the respective groundwater storage units.

Additional long-term sources for ground water will need to be secured for the future development of the City. These sources may include additional water diversion from the Whitewater River, additional wells located in the Hathaway and Potrero subunits, and the as much as 6,574 acre-feet per year from the State Water Project. In addition, the construction of the City's recycled water system may contribute a total of 7,394 acre-feet per year for irrigation purposes, which would allow additional existing ground water resources to be used for potable uses. Since the need for additional water capacity will be generated by new development, it should be new development's responsibility to provide additional water for their projects.

GOAL, POLICIES AND PROGRAMS

GOAL
A balance of development which assures the maintenance of the water supply and its continued high quality.

Policy 1
New development projects proposing 50 units on property whose General Plan Land Use designation would allow 50 units, and/or 10 acres of commercial/industrial/other development, or more, whether through a tract map, Specific Plan or other planning application, shall be required to fund the provision of its entire water supply, either through SWP, recycled water or other means, as a condition of approval.

Program 1.A
In accordance with the 2003 Determination of Maximum Perennial Yield for the City of Banning, the City shall implement an annual ground water audit. This process involves evaluating groundwater level trends, production rates, ground water quality or other aquifer/well/pump considerations from the previous year (the water audit should be performed

six months prior to the start of the water accounting year) and using this information to make recommendations for pumping in the following year.
Responsible Agency: Public Works Department
Schedule: 2005-2006, Continuous

Program 1.B
The City shall develop construction plans and cost estimates for the construction of recycled water facilities for both Phase I and II, and make them available to the development community.
Responsible Agency: Public Works Department
Schedule: 2005-2006

Program 1.C
The City shall coordinate with the San Gorgonio Pass Water Agency and other appropriate agencies to assure that the City's SWP water can be delivered.
Responsible Agency: Planning Department, Public Works Department
Schedule: 2005-2006, Ongoing

Policy 2
The City shall require the use of drought-tolerant, low water consuming landscaping as a means of reducing water demand for new development.

Program 2.A
Continue to implement the City's Water Efficient Landscape Ordinance by requiring the use of native and drought-tolerant planting materials and efficient irrigation systems.
Responsible Agency: Public Works Department, Planning Department
Schedule: Continuous

Program 2.B
The City shall coordinate and cooperate with the San Gorgonio Pass Water Agency, Banning Heights Mutual Water Company and the Beaumont-Cherry Valley Water District to expand and strengthen educational/public relations programs regarding the importance of water conservation and water-efficient landscaping.
Responsible Agency: Public Works Department, Planning Department, Banning Heights Mutual Water Company, Beaumont-Cherry Valley Water District
Schedule: Continuous

Policy 3
The City shall require the use of recycled wastewater for new development, or where it is unavailable, the infrastructure for recycled water when it becomes available, as a means of reducing demand for groundwater resources.

Program 3.A
Coordinate with the Banning Heights Mutual Water Company regarding the future expansion of recycled wastewater treatment facilities to serve existing and new development projects in the City.
Responsible Agency: Planning Department, Public Works Department, Banning Heights Mutual Water Company
Schedule: Continuous

Program 3.B
Aggressively pursue all sources of funding to allow for the installation of a comprehensive recycled water distribution system throughout the City.
Responsible Agency: Public Works Department, City Manager's Office
Schedule: Immediate, Continuous

Program 3.C
The City shall study the potential of providing incentives to developers and property owners for the installation of on-site recycled water reclamation systems. Recycled water systems include the reuse of water from sources such as sink drains, dishwashers and washing machines for irrigation purposes.
Responsible Agency: Public Works Department, City Manager's Office
Schedule: 2005-2006

Policy 4
Require that all new development be connected to the sewage treatment system, or install dry sewers until such time as that connection is possible.

Policy 5
The City shall provide guidelines for the development of on-site storm water retention facilities consistent with local and regional drainage plans and community design standards.

Program 5.A
Enforce regulations and guidelines for the development and maintenance of project-specific on-site retention/detention basins which implement the NPDES program, enhance groundwater recharge, complement regional flood control facilities, and address applicable community design policies.
Responsible Agency: Public Works Department, Planning Department
Schedule: Continuous

Policy 6
Coordinate with the San Gorgonio Pass Water Agency, Banning Heights Mutual Water Company and the Beaumont-Cherry Valley Water District, the California Regional Water Quality Control Board and other appropriate agencies to share information on potential groundwater contaminating sources.

Program 6.A
Develop and maintain a system to share records and technical information with the San Gorgonio Pass Water Agency, Banning Heights Mutual Water Company and the Beaumont-Cherry Valley Water District, CRWQCB and other appropriate agencies regarding all sites that have the potential to contaminate groundwater resources serving the City.
Responsible Agency: Public Works Department, the San Gorgonio Pass Water Agency, Banning Heights Mutual Water Company and the Beaumont-Cherry Valley Water District, California Regional Water Quality Control Board
Schedule: Continuous

Policy 7
The City shall ensure that no development proceeds that has potential to create groundwater hazards from point and non-point sources, and shall confer with other appropriate agencies, as necessary, to assure adequate review and mitigation.

Policy 8
Encourage water conservation in existing development.

Program 8.A
Establish incentive programs for conversion of existing buildings to water conserving fixtures and landscaping.
Responsible Agency: Public Works – Water Department
Schedule: 2005-2006

OPEN SPACE AND CONSERVATION ELEMENT

PURPOSE

The purpose of the Open Space and Conservation Element is to provide for the comprehensive and long-term preservation and conservation of natural resources and open space lands located within the General Plan study area. The Element addresses protection and conservation of natural resources, including water, mineral and scenic resources. Conservation of natural resources and the provision and preservation of open space are important and necessary to maintaining a balanced and healthy community. As the City and the Pass region continue to grow and develop, thoughtful planning and resource management become increasingly important in helping to conserve natural resources and open space lands. One of the major objectives of the General Plan is to preserve and enhance the community, and to ensure that long-term growth within the City and its environs does not adversely affect environmental resources.

The policies and programs set forth in this element will serve as tools to create a productive harmony between existing and future development and the continued safeguarding of important natural resources and undisturbed open space areas. They also function to assure the long-term viability of open space and conservation lands by discouraging the premature or inappropriate conversion of these lands to urban uses.

Since conservation and open space are closely related, they have been integrated into one comprehensive element of the General Plan. The requirements of state law result in conservation elements that are oriented toward the management of natural resources to prevent waste, destruction or neglect. The Open Space Element emphasizes open space as a land use, and requires that preservation and management of natural resources be considered in land use planning and decision-making. This combined Open Space and Conservation Element describes conservation practices and open space lands, thereby meeting the requirements of both elements under law.

BACKGROUND

The broad and wide-ranging nature of the issues and subjects within this Element relate directly and indirectly to many other elements of this General Plan. This Element has direct influence on policies and programs set forth in the Land Use and Circulation Elements. Other elements directly related to this Element include the Parks and Recreation, Biological and Cultural Resources, Water Resources and Geotechnical Elements.

Open space land is generally defined as any parcel or area of land or water that is essentially unimproved and devoted to an open space use. Open space areas are mainly lands designated for the preservation of natural resources, including plant and animal species, for passive recreational uses, and for the production of resources (Government Code 65560(b). The Open Space Lands

Act (Government Code 65566) requires that local governments prepare open space plans before adopting required open space related ordinances. The Act helps assure consistency between the open space plan and zoning regulations.

Government Code Section 65563 requires that every city and county prepare and adopt a local open-space plan to ensure the comprehensive and long-range preservation of open space land within its jurisdiction. This plan must be submitted to the Secretary of the Resources Agency, and may consist of the Open Space Element that is adopted by the City Council. It must also contain specific programs that will implement the open-space plan, which the City is expected to pursue (Government Code Section 65565). Building permits, subdivision maps, and open-space zoning ordinances must be consistent with the local open-space plan (Government Code Section 65567).

Relevant to the conservation component of this Element, Government Code Section 65302(d) requires that General Plans include elements that address issues of resource conservation, development and utilization, including reclamation, prevention of pollution or resource degradation, and protection of watersheds. The Energy and Mineral Resources, Air Quality, and Water Resources elements of this Plan discuss these issues.

OPEN SPACE CATEGORIES

Four categories of open space land are relevant to the General Plan planning area: open space for the preservation of natural resources, open space for resource management; open space for recreation; and open space for public health and safety. The following discussion defines each of these open space categories. These designations are relevant to the City and its planning area, as well as on a regional level.

Open Space for the Preservation of Natural Resources

Open space for the preservation of natural resources refers to areas required for the protection of scenic resources, plant and animal resources and crucial habitat, as well as areas required for ecologic reserves and scientific study. Habitat and conservation in the planning area has become increasingly important due to the amount of federally listed species in the region. Most species of concern are addressed in the Draft Multiple Species Conservation Plan, currently (2004) in the approval process through the County, the California Department of Fish and Game, and the United States Fish and Wildlife Service (please also see the Biological Resources Element).

The following includes brief descriptions of open space areas for the preservation of natural resources.

Portrero Reserve ACEC

The northern boundary of the Portrero Reserve/Area of Critical Environmental Concern (ACEC) begins approximately 1.5 miles south of US Interstate-10 and approximately 2 to 3 miles east of Highway 79. A portion of this ACEC occurs within the City's planning area. The Portrero Valley contains almost 13,000 acres. Within the Reserve, the Bureau of Land Management (BLM) administers approximately 1,030 acres, with approximately 12,000 acres of private land proposed for acquisition. The Reserve is a unit under the South Coast Resource Management Plan. The BLM also administers another 7,969-acre parcel to the east. This large block of BLM

public land is located within an area being considered by Riverside County as a multi-species wildlife corridor, which stretches through the Badlands from the San Bernardino National Forest to the San Jacinto Wildlife Refuge.

There are approximately 1,900 acres of occupied Stephens' kangaroo rat habitat within the Reserve, as well as approximately 88 acres of potential Least Bell's Vireo habitat. The area contains 55 acres of suitable habitat for the California Gnatcatcher. Other sensitive, non-listed plant species have been recorded at the site. The area also supports 95 acres of Southern Cottonwood-Willow Riparian Forest and a small stand of South Coast Live Oak Riparian Forest.

San Bernardino National Forest
The San Bernardino Forest Reserve was established in 1893, and the San Bernardino National Forest was established in 1925. The San Bernardino National Forest is located in the San Gabriel, San Bernardino, San Jacinto and Santa Rosa Mountains, and encompasses 5 federally designated wildernesses ranging in size from 12,000 acres to almost 95,000 acres. These lands are administered by the U.S. Forest Service. The Forest is biologically diverse, providing a home to 440 wildlife species and thousands of plant species. Of these species, approximately 30 are federally listed threatened or endangered. Mount San Gorgonio, the tallest peak in Southern California (11,502 feet), is located within the Forest. The Forest provides for a variety of recreational opportunities including hiking, horseback riding, hunting, fishing, and mountain biking, as well as snow skiing, snowboarding and snowmobiling during winter months.

San Bernardino National Forest lands are interspersed throughout the north central and northwesterly portions of the planning area. There are no existing authorized or mapped trails on Forest lands in the planning area, nor are trails proposed by the US Forest Service. While potential exists for these lands to be exchanged for other lands contiguous to other portions of the Forest, environmental and topographical constraints make it unlikely these lands would be developed for urban uses. It is expected they would remain as open space.

San Jacinto and Santa Rosa Mountains National Monument
The U.S. Congress and the President established the San Jacinto and Santa Rosa Mountains National Monument in October 2000, creating a monument that extends from the San Gorgonio Pass southeast into the Imperial Valley. The Monument designates 440 square miles in five climate zones, ranging from desert to arctic pine. The Monument designation resulted in prohibition on mining and off-road vehicle use. A management plan is currently being developed for these lands.

Morongo Band of Mission Indians Conservation Lands
Lands designated for conservation and owned by the Morongo Band of Mission Indians occur adjacent to and east/northeast of portions of the City's planning area. Most of these lands are located within the San Jacinto Mountains and adjacent to the San Bernardino National Forest. These lands are generally vacant, with some areas fenced for livestock. Due to issues of accessibility, lack of a potable water system, and environmental constraints, it is unlikely that these lands will be developed in the next 20 years. Use of these lands is generally restricted to tribal members only.

Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP)
The County of Riverside is currently preparing a Multiple Species Habitat Conservation Plan (MSHCP) to develop principles, policies and regional proposals to conserve biological diversity on a regional scale. The Western Riverside County MSHCP is one of several large multi-jurisdictional habitat planning efforts within Southern California that have been instigated with the overall goal of maintaining biological diversity within a rapidly urbanizing region. The plan is intended to provide a coordinated reserve system and implementation program to facilitate the preservation of biological diversity and maintain the region's quality of life. The Plan includes standards for access into protected areas, trail use, and other standards that will be implemented by the County on unincorporated lands. The MSHCP designates only about 90 acres of land in the planning area for conservation, generally located in the Black Bench area.

Open Space for Resource Management
Open space for management of natural resources refers to those lands that contain resources that are utilized and developed, such as agricultural lands, cultural resource lands, areas containing major mineral deposits, areas of economic importance for the production of food or energy, and areas required for recharging groundwater or for water storage.

Within the planning area, agricultural uses include a fruit orchard located on the Banning Bench, and privately owned equestrian estates used for horse grazing, particularly on the south side of the planning area. These lands are not designated for open space, but rather are ultimately planned for residential land uses.

An approximately 182-acre site that includes mining and processing of aggregate materials is located at the north end of Hathaway. The site includes rock and sand mining operations owned by Robertson's Ready Mix, and an asphalt processing plant owned by Matich Corporation.

Finally, the San Gorgonio River, and its associated groundwater resource, represent an important area of Open Space to be preserved. The River can also be classified as Open Space for Public Health and Safety, as discussed below.

Williamson Act
The California Land Conservation Act of 1965, commonly referred to as the Williamson Act, allows local governments to enter into contracts with private landowners to restrict specific parcels of land to agricultural or related open space use. Landowners in return receive lower-than-normal property tax assessments, based upon farming and open space uses as opposed to full market value. Local governments receive an annual subsidy of property tax revenues from the state.

Based on information provided by Riverside County, there are currently three Williamson Act contracts in effect over approximately 3,500 acres in the planning area. These include lands located in the City limits near the Banning Bench, in the northwest portion of the planning area between Highland Springs Avenue and Highland Home Road, and in the City's southerly sphere of influence south of Westward Avenue.

Open Space for Outdoor Recreation

Open space for outdoor recreation includes areas of outstanding scenic, historic and cultural value, areas that are suitable for park and recreational purposes, and areas that can serve as links between major recreation and open space reservations, including utility easements, and trails and scenic highways corridors.

Parklands are an important source of open space for recreation. The City is home to six developed City-owned parks, including Repplier, Sylvan, Roosevelt Williams, Lions, Carpenter-Hamilton, Dysart, and three undeveloped park sites, including Mountain Avenue (working title), Smith Creek, and one unnamed park. One County-owned park, Gilman Ranch & Museum, and one privately-owned park are also located in the City. (Also please see the Parks and Recreation Element). In addition to the active and passive recreation opportunities that the City's parks provide, there are also trails and facilities that support passive recreation on a regional scale. These include numerous mountain trails through the San Jacinto and Santa Rosa Mountains.

Open Space for Public Health and Safety

Open space for public health and safety refers to lands that require special management or regulation because of hazardous or special conditions. These include earthquake fault zones, floodplains, watersheds, areas required for the protection of water quality and water reservoirs, unstable soil areas, and high fire areas. (Also see the Geotechnical, Hydrology, Emergency Preparedness and Water Resources Elements for more detailed information).

Although these lands remain open due to hazardous conditions, they have potential for other open space uses. Land located along fault lines can remain in its natural condition as a wildlife corridor, and flood control facilities may be usable for natural open space and recreation. In the planning area and immediate vicinity, this category of Open Space is primarily associated with the Banning Water Canyon.

Open Space Land Use Categories

The General Plan provides for approximately 6,460 acres of open space lands, or 27.4 percent of the total planning area The types of designated open space land uses and the acreages of each are shown in Table IV-6, below.

Table IV-6
Open Space Lands

	City Limits			Sphere of Influence			Planning Area			
Designation	**Acres Dev.**	**Acres Vacant**	**Acres Total**	**Acres Dev.**	**Acres Vacant**	**Acres Total**	**Acres Dev.**	**Acres Vacant**	**Acres Total**	**Grand Total Acres**
Open Space - Hillside Preservation							0.2	647.1	647.3	647.3
Open Space - Park	346.6	851.3	1,197.9	0.0	26.3	26.3	29.8	15.8	45.6	1,269.8
Open Space - Resources	122.3	2,565.9	2,688.3	25.0	1,598.7	1,623.7	1.2	230.0	231.2	4,543.1
Grand Total Open Space	**468.9**	**3,417.2**	**3,886.2**	**25.0**	**1,624.9**	**1,649.9**	**31.2**	**892.8**	**924.1**	**6,460.1**

Open Space – Resources and Open Space – Hillside Preservation lands include those lands which are to be preserved in the long term as open space, while Open Space – Parks lands are expected to be developed for recreational uses.

LAND ACQUISITION

The thoughtful designation of open space is one way to ensure that the development or preservation of natural resources is consistent with the goals and policies of the City. Open space regulation can allow the land to be used and/or preserved for the good of the entire community while remaining largely undeveloped. To help conserve open space in California, many conservation programs and legislative enactments have been put into effect. These include the Conservation Easement Act, Open-Space Easement Act of 1974, less-than-fee real property interests, and the Scenic Deed Act.

The Conservation Easement Act

The Conservation Easement Act (Civil Code Sections 815-816) was established to encourage the dedication of open space lands for ongoing conservation. A conservation easement is a voluntary agreement that allows a landowner to limit the type or amount of development on their property, while retaining private ownership of the land.

The easement is binding to successive owners of the land. The purpose of a conservation easement is to retain land predominantly in its natural, scenic, historical, agricultural, forested, or open space condition. By granting conservation easements, a landowner can assure that the property will be protected forever, regardless of who owns the land in the future.

Open Space Easement Act

The Open Space Easement Act of 1974 (Government Code Sections 51070-51097) provides another mechanism for preserving open space land. This gives local governments the authority to accept easements granted to them or non-profit organizations for the purpose of conserving open space and agricultural lands.

The Scenic Easement Deed Act

The Scenic Easement Deed Act (Government Code Sections 6950-6954) authorizes local governments to purchase fee land or scenic easements, but there is no special mechanism for obtaining them. Land uses are regulated by the Act, and local governments are authorized to adopt an ordinance, which establishes open space covenants with property owners.

Public Land Trusts
A public land conservation trust is another mechanism devoted to protecting open space, agricultural lands, wildlife habitats and natural resource lands. Land trusts achieve their objectives primarily through acquiring and managing interests in land.

Land conservation trusts can help to preserve open space and resource lands in a variety of ways. Trust funds can be used to acquire fee simple interest in real estate to then manage or lease back holdings, or to purchase conservation easements that protect sensitive land from development.

Since they are less restrained by formalities and regulations, private land trusts are usually able to respond more quickly than governmental entities to purchasing opportunities. They also have more experience to help public agencies with the technicalities of acquisition. A public land trust helps to preserve environmentally sensitive open space and conservation lands, pursues State and Federal financing with grants and loans, and other assistance methods for the preservation of open space. There are several land trusts that operate within the region. These include The Nature Conservancy, the Center for Natural Lands Management, Friends of Desert Mountains, the San Bernardino Mountains Land Trust, The Wildlands Conservancy, the California Desert Coalition, and the Arid Lands Community.

Methods of Funding Open Space
Viable funding mechanisms are essential to financing the acquisition and management of open space lands. These mechanisms may include State obligation bonds, grants and tax increment financing. In addition to these funding mechanisms, the California Legislature has helped organizations create grant and loan programs that can aid open space financing. These are available on a competitive basis for specific projects, and include:

- Land and Water Conservation Fund/Department of Parks and Recreation
- Habitat Conservation Program/Department of Parks and Recreation
- Simms Trail Bill/Department of Parks and Recreation
- Public Access Program/Department of Fish and Game
- Wildlife Conservation Board/ Department of Fish and Game
- Urban Forestry Program/California Department of Forestry

FUTURE DIRECTIONS

The City of Banning and its General Plan planning area contain many valuable natural resources and open space lands. These resources make a significant contribution to the desirability of the area and to an enhanced quality of life in the community. The preservation of these areas and resources is an ongoing effort that will need to be continually pursued by the City. While growth will continue to occur in the region, the implementation of the General Plan, Zoning Ordinance, and other regulatory mechanisms will help to promote conservation and ensure that development will not interfere with or interrupt open space and conservation lands in the future. The City should use these mechanisms, along with the development review process, to encourage and promote dedication and conservation of open space lands by private developers and landowners.

The City should work with the Morongo Band of Mission Indians and adjacent cities and communities to establish a network of open space and conservation lands within the Pass region.

The City can also play an important role in encouraging and supporting the preservation efforts of non-profit and other conservation groups, and assist in acquiring other open space lands. Assistance may be provided in finding federal and state grants for purchase of conservation easement and/or fee simple ownership interest.

GOALS, POLICIES, AND PROGRAMS

Goal 1
Open space and conservation lands that are preserved and managed in perpetuity for the protection of environmental resources or hazards, and the provision of enhanced recreational opportunities and scenic qualities in the City.

Goal 2
A balance between the City's built and open space environment and local and regional protection and preservation of its unique environment.

Policy 1
Identify and assess lands in the City, its sphere-of-influence and planning area, that are suitable for preservation as public or private, passive or active open space.

Program 1.A
The City shall maintain and use Open Space land use designations on the General Plan Land Use Map.
Responsible Agency: Planning Department, Community Services Department.
Schedule: 2005-2006

Program 1.B
Environmental hazard zones, including earthquake fault lines, floodways and floodplains, steep or unstable slopes, shall be designated as open space on the land use map.
Responsible Agency: Planning Department
Schedule: 2005-2006

Program 1.D
Lands on which cultural resources are identified may be preserved as Open Space
Responsible Agency: Planning Department
Schedule: Ongoing

Program 1.C
Inventory the costs of land acquisition, maintenance and other administrative functions, and encourage the transfer of public open space and conservation properties to existing land trusts for local property management.
Responsible Agency: Planning Department, City Council.
Schedule: 2005-2006, Update every two years.

Policy 2
The City shall protect natural hillsides above the toe of slope in perpetuity as undeveloped open space, and shall provide specific parameters under which development can occur within the Rural Residential – Hillside and Ranch/Agriculture Residential – Hillside land use designations. For purposes of this General Plan, the toe of slope is defined as the dividing line between rock formations where there is a noticeable break in the angle of slope from steep to shallow.

Program 2.A
The Zoning Ordinance shall be amended to include detailed provisions for the preservation of natural hillsides above the toe of slope. These provisions shall include, but not be limited to, density transfers from hillside areas to developable areas within the same parcel, building prohibitions for lands with grades exceeding 25%, permitted uses and building standards for developable areas in these hillsides, and grading parameters in these hillsides. The Zoning Ordinance shall also include procedures for the development of slope analyses to be reviewed and approved by the City Engineer, as a prerequisite to determining whether development can occur on any portion of a parcel.
Responsible Agency: Planning Department, City Engineer, Planning Commission, City Council.
Schedule: 2005-2006

Program 2.B
The City shall seek recreational usage of desirable hillside lands currently owned by public agencies, such as the Bureau of Land Management, the United States Forest Service or the County of Riverside; and shall secure open space lands from private entities by negotiating public access provisions and/or establishing a density transfer program.
Responsible Agency: City Manager's Office, Planning Department, City Council
Schedule: 2006-2007; Ongoing

Policy 3
Ridgelines shall be preserved as permanent open space.

Policy 4
The City shall preserve all watercourses and washes necessary for regional flood control, ground water recharge areas and drainage for open space and recreational purposes.

Policy 5
The City shall preserve permanent open space edges or greenbelts that define the physical limits of the City and provide physical separation between adjoining neighborhoods.

Program 5.A
The Land Use Map and Zoning Ordinance shall regulate development at the boundaries of the planning area to assure the preservation of a well-defined, functional or visual edge.
Responsible Agency: Planning Department.
Schedule: 2005-2006

Policy 6
Where practical, new development shall integrate pipeline, above- and under-ground utility corridors and other easements (including electric, cable and telephone distribution lines) into a functional open space network.

Policy 7
Drought tolerant landscaping materials and design features shall be incorporated into parks, roadway medians, common area landscaping, public facilities and other appropriate open space lands to retain and preserve the natural environment.

BIOLOGICAL RESOURCES ELEMENT

PURPOSE

The Biological Resource Element is intended to identify the variety of biological resources in the General Plan planning area and vicinity, and to provide for the preservation and protection of the integrity of the natural environment and its many biological resources. Biological resources represent the plants and wildlife species and ecosystems and habitats that contribute to an area's natural setting. They also add to the health, identify and image of the natural environment. This Element provides a basis for understanding biological resource issues, referencing other information sources that promote protection of biological resources and serve as mechanisms for long-term development. The Element is intended to guide decision makers in regulating land use and development, while protecting these critical resources. Goals, policies and programs set forth in this element are designed to ensure the long-term preservation of biological resources for the benefit of the entire community.

BACKGROUND

The Biological Resources Element is directly related to major policy issues in the Land Use and Open Space and Conservation Elements. This Element relates to the Parks and Recreation Element, wherein is addressed the community's commitment to and enjoyment of natural resources. The City is signatory to and is located within the planning area for the Western Riverside County Multiple Species Habitat Conservation Plan and Natural Communities Conservation Plan (MSHCP), a regional effort designed to protect and plan for the preservation of the region's biological resources. The Banning planning area encompasses a portion of the Portrero Reserve/Area of Critical Environmental Concern (ACEC), as well as lands within the San Bernardino National Forest. The planning area is adjacent to the San Jacinto and Santa Rosa Mountains National Monument to the south. The Biological Resources Element, which conforms with and supports the County's MSHCP, will influence and contribute to the effective implementation of conservation strategies, goals, policies and programs.

As set forth in Government Code Section 65302(d), the City is required to include an element that provides for the conservation and preservation of wildlife resources. This Section also requires that the City provide inventories of natural vegetation, fish and wildlife, including rare and endangered species and their habitat. In compliance with these requirements, this element includes goals, policies and programs, and includes plans and resource maps to illustrate areas important to the preservation of plant and animal life. These include the locations habitat for fish and wildlife species, and areas required for ecological and scientific study.

There are a number of state and federal regulations established to govern the health and well-being of biological resources, including habitat and wildlife species. The Endangered Species Act constitutes one of the most effective laws for protecting species and their habitat, identifying

endangered species and isolated populations, and preserving the region's biodiversity for current and future generations. In addition to the Endangered Species Act, California has several other laws and regulations that directly and indirectly protect plant and wildlife species. These include state enforcement of the federal Clean Water Act, the California Fish and Game Code and the Natural Community Conservation Planning Act.

Regional Setting And The Physical Environment

Climate

The planning area is located within the transition zone between the east edge of the inland valleys and the west edge of the Colorado Desert. Over an approximately twenty-mile distance, there are profound changes in flora and fauna caused by the merging of coastal climatic influences with those of the desert climate. Banning is located in the San Gorgonio Pass, which is at a higher elevation than either the desert or valleys. The planning area therefore receives higher rainfall, and milder summer and cooler winter temperatures than surrounding valleys and desert communities.

Topography

Some of the lower slopes of the San Bernardino Mountains also occur within the study area. These provide habitat for different plants and animals from those on the floor of the Pass. The region serves as a connector between vast areas of wildlands in the San Bernardino Mountains. Thus, wide-ranging animal species, such as deer, bears, and predators such as the golden eagle, bobcat and mountain lion, may be present. The Western Riverside County MSHCP designates the mountains up to the southern boundary of San Bernardino County as core habitat reserve.

The foothills of the San Jacinto Mountains occur on the southern boundary of the study area. This mountainous region where the Badlands merge into the main portion of the range constitutes a unified block of wildlands where the local ecosystems are largely intact. The MSHCP designates the southern edge of the study area as a Conservation Area, and it is another core area for protection of native flora and fauna in Western Riverside County.

There are major drainages below the canyons of the San Bernardino Mountains that support riparian habitat, and provide wildlife movement corridors. The blowsand ecosystem of the Coachella Valley is supported by the high sediment load and infrequent flooding in the San Gorgonio River. Several other watercourses occur in the planning area. These are Smith Creek, a relatively intact watercourse at the southern edge of the planning area, Montgomery Creek, and others. Drainage from the southern hillsides flows primarily away from the City into the San Jacinto Valley.

Regional Habitats And Natural Communities

There are seven separate natural communities represented in the Banning General Plan planning area. These are:

Riparian Scrub
This habitat, which consists of small areas of water-dependent plants, is supported by the primary watercourses that flow through the planning area. Many weedy non-native species are present, and the community is dominated by willows, mulefat, and a variety of annuals. Although this habitat comprises a smaller proportion of vegetation in the planning area, it is valuable for the diversity of wildlife, especially birds, that it supports. It is found in the channels of the San Gorgonio River, Smith Creek, and Mias Canyon.

Coastal Sage Scrub
This natural community is the object of substantial conservation efforts in southern California. There are several patches of this habitat within the planning area, although it is at the margin of its range in the San Gorgonio Pass. Largest areas are found in the City's sphere of influence in Section 13 and along the City's southern boundary. It is sometimes an early success ional stage, developing after wildland fires and then replaced by chaparral over time.

Riversidean Alluvial Fan Sage Scrub
This community is an expression of coastal sage scrub that is restricted to major washes and dry rivers. It provides habitat for several unique plants and animals, including the San Bernardino kangaroo rat, slender horned spineflower and Santa Ana woolly-star, all Federal listed endangered species. The City is out of range of these species. However, given that alluvial fan sage scrub is found along a two-mile stretch of the San Gorgonio River north of the main urban area, there is a relatively high potential for detection of rare plant species in this area.

Chaparral
Found at mid-elevations on hillsides throughout California, this common, fire-dependent community is present in the northern part of the planning area. It occurs in the San Gorgonio River watershed, and surrounding Mias Canyon in the eastern sphere of influence. Chaparral is composed of stiff shrubs with woody debris, including chamise, manzanita, black sage, wild lilac.

Grassland
This comprises most undeveloped lands in the planning area that are not in use for agriculture. It is composed of weedy species such as red brome, wild oats and ripgut grass and is found in the southern and western portions of the planning area. No native grasses, such as bunch grasses or wildflower fields, were detected in the planning area. Although non-native grassland has relatively low floristic diversity, it provides habitat for wildlife favoring low vegetative cover. Species utilizing non-native grasslands may include burrowing owls, foraging raptors, some amphibians and songbirds.

Meadows and Marshes
Although mapping conducted for the MSHCP indicates a plant community designated as "meadows and marshes" in the uppermost reaches of Banning Canyon, it was not found to be present during field surveys. It is possible this wetland community existed in the past but has been dried out by groundwater extraction.

Montane Coniferous Forest
This community is limited to the northern study area. It occurs on watershed slopes bordering the San Gorgonio River and tributaries near the San Bernardino County line.

Non-native Communities
The planning area contains lands in urban and rural development in addition to natural plant communities. Within urbanized areas, ornamental plants support a few native wildlife species that have adapted to the presence of humans.

A substantial portion of the planning area is or has been previously used for agriculture. Non-native grassland, which now occupies abandoned farmland, provides open space for a variety of common species, and foraging habitat for birds of prey.

Wildlife Habitat and Fauna
Wildlife habitat in the planning area generally follows natural communities descriptions. Urban lands, agricultural fields and the San Gorgonio River channel also provide habitat, albeit to a more limited extent than do undeveloped lands. The San Gorgonio River channel provides one of the few possible connectors for wildlife travel between the San Bernardino Mountains and the San Jacinto Mountains. Although its value as such for larger mammals and predators is not proven, it is thought to be important.

Habitat for a variety of wildlife, from chuckwalla lizards to bighorn sheep, is present on the rocky slopes of the San Bernardino and San Jacinto Mountains. Species with large ranges, such as bighorn sheep, benefit from the contiguous open spaces in these mountains, as do predators such as golden eagle and mountain lion. Most of these are public lands within the San Bernardino National Forest. In the City's southeastern sphere of influence (Section 13) there is an abundance of reptile species. These include the granite spiny lizard, and habitat suitable for the granite night lizards. Both these species are covered by the MSHCP. The relationship of the Banning General Plan with the MSHCP is further discussed below.

Sensitive, Rare, And Endangered Species

The Banning planning area includes a wide range of significant biological resources. Of these, some have been listed as threatened or endangered by the federal and state governments. "Endangered" species are those considered in imminent danger of extinction due their limited numbers. "Threatened" species refers to those likely to become endangered within the foreseeable future, primarily on a local scale. "Sensitive" species are those that are naturally rare or have been locally depleted or put at risk by human activities. Although the perpetuation of these species is not apparently significantly threatened, they are considered vulnerable and may be candidates for future listing. Tables IV-1 through IV-4 show the listed or sensitive species that have been reported by federal and state wildlife agencies and quasi-public conservation organizations as potentially occurring within the planning area. However, given that many of these species require larger stands of undisturbed habitat than are present in the planning area, the majority of these species are not likely to be present.

Table IV-7
Sensitive Plant Species Reported from the Vicinity of Banning

Sensitive Species	Status Designation	Habitat	Activity Season	Occurrence Probability
Allium marvinii **Yucaipa Onion**	Fed: ND Calif: ND CNPS: List 1B R-E-D: 3-3-3 MSHCP: N	Chaparral/clay, openings 2495-3495 feet elevation	April to May	Recorded CNDDB record, and another CNDDB record from surrounding areas
Antennaria marginata *White-margined Everlasting*	Fed: ND Calif: ND CNPS: List 2 R-E-D: 3-1-1 MSHCP: N	Lower and upper montane coniferous forest 6955-10925 feet elevation	May to August	Absent Plan area is outside known elevational range for the species. CNDDB and CNPS records from surrounding areas
Arabis breweri **var. *pecuniaria*** **San Bernardino Rock Cress**	Fed: ND Calif: ND CNPS: List 1B R-E-D: 3-2-3 MSHCP: N	Subalpine coniferous forest / rocky 8860- 10500 feet elevation	March to August	Absent Plan area is outside known elevational range for the species. CNDDB and CNPS records from surrounding areas
Arenaria lanuginose **ssp. *saxosa*** ***Rock Sandwort***	Fed: ND Calif: ND CNPS: List 2 R-E-D: 3-1-1 MSHCP: N	Subalpine coniferous forest,•upper montane coniferous forest / mesic, sandy 5905-8530 feet elevation	July to August	Absent Plan area is outside known elevational range for the species. CNDDB and CNPS records from surrounding areas
Astragalus pachypus **var. *jaegeri*** **Jaeger's Milk-vetch**	Fed: ND Calif: ND CNPS: List 1B R-E-D: 3-3-3 MSHCP: Y	Chaparral, cismontane woodland, coastal scrub, valley and foothill grassland / sandy or rocky 1200 - 3000 feet elevation	December to June	Moderate MSHCP, CNDDB, and CNPS records from surrounding areas
Botrychium crenulatum **Scalloped Moonwort**	Fed: ND Calif: ND CNPS: List 2 R-E-D: 2-2-1 MSHCP: N	Bogs and fens, lower montane coniferous forest, meadows and seeps, marshes and swamps / freshwater 4920-10760 feet elevation	June to July	Low CNDDB, and CNPS records from surrounding areas
Calochortus palmeri **var. *munzii*** *Munz's Mariposa Lily*	Fed: ND Calif: ND CNPS: List 1B R-E-D: 3-2-3 MSHCP: Y	Chaparral, lower montane coniferous forest 3900 - 7200 feet elevation	June to July	Recorded One MSHCP record, and CNPS records from surrounding areas
Calochortus palmeri **var. *palmeri*** *Palmer's Mariposa*	Fed: ND Calif: ND CNPS: List 1B	Chaparral, lower montane coniferous forest, meadows and	May to July	Moderate MSHCP and CNPS records from surrounding

Table IV-7
Sensitive Plant Species Reported from the Vicinity of Banning

Sensitive Species	Status Designation	Habitat	Activity Season	Occurrence Probability
Lily	R-E-D: 2-2-3 MSHCP: Y	seeps / mesic 3900 - 7200 feet elevation		areas
Calochortus plummerae **Plummer's Mariposa Lily**	Fed: ND Calif: ND CNPS: List 1B R-E-D: 2-2-3 MSHCP: Y	Rocky and sandy sites in coastal scrub, chaparral, grassland, woodland, forest 330 - 5600 feet elevation	May to July	Recorded CNDDB and two MSHCP records. Also records from surrounding areas
Castilleja lasiorhyncha **San Bernardino Mountains Owl's-clover**	Fed: ND Calif: ND CNPS: List 1B R-E-D: 2-2-3 MSHCP: Y	Chaparral, meadows and seeps, pebble (pavement) plain upper montane coniferous forest / mesic; 4265 - 7840 feet elevation	June to August	Low CNDDB and CNPS records from surrounding areas
Caulanthus simulans **Payson's Jewel-flower**	Fed: ND Calif: ND CNPS: List 4 R-E-D: 1-2-3 MSHCP: Y	Chaparral, coastal sage scrub 300 - 7200 feet elevation	March to June	Recorded One MSHCP record, and more MSHCP records from surrounding areas
Centromadia [Hemizonia] pungens **ssp. *laevis*** **Smooth Tarplant**	Fed: ND Calif: ND CNPS: List 1B R-E-D: 2-3-3 MSHCP: Y	Chenopod scrub, meadows and seeps, playas, riparian woodland, valley and foothill grassland / alkaline 0 - 1575 feet elevation	April to September	Absent Plan area is outside known elevational range for the species. CNDDB records from surrounding areas
Chorizanthe parryi **var. *parryi*** **Parry's Spineflower**	Fed: ND Calif: ND CNPS: List 3 R-E-D: ?-2-3 MSHCP: Y	Chaparral, coastal sage scrub 130 - 5600 feet elevation	April to June	Moderate MSHCP, CNDDB, and CNPS records from surrounding areas
Chorizanthe xanti var. leucotheca **White-bracted Spineflower**	Fed: ND Calif: ND CNPS: List 1B R-E-D: 2-2-3 MSHCP: Y	Mojavean desert scrub, pinyon and juniper woodland 985-3935 feet elevation	April to June	Low CNPS records from surrounding areas
Dodecahema leptoceras **Slender-horned Spineflower**	Fed: **END** Calif: **END** CNPS: List 1B R-E-D: 3-3-3 MSHCP: N	Chaparral, cismontane woodland, coastal scrub (alluvial fan) / sandy 660 - 2500 feet elevation	April to June	Moderate CNDDB records from surrounding areas
Eriogonum kennedyi **var. *alpigenum*** **Southern Alpine Buckwheat**	Fed: ND Calif: ND CNPS: List 1B R-E-D: 2-1-3 MSHCP: N	Alpine boulder and rock field, subalpine coniferous forest / granitic, gravelly 8530-11485 feet elevation	July to September	Absent Plan area is outside known elevation range for the species. CNDDB and CNPS records from surrounding

Table IV-7
Sensitive Plant Species Reported from the Vicinity of Banning

Sensitive Species	Status Designation	Habitat	Activity Season	Occurrence Probability
				areas
Gentiana fremontii **Moss Gentian**	Fed: ND Calif: ND CNPS: List 2 R-E-D: 3-1-1 MSHCP: N	Meadows and seeps / mesic, upper montane coniferous forest 7875-8860 feet elevation	June to August	Absent Plan area is outside known elevational range for the species. CNPS records from surrounding areas
Gilia leptantha* ssp. *leptantha **San Bernardino Gilia**	Fed: ND Calif: ND CNPS: List 1B R-E-D: 2-1-3 MSHCP: N	Lower montane coniferous forest / sandy or gravelly 4920-7990 feet elevation	June to August	Low CNDDB and CNPS records from surrounding areas
Helianthus nuttallii* ssp. *parishii **Los Angeles sunflower**	Fed: ND Calif: ND CNPS: List 1A R-E-D: Presumed extinct in CA MSHCP: N	Marshes and swamps / coastal salt and freshwater 35-5495 feet elevation	August to October	Low CNDDB and CNPS records from surrounding areas, but CNPS believes that it is extirpated
Hemizonia (Deinandra) mohavensis **Mojave Tarplant**	Fed: ND Calif: **END** CNPS: List 1B R-E-D: 2-1-3 MSHCP: Y	Chaparral, coastal scrub, riparian scrub / mesic 2100 - 5250 feet elevation	July to January	Recorded Two MSHCP records, also CNDDB, MSHCP, and CNPS records from surrounding areas
Heuchera parishii **Parish's alumroot**	Fed: ND Calif: ND CNPS: List 1B R-E-D: 2-1-3 MSHCP: Y	Alpine boulder and rock field; lower, subalpine, and upper montane coniferous forest / rocky 4920-12465 feet elevation	June to August	Low CNDDB records from surrounding areas
Horkelia cuneata ssp. puberula **Mesa Horkelia**	Fed: ND Calif: ND CNPS: List 1B R-E-D: 2-3-3 MSHCP: N	Chaparral, cismontane woodland, coastal scrub / sandy or gravelly 230-2655 feet elevation	February to September	Absent CNPS records from surrounding areas, but CNPS believes the species is extirpated
Hulsea vestita ssp. pygmaea **Pygmy Hulsea**	Fed: ND Calif: ND CNPS: List 1B R-E-D: 2-1-3 MSHCP: N	Alpine boulder and rock field, subalpine coniferous forest / granitic, gravelly 9300-12795 feet elevation	June to October	Absent Plan area is outside known elevational range for the species. CNPS records from surrounding areas
Lilium parryi **Lemon Lily**	Fed: ND Calif: ND CNPS: List 1B R-E-D: 2-2-2 MSHCP: Y	Lower montane coniferous forest, meadows and seeps, riparian forest, upper montane coniferous forest / mesic	June to August	Low CNDDB localities in the area are suppressed There are CNPS records also

Table IV-7
Sensitive Plant Species Reported from the Vicinity of Banning

Sensitive Species	Status Designation	Habitat	Activity Season	Occurrence Probability
		4270 - 9000 feet elevation		
Monardella macrantha* ssp. *hallii **Hall's Monardella**	Fed: ND Calif: ND CNPS: List 1B R-E-D: 2-1-3 MSHCP: Y	Chaparral, broadleaved upland forests, lower montane coniferous forests, cismontane woodlands, sandy valley and foothill grasslands 2400 - 7200 feet elevation	June to August	Moderate CNDDB and CNPS records from surrounding areas
Opuntia parryi *var*. serpentina (Opuntia californica var. californica) *Snake Cholla*	Fed: ND Calif: ND CNPS: List 1B R-E-D: 3-3-2 MSHCP: Y	Chaparral, coastal scrub 100-490 feet elevation	April to May	Absent Plan area is outside known elevational range for the species. MSHCP records from surrounding areas
Oreonana vestita **Woolly Mountain-parsley**	Fed: ND Calif: ND CNPS: List 1B R-E-D: 2-1-3 MSHCP: N	Lower montane, subalpine, and upper montane coniferous forest / gravel or talus 5300-11485 feet elevation	May to September	Low CNPS records from surrounding areas
Oxytropis oreophila* var. *oreophila *Mountain Oxytrope*	Fed: ND Calif: ND CNPS: List 2 R-E-D: 3-1-1 MSHCP: N	Alpine boulder and rock field, subalpine coniferous forest / gravelly or rocky 11155-12465 feet elevation	June to September	Absent Plan area is outside known elevational range for the species. CNPS records from surrounding areas
Parnassia cirrata **Fringed Grass-of-parnassus**	Fed: ND Calif: ND CNPS: List 1B R-E-D: 2-1-3 MSHCP: N	Upper and lower montane coniferous forest / mesic 7005- 9845 feet elevation	August to September	Absent Plan area is outside known elevational range for the species. CNDDB and CNPS records from surrounding areas
Quercus engelmannii **Engelmann Oak**	Fed: ND Calif: ND CNPS: List 4 R-E-D: 1-2-2 MSHCP: Y	Chaparral, cismontane and riparian woodland, valley and foothill grassland 395-4265 feet elevation	March to June	Moderate MSHCP records from surrounding areas
Sidalcea hickmanii* ssp. *parishii **Parish's Checkerbloom**	Fed: **CAN** Calif: **RAR** CNPS: List 1B R-E-D: 3-2-3 MSHCP: N	Chaparral, cismontane woodland, lower montane coniferous forest 3280-8200 feet elevation	June to August	Moderate CNDDB and CNPS records from surrounding areas

Table IV-7
Sensitive Plant Species Reported from the Vicinity of Banning

Sensitive Species	Status Designation	Habitat	Activity Season	Occurrence Probability
Taraxacum californicum **California Dandelion**	Fed: **END** Calif: ND CNPS: List 1B R-E-D: 3-2-3 MSHCP: N	Meadows and seeps / mesic 5315-9185 feet elevation	May to August	Low CNDDB and CNPS records from surrounding areas
Trichocoronis wrightii var. *wrightii* **Wright's Trichocoronis**	Fed: ND Calif: ND CNPS: List 2 R-E-D: 3-3-1 MSHCP: Y	Meadows and seeps, marshes and swamps, riparian forest, vernal pools / alkaline 15-1425 feet elevation	May to September	Absent Plan area is outside known elevation range for the species. CNPS records from surrounding areas

Table IV-8
Sensitive Fish, Amphibians and Reptiles Reported from the Vicinity of Banning

Sensitive species	Habitat	Status Designation	Occurrence Probability
Spea hammondii **Western Spadefoot Toad**	Ephemeral pools of the lowlands.	Fed: ND Calif: CSC MSHCP: Y	Recorded. 1990 record from Beaumont quad, T3S, R1E, S7. Two additional MSHCP records in the plan area.
Rana muscosa **Mountain Yellow-legged Frog**	Streams in shaded canyons; San Bernardino, San Gabriel, and San Jacinto Mts.	Fed: **END** Calif: CSC MSHCP: Y	Recorded. The lone CNDDB record was in 1925, in the San Gorgonio River, Cabazon Quadrangle, T3S, R1E, S3. The MSHCP shows four additional records in the plan area.
Reptiles			
Coleonyx variegatus abbotti **San Diego Banded Gecko**	Chaparral and coastal sage scrub, esp. areas with rocks.	Fed: ND Calif: ND MSHCP: Y	Recorded Four MSHCP records in the plan area
Gambelia wislizenii **Long-nosed Leopard Lizard**	Occupies scrub and desert flats with sandy or gravelly substrates	Fed: ND Calif: ND MSHCP: Y	Recorded Two MSHCP records in the

Table IV-8
Sensitive Fish, Amphibians and Reptiles Reported from the Vicinity of Banning

Sensitive species	Habitat	Status Designation	Occurrence Probability
			plan area
***Phrynosoma coronatum* (blainvillei population)** **Coast (San Diego) Horned Lizard**	Forest, shrubland or grassland w/ sandy areas and harvester ants (its principle prey).	Fed: ND Calif: CSC MSHCP: Y	Occurs Also 14 MSHCP records in the plan area.
***Sceloporus orcutti orcutii* Granite Spiny Lizard**	Rock outcrops in shrublands and grasslands.	Fed: ND Calif: ND MSHCP: Y	Occurs Also five MSHCP records in the plan area
Sceloporus graciosus vandenburganus **Southern Sagebrush Lizard**	Scrub in high elevation montane forests.	Fed: ND Calif: ND MSHCP: Y	Recorded One MSHCP record in the plan area.
Xantusia henshawi henshawi **Granite Night Lizard**	Rocky canyons and hillsides, where it occurs in exfoliating granite.	Fed: ND Calif: ND MSHCP: Y	Recorded 84 MSHCP records in the plan area.
Cnemidophorus hyperythrus (Aspidoscelis hyperythra) beldingi **Orange-throated Whiptail**	Coastal sage scrub, chaparral, grasslands	Fed: ND Calif: CSC MSHCP: Y	Low No MSHCP or CNDDB records in the plan area
Cnemidophorus (Aspidoscelis) tigris multiscutatus (stejnegeri) **Coastal Western Whiptail**	Woodlands, chaparral, scrublands, desert wash, and annual grasslands.	Fed: ND Calif: ND MSHCP: Y	Occurs Also ten MSHCP records in the plan area.
Anniella pulchra pulchra **California (Silvery) Legless Lizard**	Sandy or other friable soils with high moisture content to desert edge.	Fed: ND Calif: CSC MSHCP: Y	Moderate No MSHCP or CNDDB records in the plan area
Charina (Lichanura) trivirgata roseofusca **Coastal Rosy Boa**	Rocky chaparral, coastal scrub.	Fed: ND Calif: ND MSHCP: Y	Recorded Five MSHCP records in the plan area.
Charina (bottae) umbratica Southern Rubber Boa	Grasslands, chaparral, forests, and woodlands where cover is available of rocks, rocky outcrops, rotting logs, standing dead trees, stumps, and exfoliated bark	Fed: ND Calif: **THR** MSHCP: Y	Low No MSHCP or CNDDB records in the plan area
Diadophis punctatus modestus **San Bernardino Ringneck Snake**	Open areas with rocks or other surface debris.	Fed: ND Calif: ND MSHCP: Y	Recorded One MSHCP record in the plan area.
Arizona elegans occidental **California Glossy Snake**	Coastal sage scrub, chaparral	Fed: ND Calif: ND MSHCP: Y	Recorded One MSHCP record in the plan area

Table IV-8
Sensitive Fish, Amphibians and Reptiles Reported from the Vicinity of Banning

Sensitive species	Habitat	Status Designation	Occurrence Probability
Lampropeltis zonata parvirubra **California (San Bernardino) Mountain Kingsnake**	Montane or riparian habitats	Fed: ND Calif: CSC MSHCP: Y	Recorded Two MSHCP records in the plan area. MSHCP references to San Diego Mountain Kingsnakes in the plan area are incorrect, as it is outside that subspecies known range.
Salvadora hexalepis virgultea **Coast Patch-nosed Snake**	Many habitats, including grasslands, chaparral, woodlands.	Fed: ND Calif: CSC MSHCP: Y	Recorded Five MSHCP records in the plan area.
Thamnophis hammondii **Two-striped Garter Snake**	Perennial and intermittent streams.	Fed: ND Calif: CSC MSHCP: Y	Recorded One MSHCP record in the plan area
Crotalus ruber ruber **Northern Red Diamond Rattlesnake**	Coastal sage scrub, chaparral, desert scrub.	Fed: ND Calif: CSC MSHCP: Y	Recorded Four MSHCP records in the plan area

Table IV-9
Sensitive Bird Species Reported from the Vicinity of Banning

Sensitive species	Habitat	Status Designation	Occurrence Probability
Cathartes aura meridionalis **Turkey Vulture**	Forages in open areas, nests on remote cliffs.	Fed: ND Calif: ND MSHCP: Y	Recorded Two MSHCP records in the plan area
Elanus leucurus majusculus White-tailed Kite	Open areas such as grassland, savanna, open woodlands.	Fed: ND Calif: FP MSHCP: Y	Recorded One MSHCP record in the plan area
Circus cyaneus hudsonius **Northern Harrier**	Marshes, grasslands, and agricultural fields.	Fed: ND Calif: CSC MSHCP: Y	Recorded Three MSHCP records in the plan area
Accipiter striatus velox **Sharp-shinned Hawk**	In winter, hunts in forests and woodlands, also forages in open	Fed: ND Calif: CSC	Recorded One MSHCP

Table IV-9
Sensitive Bird Species Reported from the Vicinity of Banning

Sensitive species	Habitat	Status Designation	Occurrence Probability
	areas. In so. California, nests only rarely, only in the mountains.	(nesting) MSHCP: Y	record in the plan area.
Accipiter cooperii **Cooper's Hawk**	Nests & hunts in forests, woodlands, sometimes hunts over open land.	Fed: ND Calif: CSC (nesting) MSHCP: Y	Recorded Five MSHCP records in the plan area
Buteo swainsoni *Swainson's Hawk*	Open desert, grassland, or cropland containing scattered, large trees or small groves.	Fed: ND Calif: **THR** MSHCP: Y	Recorded 2004 migration sightings
Buteo regalis *Ferruginous Hawk*	Winters in grasslands, open shrublands, agricultural areas.	Fed: ND Calif: ND MSHCP: Y	Low No MSHCP or CNDDB records in the plan area
Aquila chrysaetos canadensis **Golden Eagle**	Nests in remote trees and cliffs; forages over shrublands and grasslands.	Fed: ND Calif: CSC, FP MSHCP: Y	Occurs Seven MSHCP records in the plan area
Falco columbarius *Merlin*	Winters in agricultural areas, open habitats.	Fed: ND Calif: CSC MSHCP: Y	Recorded One MSHCP record in the plan area
Falco mexicanus **Prairie Falcon**	Nests on high cliffs, forages primarily over open lands.	Fed: ND Calif: CSC MSHCP: Y	Recorded Three MSHCP records in the plan area
Oreortyx pictus (picta) eremophilus *Mountain Quail*	Montane and foothill chaparral.	Fed: ND Calif: ND MSHCP: Y	Occurs Three MSHCP records in the plan area
Athene (Speotyto) cunicularia hypugaea Burrowing Owl	Nests in burrows adjacent to grasslands, scrub habitats, agricultural areas	Fed: ND Calif: CSC MSHCP: Y	Recorded Three MSHCP records in the plan area
Strix occidentalis occidentalis **California Spotted Owl**	Forest and woodland w/ mixed conifers and oaks; mountains.	Fed: ND Calif: CSC MSHCP: Y	Low No MSHCP or CNDDB records in the plan area
Chaetura vauxi vauxi Vaux's Swift	Forages over most terrains and habitats. Does not nest in so. California.	Fed: ND Calif: CSC MSHCP: Y	Recorded One MSHCP record in the plan area
Picoides pubescens turatie Downy Woodpecker	Uses riparian deciduous and adjacent mixed forest habitats	Fed: ND Calif: ND MSHCP: Y	Recorded One MSHCP record in the plan area
Empidonax traillii extimus	Nests in willow scrub habitats;	Fed: **END**	Recorded

Table IV-9
Sensitive Bird Species Reported from the Vicinity of Banning

Sensitive species	Habitat	Status Designation	Occurrence Probability
Southwestern Willow Flycatcher	very rare in s. Calif.	Calif: **END** MSHCP: Y	One MSHCP record in the plan area
Lanius ludovicianus gambeli **Loggerhead Shrike**	Low elevation open areas with scattered trees and shrubs.	Fed: ND Calif: CSC MSHCP: Y	Occurs Also five MSHCP records in the plan area
Vireo bellii pusillus **Least Bell's Vireo**	Riparian woodlands and forest with dense understory vegetation; breeding range of this ssp. restricted to s. and c. Calif. and n. Baja Calif.	Fed: **END** Calif: **END** MSHCP: Y	Low No MSHCP or CNDDB records in the plan area
Eremophila alpestris actia **California Horned Lark**	Open (often barren) areas, including grasslands, agricultural fields, playas; this ssp. restricted to coastal slopes of Calif. and Baja Calif	Fed: ND Calif: CSC MSHCP: Y	Recorded Four MSHCP records in the plan area
Progne subis subis **Purple Martin**	In So. Calif. nests primarily in cavities in large, dead snags.	Fed: ND Calif: CSC MSHCP: Y	Low No MSHCP or CNDDB records in the plan area
Tachycineta bicolor Tree Swallow	Riparian woodland and forest; Nesting in So. Calif.(now rare) is restricted to the lowlands and foothills; migrants occur over a variety of habitats	Fed: ND Calif: ND MSHCP: Y	Recorded One MSHCP record in the plan area
Campylorhynchus brunneicapillus cousei Cactus Wren	Coastal sage scrub, shrublands (with cactus)	Fed: ND Calif: ND MSHCP: Y	Recorded Four MSHCP records in the plan area
Catharus ustulatus **Swainson's Thrush**	Nests in mixed coniferous forest, riparian woodland.	Fed: ND Calif: ND MSHCP: Y	Low No MSHCP or CNDDB records in the plan area
Toxostoma lecontei lecontei LeConte's Thrasher	Desert washes and flats with scattered shrubs and large areas of open, sandy, or alkaline terrain in desert habitats.	Fed: ND Calif: CSC MSHCP: Y	Low No MSHCP or CNDDB records in the plan area
Vermivora ruficapilla ridgwayi **Nashville Warbler**	Breeds in coniferous forest with scrubby understory; in the w. U.S. nests from s. B. C. south to s. Calif.	Fed: ND Calif: ND MSHCP: Y	Recorded One MSHCP record in the plan area
Dendroica petechia brewsteri **Yellow Warbler**	Nests in riparian forest and woodland, migrants can occur in any terrestrial habitat.	Fed: ND Calif: CSC MSHCP: Y	Recorded Two MSHCP records in the plan area
Wilsonia pusilla pileolata	Nests in shrubby montane habitats,	Fed: ND	Recorded

Table IV-9
Sensitive Bird Species Reported from the Vicinity of Banning

Sensitive species	Habitat	Status Designation	Occurrence Probability
Wilson's Warbler	migrants can occur in any terrestrial habitat; breeds in San Jacinto and San Bernardino Mts.	Calif: ND MSHCP: Y	Three MSHCP records in the plan area
Icteria virens longicauda **Yellow-breasted Chat**	Nests in riparian forest and woodland, migrants can occur in any terrestrial habitat.	Fed: ND Calif: CSC MSHCP: Y	Low No MSHCP or CNDDB records in the plan area
Aimophila ruficeps canescens **Southern California Rufous-crowned Sparrow**	Occurs on sparsely vegetated, often rocky, coastal sage scrub slopes; this ssp. restricted to s. Calif. and n. Baja Calif.	Fed: ND Calif: CSC MSHCP: Y	Recorded One MSHCP record in the plan area
Amphispiza belli belli **Bell's Sage Sparrow**	Chaparral, dense coastal sage scrub; this ssp. restricted to coastal slopes of Calif. south to Baja Calif.	Fed: ND Calif: CSC MSHCP: Y	Recorded Two MSHCP records in the plan area
Ammodramus savannarum perpallidus Grasshopper Sparrow	Dense, dry grasslands, especially native grasslands with a mix of grasses, forbs, and widely scattered shrubs. Usually on hillsides and mesas in so. California.	Fed: ND Calif: ND MSHCP: Y	Low No MSHCP or CNDDB records in the plan area
Melospiza* (*Zonotrichia*) *lincolnii alticola **Lincoln's Sparrow**	Grassy and brushy habitats, often near water; s. Calif. ssp. restricted to montane meadows with shrubby willows.	Fed: ND Calif: ND MSHCP: Y	Low No MSHCP or CNDDB records in the plan area

Table IV-10
Sensitive Mammals Reported from the Vicinity of Banning

Sensitive species	Habitat	Status Designation	Occurrence Probability
Macrotus californicus **California Leaf-nosed Bat**	Desert areas, palm oasis, <2000'. Roosts in deep mine tunnels, caves; sometimes buildings or bridges	Fed: ND Calif: CSC MSHCP: Y	Low No MSHCP or CNDDB records in the plan area
Myotis evotis **Long-eared Myotis**	Chaparral, woodlands, coniferous forest.	Fed: ND Calif: ND MSHCP: Y	Moderate No MSHCP or CNDDB records in the plan area
Myotis thysanodes **Fringed Myotis**	Woodland habitats, coniferous forest, grassland.	Fed: ND Calif: ND MSHCP: Y	Moderate No MSHCP or CNDDB records in the plan area
Myotis volans **Long-legged Myotis**	Woodlands and forest, chaparral.	Fed: ND Calif: ND MSHCP: Y	Moderate No MSHCP or CNDDB records in the plan area
Myotis ciliolabrum **Small-footed (Western) Myotis**	Riparian forest and woodland, coniferous forest.	Fed: ND Calif: ND MSHCP: Y	Moderate No MSHCP or CNDDB records in the plan area
Corynorhinus townsendii townsendii / pallescens **Townsend's (Western) Big-eared Bat**	Desert scrub, chaparral, coniferous forest.	Fed: ND Calif: CSC (full species) MSHCP: Y (*pallescens*)	Moderate No MSHCP or CNDDB records in the plan area
Antrozous pallidus **Pallid Bat**	Desert scrub, brushlands, forest, and woodlands.	Fed: ND Calif: CSC MSHCP: Y	Recorded One MSHCP record in the plan area
Eumops perotis californicus (californica) **Western Mastiff Bat**	Coniferous forest, woodlands, chaparral, desert scrub and woodlands.	Fed: ND*)* Calif: CSC MSHCP: Y (*californica)*	Moderate No MSHCP or CNDDB records in the plan area
Sylvilagus bachmani cinerascens *Brush Rabbit*	Chaparral	Fed: ND Calif: ND MSHCP: Y	Low No MSHCP or CNDDB records in the plan area
Lepus californicus bennettii **San Diego Black-tailed Jackrabbit**	Grassland, sparse scrub habitats; ssp. restricted to coastal slope of s. Calif.	Fed: ND Calif: CSC MSHCP: Y	Recorded Two MSHCP records in the plan area
Perognathus longimembris brevinasus **Los Angeles Pocket Mouse**	Open shrublands, grasslands.	Fed: ND Calif: CSC MSHCP: Y	Recorded Five MSHCP records in the plan area
Chaetodipus fallax fallax	Open shrublands and sandy areas,	Fed: ND	Recorded

Table IV-10
Sensitive Mammals Reported from the Vicinity of Banning

Sensitive species	Habitat	Status Designation	Occurrence Probability
Northwestern San Diego Pocket Mouse	usually in association with rocks or coarse gravel.	Calif: CSC MSHCP: Y	Five MSHCP records in the plan area
Dipodomys stephensi **Stephen's Kangaroo Rat**	Grasslands, sparse coastal scrub.	Fed: **END** Calif: **THR** MSHCP: Y	Recorded There are MSHCP and two CNDDB records in the plan area.
Dipodomys merriami parvus **San Bernardino (Merriam's) Kangaroo Rat**	Riversidean alluvial fan sage scrub and sandy loam soils, alluvial fans and flood plains, and along washes with nearby sage scrub.	Fed: **END** Calif: CSC MSHCP: Y	Recorded One MSHCP record in the plan area
Onychomys torridus ramona **Southern Grasshopper Mouse**	Frequents desert areas, especially scrub habitats with friable soils for digging. Also occurs in coastal scrub, mixed chaparral, sagebrush, low sage, and bitterbrush habitats.	Fed: ND Calif: CSC MSHCP: Y	Low No MSHCP or CNDDB records in the plan area
Neotoma lepida intermedia **San Diego Desert Woodrat**	Chaparral and other shrublands.	Fed: ND Calif: CSC MSHCP: Y	Recorded One MSHCP record in the plan area
Canis latrans clepticus **Coyote**	Widespread, uses many habitats.	Fed: ND Calif: ND MSHCP: Y	Recorded Five MSHCP and two CNDDB records in the plan area
Mustela frenata latriostra **Long-tailed Weasel**	Shrublands, grasslands, riparian, near open water.	Fed: ND Calif: ND MSHCP: Y	Recorded One MSHCP record in the plan area
Taxidea taxus **American Badger**	Deserts, chaparral, coastal sage scrub – habitats must contain friable soils.	Fed: ND Calif: ND MSHCP: Y	Moderate No MSHCP or CNDDB records in the plan area
Puma concolor **Mountain Lion**	Forested and brushy areas.	Fed: ND Calif: ND MSHCP: Y	Moderate No MSHCP or CNDDB records in the plan area
Lynx rufus californicus **Bobcat**	Widespread, various scrub habitats	Fed: ND Calif: ND MSHCP: Y	Recorded Two MSHCP records in the plan area

Federal designations: (F = federal Endangered Species Act, US Fish and Wildlife Service):
- **END: Federally listed, Endangered.**
- **THR: Federally listed, Threatened.**
- **CAN: Candidate for Federal listing.**
- ND: Not designated.

***State designations*:** (C = California Endangered Species Act, California Dept. of Fish and Game)
END: State listed, Endangered.
THR: State listed, Threatened.
RAR: State designated, Rare.
CSC: California Special Concern Species.
FP: Fully Protected
ND: Not designated.

***MSHCP designations*:** (Western Riverside County Multiple Species Conservation Plan)
Y: Listed in the MSHCP.
N: Not listed in the MSHCP.

California Native Plant Society (CNPS) designations: (Taken from Skinner and Pavlick 1994)
List 1B: Plants rare and endangered in California and throughout their range.
List 2: Plants rare, threatened or endangered in California but more common elsewhere.
List 3: Plants for which more information is needed.
List 4: Plants of limited distribution; a "watch list."

CNPS R-E-D Code:

Rarity
1: Rare, but found in sufficient numbers and distributed widely enough that the potential for extinction or extirpation is low at this time.
2: Occurrence confined to several populations or one extended population.
3: Occurrence limited to one or a few highly restricted populations, or present in such small numbers that it is seldom reported.

Endangerment
1:Not endangered.
2:Endangered in a portion of its range.
3:Endangered throughout its range.

Distribution
1:More or less widespread outside California.
2:Rare outside California.
3:Endemic to California (i.e., does not occur outside California).

Definitions of occurrence probability:

Occurs:	Observed on the site by AMEC personnel, or recorded on-site by other qualified biologists.
Recorded:	At least one literature or museum record of this species present, but the habitat now appears unsuitable.
High:	Observed in similar habitat in region by qualified biologists, or habitat on the site is a type often utilized by the species and the site is within the known range of the species.
Moderate:	Reported sightings in surrounding region, or site is within the known range of the species and habitat on the site is a type occasionally used by the species.
Low:	Site is within the known range of the species but habitat on the site is rarely used by the species.
Absent:	A focused study failed to detect the species, or, no suitable habitat is present.

Ecosystem Management and Biodiversity Protection

The natural environment and human life are inextricably linked. Earth's ecosystems are composed of interactions between species and the natural environment that represent the culmination of historic evolutionary processes of long standing. Soil formation, waste disposal, air and water purification, nutrient cycling, solar energy absorption, and management of biogeochemical and hydrological cycles are all dependent on biodiversity. These life-sustaining resources and services are provided by native species. While the complexity o the earth's ecosystems are not fully understood, it is clear that each member of an ecosystem fills an important role.

Humans, as the most dominant organism on earth, make use of more than half of the world's terrestrial ecosystems. Although human survival depends on utilization of natural resources, many of our current practices are disruptive and damaging to ecological processes and the natural environment. The majority of biodiversity losses may be traced to the conversion of natural habitat to human uses.

Ecosystem management, which attempts to integrate ecological, economic and social goals in a unified approach, is an important step towards protecting biodiversity. It recognizes that each of these domains is interrelated, affect, and are affected, by the others. Sustained progress towards social goals in a deteriorating environment or economy, or vice versa, is not possible. Legislation that seeks to restore, maintain, and safeguard ecological systems will ensure the well being and security of future generations.

Public Land Agencies and Ecosystem Management
Regulations and legislations aimed at protecting and managing biological resources are augmented by the activities of public land agencies and non-profit organizations focused on thoughtful ecosystem management and biological resource protection. Lands owned and managed by these agencies and organizations may provide for recreational uses, and therefore varying degrees of disturbance. Nonetheless, the mandate for most is the safeguarding of cultural, scenic and biological resources.

In the planning area and vicinity, a number of public land agencies and non-profit organizations work together to manage the region's open space lands. Some of these agencies include the National Park Services, the United States Forest Service, and the Bureau of Land Management. On a state level, agencies include the California Department of Fish and Game and the California Department of Parks and Recreation. Non-profit organizations include the Nature Conservancy.

Endangered Species Act
The U.S. Endangered Act (ESA) of 1973 represents powerful legislation for the protection of biological resources. The ESA program, unlike earlier regulations that focused primarily on "game" animals, seeks to identify all endangered species and populations in order to preserve as much biodiversity as possible. The U.S. Department of the Interior, through the U.S. Fish and Wildlife Service, is responsible for the protection of most threatened and endangered species, while the Department of Commerce, through the National Marine Fisheries Service, is responsible for marine mammals and anadromous fish. The ESA's structure is comprised of the following components:

1. Listing of species and designation of critical habitat;
2. Recovery planning, and
3. Prohibitions and exceptions to prohibitions.

The ESA regulates a wide range of activities involving endangered species. These include the "taking" (harassing, harming, pursuing, hunting, shooting, trapping, killing, capturing or collecting) either accidentally or intentionally, importing into or exporting out of the United States; possessing, selling, transporting or shipping; and selling or offering for sale any endangered species. ESA violators are subject to fines up to $100,000 and one-year

imprisonment. In 2004, the United States had 1,265 species on its endangered and threatened species lists, 24 proposed for listing, and about 280 candidate species waiting to be considered.

Since eighty percent of habitat for more than half of all listed species occurs on non-public property, private land is essential in endangered species protection. In a 1995 decision, the Supreme Court ruled that destroying habitat is as harmful to endangered species as directly taking them. Recently, however, the Service has been negotiating Habitat Conservation Plans (HCPs) with private landowners, wherein the landowners are allowed to disturb a portion of their land as long as the species benefits overall.

California Endangered Species Act

Fish and Game Code Sections 2050 et. seq embodies the California Endangered Species Act (CESA). Section 2080 of the code prohibits "take" of any species that the commission determines to be an endangered species or a threatened species. Take is defined as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill" a protected species. CESA allows for take incidental to otherwise lawful development projects. CESA emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate mitigation planning to offset losses of listed species populations and their essential habitats caused by projects.

The CDFG may also authorize individuals, public agencies, universities, zoological gardens, and scientific or educational institutions, to import, export, take, or possess any endangered species, threatened species, or candidate species of plants and animals for scientific, educational, or management purposes. Authorization is provided through permits or memorandums of understanding.

The CESA largely parallels the federal law, and provides similar requirements and mandates similar to those described for the ESA. It also prohibits the taking of both endangered species and those petitioned for listing at the state level. It also includes plant species under its protection, where the federal ESA only protects plants on federally-owned lands or where there is a federal nexus. In Banning and other pass cities, local government is responsible for ensuring that all proposed projects conform to the standards and mandates of both the federal and state acts. The Western Riverside County MSHCP will conform to the standards of both laws, in order to receive incidental take permits from both the federal and state governments.

Habitat Protection

Habitat fragmentation is a less obvious, though potent threat to species survival. Habitat fragmentation results in a decrease in habitat type, and the allotment of remaining habitat into smaller, more isolated pieces. Problems resulting from habitat fragmentation include smaller populations due to small amounts of habitat, isolation of populations into fragmented parts with less genetic diversity, and potential increase in predators, competitors and parasites. Consequently, habitat fragmentation is one of the greatest threats to species and the ecosystems upon which they rely for survival.

Habitat protection and the widespread preservation of ecosystems provide support for maximum biological diversity, ensuring the long-term protection of all species. Deeper understanding of

ecosystems and advances in conservation biology has given rise to a new discipline of restoration ecology, which seeks to repair or reconstruct ecosystems damaged by human or natural forces.

Portrero Reserve ACEC

A portion of the approximately 13,000 acre Portrero Reserve/Area of Critical Environmental Concern (ACEC) occurs in the planning area, approximately 1.5 miles south of US Interstate-10 and approximately 2 to 3 miles east of Highway 79. The Portrero Valley contains almost 13,000 acres. Of the total ACEC, the Bureau of Land Management (BLM) administers approximately 1,030 acres, with the remaining approximately 12,000 acres of private land proposed for acquisition. Along with another 7,969-acre parcel to the east, also administered by BLM, these lands are located within an area under consideration by Riverside County as a multi-species wildlife corridor. This corridor stretches through the Badlands from the San Bernardino National Forest to the San Jacinto Wildlife Refuge. The ACEC includes approximately 1,900 acres of occupied Stephens' kangaroo rat habitat, as well as approximately 88 acres of potential Least Bell's Vireo habitat. Other sensitive species and habitat have been observed on the site.

San Bernardino National Forest

The San Bernardino National Forest, located in the San Gabriel, San Bernardino, San Jacinto and Santa Rosa Mountains, occurs within the planning area in the northeasterly portions of the City's sphere of influence, as well as adjacent to the northwesterly and northeasterly planning area. The Forest is biologically diverse and provides a home to 440 wildlife species and thousands of plant species of which approximately 30 are federally listed threatened or endangered.

Relationship of the General Plan to the Multiple Species Habitat Conservation Plan

The Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) is a regional plan that provides for protection of plant and animal species listed by the federal and state governments as threatened or endangered. It is also intended to protect species that are thought to be declining or may be listed in the future. The MSHCP sets forth three primary objectives. These are: 1) to impose a habitat mitigation fee on discretionary development in western Riverside County; 2) to designate criteria areas for acquisition or as subject to special development criteria; and 3) to cooperate with state and federal land management agencies for conservation and unification of adjacent habitat lands.

The MSHCP describes conservation needs, and sets forth goals and objectives for 146 special status species. It also imposes specific discretionary permit conditions that the City is to implement. It provides for incidental take permits for covered species assuming that MSHCP requirements are met.

There are three features of the MSHCP that apply within the Banning planning area. These are criteria areas, special linkage areas, and special survey areas. The following discussion describes these features as they occur in Banning.

Criteria Areas

There is one criteria area "cell" in the planning area. Cell 227 is located along the City's western border with unincorporated Riverside County and just south of the San Bernardino County line, in the northeast quarter of Section 13, Township 2 South, Range 1 West, San Bernardino Base and Meridian. (Please see Exhibit IV-2). This cell is approximately 160 acres, a portion of which occurs in the City limits. As set forth in the MSHCP, conservation in this Cell focuses on chaparral and woodlands and forests, and will range from 45 percent to 55 percent, focusing on the eastern portion of the Cell.

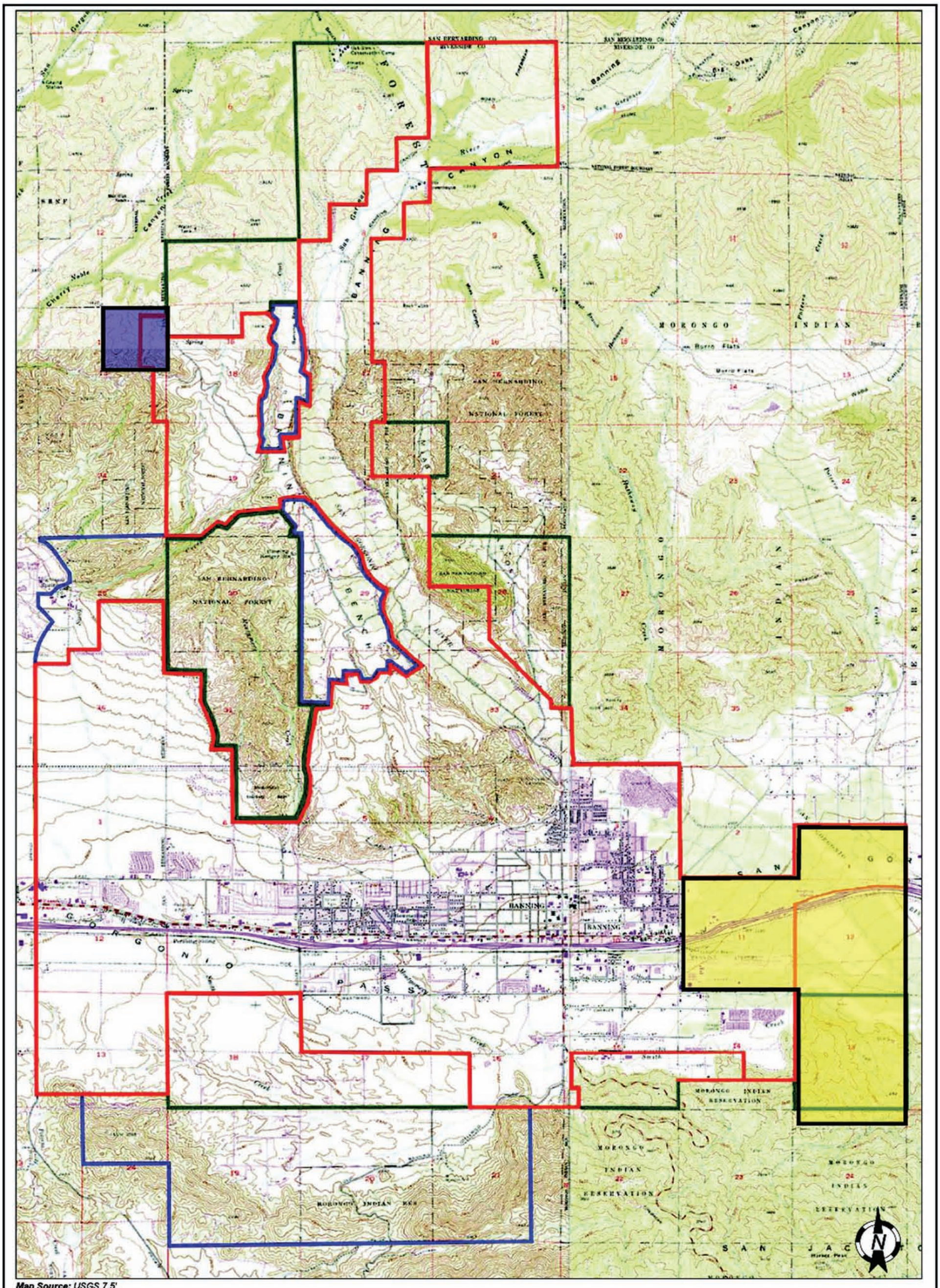
Special Linkage Area

A three-square mile MSHCP special linkage area occurs in the easterly planning area, adjacent to the eastern City limits where the San Gorgonio River exits the City. (Please see Exhibit IV-2). For special linkage areas, the MSHCP requires local jurisdictions to assure preservation of a wildlife movement corridor in compliance with guidelines set forth in the South Coast Wildlands' Missing Linkages project. However, the South Coast Wildlands' document makes no reference to the San Gorgonio River linkage. In the absence of other guidance in the MSHCP, the City will apply standards set forth in the CEQA Guidelines for projects within the Special Linkage area. The CEQA Guidelines' threshold of significance for such areas is as follows:

> *"Would the project interfere substantially with the movement of any native resident or migratory species of fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?"*

Special Survey Areas

The MSHCP provides for special species surveys for covered species that do not fit well into design of criteria areas and expected locations of habitat reserves. These species' distribution will be documented and smaller reserves outside primary conservation lands may be established as needed. The Banning planning area falls within the special survey areas for three of these species. They are the Yucaipa onion, the Burrowing owl, and the Los Angeles pocket mouse as illustrated in Exhibits IV-3, IV-4 and IV-5 respectively. Development in the City is subject to survey and mitigation requirements as set forth in the MSCHP for each of these species.



Map Source: USGS 7.5'

- City Limits
- Sphere of Influence
- Planning Area
- Criteria Area
- Special Linkage Area

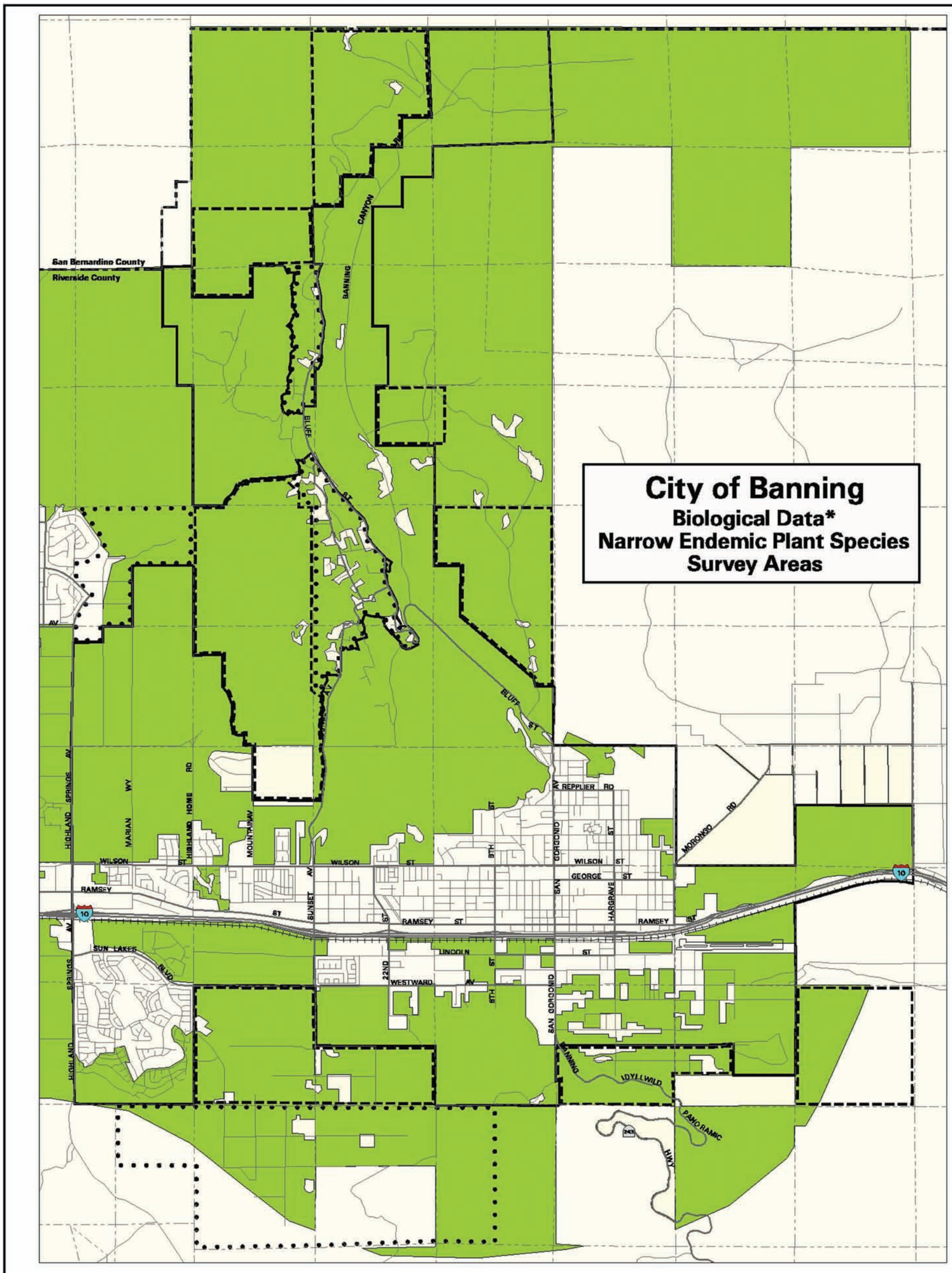
0 6600
FEET

Source: AMEC Environmental and Energy Services

TERRA NOVA®
Planning & Research, Inc.

Banning General Plan
MSHCP Special Linkage and Criteria Areas

Exhibit
IV-2



LEGEND

- Banning City Limits
- Banning Sphere of Influence
- Banning Planning Areas
- County Line
- Township - Range - Section
- Major Roads
- Minor Roads
- Railroads

AREA 8: Allium marvinii (Yucaipa Onion)

These survey areas were identified based on the presence of select soils, existing occurrence data for Narrow Endemic Plant Species (UC Riverside database and CNDDB), personal communication with the USFWS and Fred Roberts. Select soils were digitized from 1971 Soil Conservation Service Soil Survey (Knecht 1971).

* Data from the Riverside County MSHCP, July 2002

Scale
1:48,000

0 2,400 4,800 7,200
Feet

Map Prepared on: November 03, 2004

TERRA NOVA®
Planning & Research, Inc.

Banning General Plan
Yucaipa Onion Survey Area

Exhibit
IV-3

City of Banning

Biological Data*
Burrowing Owl
Survey Areas

San Bernardino County
Riverside County

BANNING CANYON
BLUFF ST
BLUFF
WILSON ST
RAMSEY ST
LINCOLN ST
WESTWARD AV
REPPLIER RD
GEORGE ST
IDYLLWILD
PANORAMIC HWY
MORONGO RD
SUNSET AV
HIGHLAND SPRINGS AV
MARIAN WY
HIGHLAND HOME RD
MOUNTAIN AV
SUN LAKES BLVD
SAN GORGONIO
HARGRAVE
8TH
22ND
10
243

LEGEND

- Banning City Limits
- Banning Sphere of Influence
- Banning Planning Areas
- County Line
- Township - Range - Section
- Major Roads
- Minor Roads
- Railroads

Burrowing Owl Survey Area

This data set was created by Dudek and Assoc. for the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) adopted by the Board of Supervisors June 17, 2003. It is being used in its original state, unaltered since delivery on March 31, 2004.

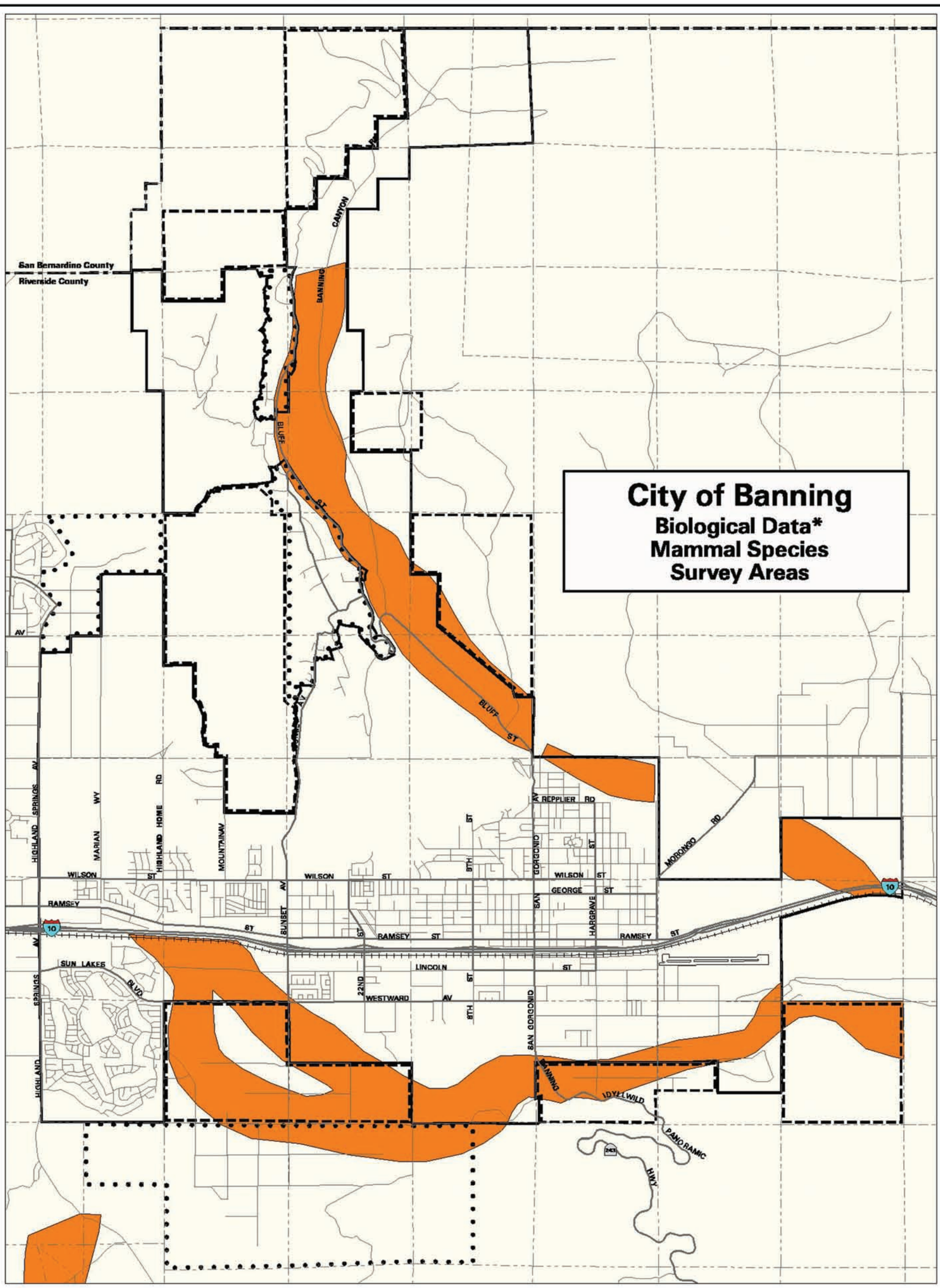
Scale
1:48,000
0 2,400 4,800 7,200
Feet

Map Prepared on: November 03, 2004

TERRA NOVA®
Planning & Research, Inc.

Banning General Plan
Burrowing Owl Survey Areas

Exhibit
IV-4



LEGEND

- Banning City Limits
- Banning Sphere of Influence
- Banning Planning Areas
- County Line
- Township - Range - Section
- Major Roads
- Minor Roads
- Railroads

L. A. pocket mouse only

Western Riverside County Multi-Species Habitat Conservation Plan Mammal Species Survey Areas. Dudek & Associates, Inc., July 2001

Scale
1:48,000
0 2,400 4,800 7,200
Feet

Map Prepared on: November 03, 2004

TERRA NOVA®
Planning & Research, Inc.

Banning General Plan
Los Angeles Pocket Mouse Survey Areas

Exhibit
IV-5

FUTURE DIRECTIONS

The City's participation in the Western Riverside County MSHCP provides a good opportunity to work towards long-term protection of important biological resources. The Plan establishes a regional ecological system that will be able to support important and intact ecosystems and communities. Through implementation of the General Plan, and the thoughtful adoption of Zoning, Subdivision and Grading Ordinances, the City can find ways to establish a means to make the built environment more harmonious with the natural environment.

GOALS, POLICIES, AND PROGRAMS

Goal
A pattern of community development that supports a functional, productive, harmonious and balanced relationship between the built and natural environment.

Policy 1
The City shall continue to participate in the preservation of habitat for endangered, threatened and sensitive species.

Program 1.A
Through the Western Riverside MSHCP, maintain an accurate and regularly updated map of sensitive plant and animal species and habitat in Banning and its planning area.
Responsible Agency: Planning Department
Schedule: 2005-2006, Ongoing

Program 1.B
The City shall participate in the Western Riverside County Multiple Species Habitat Conservation Plan.
Responsible Agency: Planning Department, Riverside County
Schedule: Ongoing

Program 1.C
City staff shall continue to request biological resource surveys for new development.
Responsible Agency: Planning Department, Riverside County
Schedule: Continuous

Policy 2
As part of the development review process, the City shall evaluate projects based on their impact on existing habitat and wildlife, and for the land's value as viable open space.

Program 2.A
The City shall encourage developers to recover native and drought tolerant plant materials, and incorporate them into project landscaping, to provide or enhance habitat for local species.
Responsible Agency: Planning Department
Schedule: Ongoing

Program 2.B
The City shall make available at City Hall a listing of planting materials that emphasizes native vegetation, but may also include non-native, plants that are compatible with the local environment.
Responsible Agency: Planning Department
Schedule: 2005-2006, Ongoing

Policy 3
The City shall encourage and cooperate with other agencies in establishing multiple use corridors that take advantage of drainage channels and utility easements as wildlife corridors, public access and links between open space areas and the built environment.

Program 3.A
The City shall consult and coordinate with the Riverside County Flood Control District to encourage the establishment of a system of multiple use corridors for movement of people and wildlife between open space areas.
Responsible Agency: Planning Department, Riverside County Flood Control District
Schedule: 2005-2006, Ongoing

Policy 4
Drainage channels, utility corridors and pipeline easements shall be preserved in natural open space to the greatest extent possible.

Policy 5
The City shall promote the protection of biodiversity and encourage an appreciation of the natural environment and biological resources.

Program 5.A
The City shall coordinate with the Banning and Beaumont Unified School Districts, the County and other agencies as identified, to provide educational programs that offer an understanding of the region's natural environment and make the public aware of biological resource issues.
Responsible Agency: Planning Department, Banning and Beaumont Unified School Districts, Riverside County, and others as identified
Schedule: 2005-2006, Ongoing

ARCHAEOLOGICAL AND CULTURAL RESOURCES ELEMENT

PURPOSE

Cultural resources are an important part of the City and provide residents with a meaningful sense of history and heritage. The Archaeological and Cultural Resources Element describes the documented pre-history and history of the City of Banning, including its 20th century development. It sets forth goals, policies and programs which preserve the City's cultural heritage and help perpetuate it for future generations.

BACKGROUND

The Archaeological and Cultural Resources Element is directly related to the Land Use, Open Space and Conservation, and Arts and Culture Elements of the General Plan. The issues addressed in the Archaeological and Cultural Resources Element are part of those set forth in California Government Code Section 65560(b) and Public Resources Code Section 5076. Furthermore, Section 21083.2(g) of the California Environmental Quality Act (CEQA) empowers the community to require adequate research, documentation and preservation when the potential for significant cultural resources exists.

The City currently reviews development proposals for their potential impacts to archaeologically and historically significant resources and may require additional studies if the potential to impact resources exists. As future development proposals are received, they will be evaluated, and the need for site-specific cultural resource assessments will be determined. Although Banning is a relatively "new" community, it is part of a region that has seen human occupation for thousands of years. The General Plan study area is also one that has been important in the development of the stagecoach, the trans-continental railroad and national highways system, and has important resources documenting this progress.

The Prehistoric Period

The "pre-historic" period refers to a time prior to the arrival of non-native peoples, when Native American society, which was based on traditions resulting from thousands of years of cultural development, was intact and viable. In the San Gorgonio Pass, the prehistoric period is generally divided into the Late Prehistoric Period and the Archaic Period.

The Archaic Period is defined as occurring before AD 1000, prior to the introduction of pottery to the region. Important cultural developments during the Archaic Period include the introduction of the bow and arrow (about AD 500) and change from burial practices to cremations. Sometime between 1000 BC and AD 500, it is believed that Takic-speaking peoples, from the Great Basin region of Nevada, Utah and eastern California migrated into southern California.

Around AD 1000, the San Gorgonio Pass region was introduced to pottery by the Colorado River cultures, marking the transition between the Archaic and Late Prehistoric Periods. Pottery was an innovation of peoples of the Colorado River, and its distribution across the upper Colorado and Mojave Deserts indicates that there was contact and trade between local tribes and those of the Colorado River.

The Late Prehistoric Period is defined as occurring after AD 1000 until around the late 1700s, when foreign influences brought profound changes to Native American society and ushered in the "historic period" in the San Gorgonio Pass. Archaeological evidence indicates that a large number of settlements and rancherias were established in the San Gorgonio Pass region during the prehistoric period. Such sites included villages, milling sites used on a seasonal basis to process food materials, lithic workshops for making stone tools and weapons, and rock art sites used for artistic and/or religious purposes.

Ethnohistory

The most recent identifiable native culture to evolve in the San Gorgonio Pass region is that of the Pass Cahuilla Indians, as well as the Serrano people, who visited and utilized the area's resources. The Cahuilla were a Takic-speaking people consisting of hunters and gatherers who are generally divided into three groups based on their geographic setting: the Pass Cahuilla of the San Gorgonio Pass/Palm Springs area; the Mountain Cahuilla of the San Jacinto and Santa Rosa Mountains; and the Desert Cahuilla of the eastern San Gorgonio Pass, as far south as today's Salton Sea.

The Cahuilla were not identified by a single name that referred to an all-inclusive tribal affiliation. Instead, membership was in terms of lineages or clans. Each lineage had its own food harvesting areas, ceremonial house and chief. However, a number of lineages are known to have cooperated with one another for trade, intermarriage, and ceremonies.

The Cahuilla population is estimated to have ranged between 3,600 and 10,000 persons prior to European contact. A large number of Indian villages, occupied by the Cahuilla, were observed in the mid-19th century throughout the San Gorgonio Pass. The environment was often harsh, with extreme variations in rainfall, wind and temperature, and occasional flash flooding and faulting activity that altered available water resources. However, the mountains, canyons and desert floor provided important sources of food and fiber, water and supplies.

The first Cahuilla contact with Europeans is believed to have occurred in the early 1770s, when Spaniards crossed through Cahuilla territory in search of new land routes between Mexico and northern California. Over time, relations between the Cahuilla and Europeans become strained due to conflicts over land ownership and exploitation, as well as religious and cultural practices. The Cahuilla had no immunity to smallpox, and in the early 1860s a smallpox epidemic decimated the Cahuilla population, which reduced the population to about 2,500 individuals.

Reservations were established beginning in the 1870s and allowed the Cahuilla to preserve their cultural traditions in relative isolation from Anglo-Americans. Today, Native Americans of the Pass and Desert Cahuilla heritage are mostly affiliated with the Morongo Band of Mission Indians reservation in the San Gorgonio Pass, which partially lies within the City of Banning. The Morongo Band is composed of both Cahuilla and Serrano peoples, the latter's homeland

occurring in the San Bernardino Mountains, and extending southerly, possibly as far as the cities of Riverside and Moreno Valley.

Archaeological Resources in the Planning Area

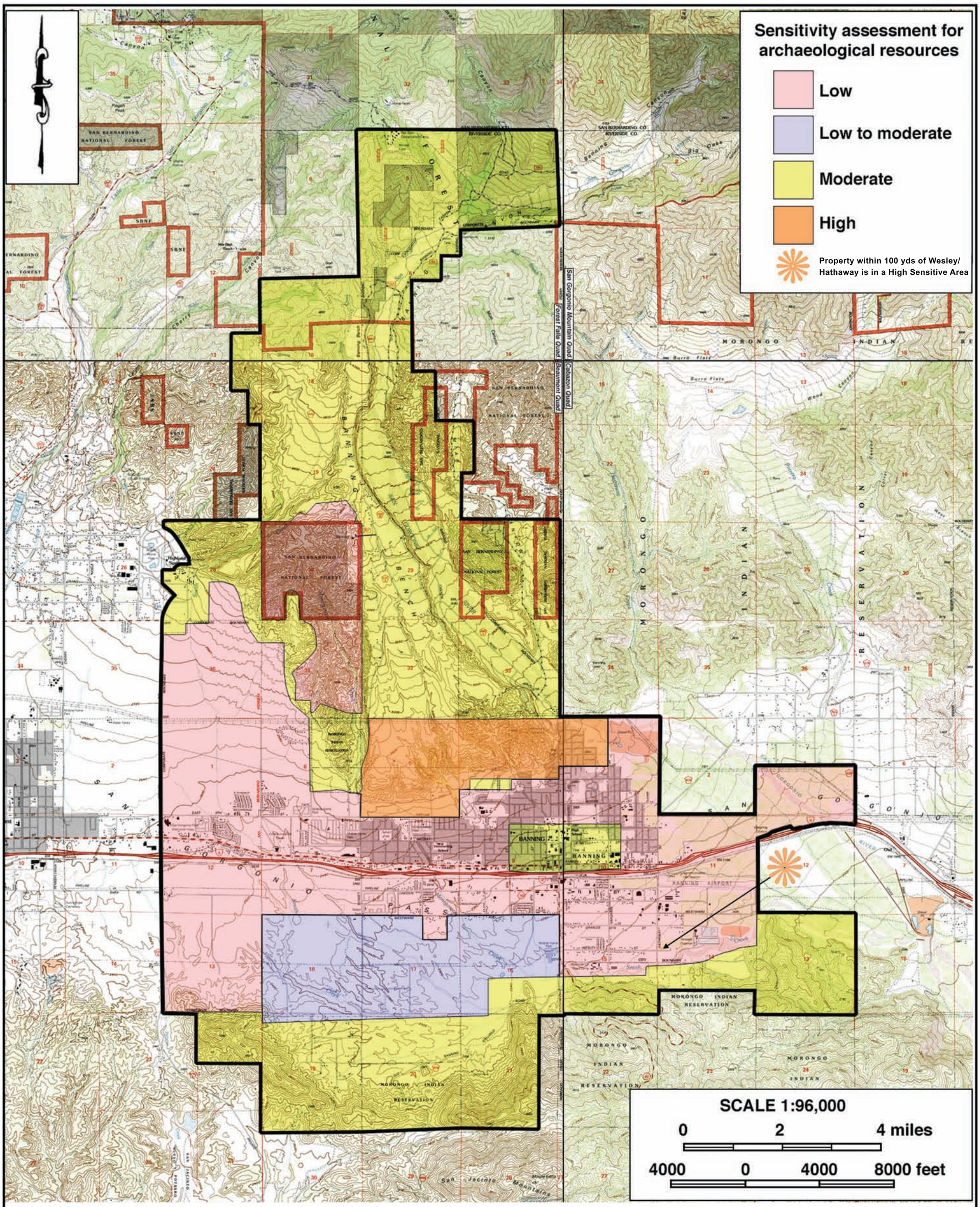
Historical maps, previous cultural resource surveys, aerial photographs, topographic maps and other cultural records were consulted to determine the presence of known archaeological resources in the planning area. A total of 20 archaeological sites have been identified and recorded in the planning area, 12 of which are prehistoric (Native American) sites. Several isolated artifacts have also been identified. The planning area has not been extensively surveyed for cultural resources due to the fact that large scale development projects have not been as widespread in the planning area as other communities in the San Gorgonio Pass/Coachella Valley region.

Less than one-third of the total acreage within the planning area has been covered by project-related surveys, leaving most of the planning area yet to be surveyed. The majority of the areas previously surveyed are located in the southern portion of the City on the Valley floor, and these surveys encountered relatively few archaeological sites or other cultural resources.

The majority of prehistoric sites in the planning area represent Native American habitation activities, including ceramic and lithic scatters, bedrock milling features, rock cairns, trails, roasting pits, and fire hearths. At least 7 of the archaeological sites recorded in the planning area contained bedrock milling features, all of them located in the foothills on the southern edge of the planning area. A rock art panel was also found at one of these sites. At least 5 of the sites were described as Indian villages. Some of these sites may have been associated with the known Cahuilla village of Pihatapa, which has been identified as being located in Banning Canyon. Typically, these areas would have offered Native Americans access to water and other important mountain and desert resources.

Archaeological Resources Sensitivity Assessment

The Gilman Ranch area has been relatively undisturbed by recent development, and as a result anthropologists and Cahuilla cultural authorities have concluded that the area has a high sensitivity for archaeological resources, both prehistoric and historic. The foothills of the San Bernardino and San Jacinto Mountains are of moderate sensitivity, as are the terraces along the San Gorgonio River. The downtown area, meanwhile, demonstrates a moderate sensitivity for archaeological resources from the historic period. These areas are identified in Exhibit IV-6.



Source: Cultural Resources Management, Inc.

TERRA NOVA®
Planning & Research, Inc.

Banning General Plan
Archaeological Resources Sensitivity Map

Exhibit
IV-6

The former site of the village of Pihatapa in Banning Canyon, where the Pisata Wanakik clan of the Pass Cahuilla resided, has been identified as having potential cultural significance. The location is also noted as Pisatanavitcem, a village group belonging to the Coyote moiety.[7] While studies state that the village was situated in Banning Canyon, its precise location is uncertain. However, in light of the results of 19th century U.S. land surveys in the Banning area it is almost certain that the Indian village noted at the mouth of Banning Canyon was indeed the village of Pihatapa.

The Historic Period

Historically significant sites are generally more than forty-five to fifty years of age, but range from the period of the earliest European contact (around the late 1770s in the San Gorgonio Pass) to about the end of World War II. Potentially significant historic sites range from permanent trails and highways to living areas and small-scale remains of single activities.

The Bradshaw Trail

The Cocomaricopa Trail passed through the San Gorgonio Pass along the base of the Santa Rosa Mountains, and connected the coastal region of California with the Colorado River. The trail was originally an Indian trade route and was revealed by the Maricopa Indians to the Europeans in 1821. In 1862, the trail was "discovered" by William David Bradshaw as the shortest route between the California coast and gold mines near the Colorado River, and it became known as the Bradshaw Trail. The trail served as the primary thoroughfare for stagecoaches traveling between coastal southern California and the gold fields near present-day Ehrenberg, Arizona. It also became part of the U.S. Mail route between Los Angeles and Santa Fe, New Mexico.

By 1876-77, however, the completion of the transcontinental railroad and the depletion of the La Paz gold mines brought an end to the heyday of this historic wagon road. Traffic declined to almost nothing by 1880, but ranchers and miners continued to use it for local transport. Today, State Highway 111 closely follows the course of the Bradshaw Trail.

Historic Settlement in the San Gorgonio Pass

By the late 18th century, Spanish explorers sought to colonize California before other European nations and established religious missions and military strongholds along the California coast. Spanish and Mexican explorers traveled through the San Gorgonio Pass in search of easily passable supply routes from Mexico to colonies on the northern Monterey Peninsula of California. In 1822, Mexico secured its independence from Spain under the Treaty of Cordova, and Spanish forces were driven out of Mexico and California. In 1823-1825, Jose Romero, Jose Maria Estudillo, and Romualdo Pacheco led an expedition in search of a route to Yuma, Arizona and became the first noted European explorers to travel through the San Gorgonio Pass.

In about 1824, friars of the San Gabriel Mission established a mission outpost in the Pass named in honor of St. Gorgonious, and Powell "Paulino" Weaver, a native of Tennessee. During that

[7] A clan or grouping of clans which perform specific integral social, ceremonial and/or ritualistic functions as part of the whole tribal life complex.

period, the area was known as Rancho San Gorgonio, one of the 24 principal cattle ranches under the control of the San Gabriel Mission. In 1845, Weaver and Isaac "Julian" Williams petitioned the Mexican authorities for a land grant of the 48,400-acre Rancho San Gorgonio, which stretched from Yucaipa to the eastern edge of the Pass. The grant was never issued, but Weaver and Williams took possession of the land under assumed ownership.

The United States defeated Mexico in 1848 in the Mexican-American War and gained control of California. At the same time, the discovery of gold and the appeal of cattle ranching led to an influx of new settlers to the state. California was admitted to the Union in 1850. The first U.S. Government surveys were conducted in the San Gorgonio Pass in 1853, and noted a number of trails and roads crossing the area, as well as an Indian village at the mouth of the Banning Canyon. These surveys were part of a potential railroad route from Mississippi to the California coast, although train service would not be available until nearly 25 years later. In the mean time, Banning was developing as a transportation hub on the Bradshaw Trail, playing host to a convergence of stagecoach lines, including Alexander and Company of Los Angeles..

In Banning, the earliest European structures were the adobe houses built by Isaac W. Smith and José Pope in 1854. Pope's house, at what is now the Gilman Ranch, served as a stage station on the Bradshaw Trail under the later owners of the property, Newton Noble and James M. Gilman. Smith's ranch, also known to have been a stage stop, later became the site of the Highland Springs Resort.

Non-Indian settlement in the San Gorgonio Pass expanded during the 1870s and 1880s, with the establishment of railroad stations along the Southern Pacific line and the implementation of the Homestead Act and Desert Land Act, which opened public land for claims. With the completion of the Southern Pacific Railway in 1877, the focal point of local growth shifted from the northern foothills to the present-day downtown area.

After the founding of Banning in 1884, the town became the unmistakable center of population and community growth in the area. During the 20th century, Banning continued to benefit from its strategic location at the nexus of the various transportation arteries, including the original Ocean-to-Ocean Highway (U.S. Route 60, 70, 99, now Ramsey Street) and today's Interstate 10, roughly halfway between the Riverside-San Bernardino area and the growing desert resort communities in the Coachella Valley.

In 1930, as part of the Colorado River Aqueduct project, the Metropolitan Water District provided a considerable boost to the Banning economy and population when it chose the City as its headquarters for the tunneling operations through the San Jacinto Mountains. As a result, road improvements, schools, and parks were completed during this time, including Repplier Park. Growth in the City slowed considerably during World War II, but rebounded afterward. Building permits issued in 1945 totaled $13,481,682.50, representing 163 new businesses and 1,350 residences.

By the early 1940s Banning's downtown area stretched from Eighth Street on the west to Hathaway Avenue on the east, and the City extended as far north as the mouth of Banning Canyon. The downtown had been fully urbanized and a suburban neighborhood had emerged on

the western edge of the town, between Sunrise and Sunset Avenues. Scattered buildings were also located between these two areas, mostly to the north of present-day Ramsey Street. While other buildings dotted the outlying areas, with many of them surrounded by orchards, including those on the Banning Bench. During the next ten years, the undeveloped area between Banning's downtown and the westerly neighborhood was essentially filled in amid the post-WWII boom.

In contrast, the areas beyond the core and the Ramsey Street and San Gorgonio Avenue corridors remained largely rural in character until the most recent decades, when large-scale residential developments, such as the Sun Lakes subdivision and the accompanying commercial districts, began to turn vacant land on the western edge of the City into a new population center.

The Founding of the City of Banning

The railroad was built through the San Gorgonio Pass in 1876, inducing population growth and the need for services and amenities. By 1878, Banning had four houses, a few tents, three saloons, a boarding house, and a store operated by Andrew J. Worsham (at the current intersection of San Gorgonio and Livingston Street), which also housed the post office. Banning's first school was located at First Street and Livingston Street, and was also built during that period. The town was called Moore City, after the town's principal landowner, Ransom B. Moore.

Around 1877, the City's name was established through an arrangement between either Randsom Moore or Welwood Murray and Phineas Banning. At the time Phineas Banning was a widely known livestock broker, businessman, and political figure. Mr. Banning was also a primary financial contributor to the construction of the town's Baptist church, first organized in 1883. The Banning town site was officially established in 1884 at the intersection of the Bradshaw Trail and the Southern Pacific Railway. The City of Banning was incorporated in 1913.

Historic Sites in the Planning Area

In contrast to the relatively small number of archaeological sites, a total of 110 historic-period buildings and other built environment features have been recorded within the planning area. The vast majority of these were identified in 1982-1983, during a countywide historical resources reconnaissance sponsored by the Riverside County Historical Commission. These include home sites and commercial sites dating back to 1880s. The list also includes sites ranging from early homesteads to mid-twentieth century urban development. The historic-period buildings are concentrated in the central core of the City, particularly in the Ramsey Street and San Gorgonio Avenue corridors, historically the two main thoroughfares through the heart of downtown Banning. The construction dates of these properties range from the mid-1880s to the late 1930s, with the majority dating to the early 20th century. The previously identified historic-period sites in the planning area are listed in the Table below.

Table IV-11
Recorded Historic-Era Buildings and Other Features in the Planning Area

Property Number	Property Name	Location	Property Type	Year Built
33-7870	Pedley-type dam	San Gorgonio Ave. and Bluff St.	Water retarder/ erosion control	1910s
33-7879	Henderson Building (1880s) or Reid Building (1890s-present)	54 S. San Gorgonio Ave.	Commercial building	1884
33-7880	Coplin House/Spokane Hotel	12 S. San Gorgonio Ave.	Hotel	1900
33-8332	None	70 E. Barbour St.	Single-family dwelling	1890s
33-8333	None	225 E. Barbour St.	Single-family dwelling	1892
33-8334	Russell Jones House	391 E. Barbour St.	Single-family dwelling	1900s
33-8335	None	434 E. Barbour St.	Single-family dwelling	1920s
33-8336	None	451 E. Barbour St.	Single-family dwelling	1890s
33-8337	Davis Home	933 E. Barbour St.	Single-family dwelling	1892
33-8338	D. Frank Southworth House	1487 E. Barbour St.	Single-family dwelling	1900s
33-8339	Canyon/Strause House	8720 Bluff St.	Single-family dwelling	1928
33-8340	John Minney Packing Shed	9615 Bluff St.	Packing house	1910s
33-8341	Ellis Ranch	9835 Bluff St.	Single-family dwelling	1940
33-8342	Rutherford Orchards/Barker Orchards	10181 Bluff St.	Packing house	1930s
33-8343	Tom Morongo House	10220 Bluff St.	Single-family dwelling	1910s
33-8344	Rutherford Moore Orchard Barn	4335 Dunlap St.	Barn/single-family dwelling	1928
33-8345	None	215 E. George St.	Single-family dwelling	1923
33-8346	Karl Brown Home	272 E. George St.	Single-family dwelling	1900s
33-8347	Rose House	779 E. George St.	Single-family dwelling	1910s
33-8348	None	Gilman St. north of Mesa St.	Pump house	1910s
33-8349	None	43210 Gunner Rd.	Single-family dwelling and packing house	1930s
33-8350	George Parker House	1228 S. Hargrave St.	Single-family dwelling	1888
33-8351	Banning Woman's Club	175 W. Hayes St.	Social club	1910s
33-8352	None	322 E. John St.	Single-family dwelling	1900s
33-8353	Mary Iselin House	43601 Mesa St.	Single-family dwelling	1920
33-8355	None	334 N. Murray St.	Single-family dwelling	1910
33-8356	The San Gorgonio Inn/Bryant House	150 E. Ramsey St.	Hotel	1884
33-8357	Fox Theater/Corey Building	84 W. Ramsey St.	Theater	1928
33-8358	Hotel Banning	225 W. Ramsey St.	Hotel	1920s
33-8359	Purcell House	11639 N. San Gorgonio Ave.	Single-family dwelling	1932
33-8360	Banning High School	NE corner of San Gorgonio Ave. and Nicolet St.	Educational building	1935
33-8362	Holcumb Building	40 S. San Gorgonio Ave.	Commercial building	1900s
33-8363	Conrad Graf House	717 S. San Gorgonio Ave.	Single-family dwelling	1910
33-8399	None	132 E. Wesley St.	Single-family dwelling	1920s
33-8400	Vollaro House/J.R. Fountain House	270 E. Wesley St.	Single-family dwelling	1888
33-9096	Mary Ellis Home	170 W. Williams St.	Single-family dwelling	1910s
33-9097	Banning Unified School District Offices	161 W. Williams St.	Government building	1908
33-9098	Charlie Morris House	486 W. Williams St.	Single-family dwelling	1897
33-9099	None	530 W. Williams St.	Single-family dwelling	1902

Table IV-11
Recorded Historic-Era Buildings and Other Features in the Planning Area

33-9104	McAllister Home	111 N. 1st St.	Single-family dwelling	1906
33-9105	None	125 N. 1st St.	Single-family dwelling	1932
33-9106	None	144 N. 1st St.	Single-family dwelling	1920s
33-9107	None	157 N. 1st St.	Single-family dwelling	1910s
33-9108	None	160 N. 1st St.	Single-family dwelling	1910s
33-9109	Saint Agnes Church/Grace Lutheran Church	111 N. 2nd St.	Religious building	1930s
33-9110	C.D. Hamilton Home	181 N. 2nd St.	Single-family dwelling	1890s
33-9111	United Methodist Church	235 N. 2nd St.	Religious building	1928
33-9112	Dr. Ryan Home	115 N. 3rd St.	Single-family dwelling	1900s
33-9113	Methodist Parsonage	180 N. 3rd St.	Single-family dwelling	1897
33-9115	Samuels Home	384 N. 3rd St.	Single-family dwelling	1908
33-9116	None	524 N. 3rd St.	Single-family dwelling	1910
33-9117	F.F. Lemon Home	181 N. 4th St.	Single-family dwelling	1887
33-9118	Osborne House	416 N. 4th St.	Single-family dwelling	1923
33-9119	Rutherford House	385 N. 5th St.	Single-family dwelling	1912
33-9120	None	899 W. Hayes St.	Single-family dwelling	1920s
33-9121	None	1015 W. Hayes St.	Single-family dwelling	1920s
33-9122	None	1067 W. Hayes St.	Single-family dwelling	1920s
33-9123	None	81 King St.	Single-family dwelling	1910s
33-9124	None	94 King St.	Single-family dwelling	1910s
33-9125	None	58 W. King St.	Single-family dwelling	1910s
33-9126	None	943 Linda Vista Dr.	Single-family dwelling	1920s
33-9127	None	946 Linda Vista Dr.	Single-family dwelling	1920s
33-9128	None	1118 Linda Vista Dr.	Single-family dwelling	1930s
33-9129	None	160 W. Ramsey St.	Commercial building	1930s
33-9130	None	170 W. Ramsey St.	Commercial building	1930s
33-9131	Mason Moore Building	185 W. Ramsey St.	Commercial building	1928
33-9132	Hendrick's Market	141 N. San Gorgonio Ave.	Commercial building	1930s
33-9133	American Legion Hall	375 N. San Gorgonio Ave.	Social club	1921
33-9134	Odd Fellows Building	25 South San Gorgonio Ave.	Social club	1920s
33-9135	None	873 N. 1st St.	Single-family dwelling	1930s
33-9136	None	889 N. 1st St.	Single-family dwelling	1930s
33-9137	None	901 N. 1st St.	Single-family dwelling	1930s
33-9138	None	933 N. 1st St.	Single-family dwelling	1930s
33-9139	None	961 N. 1st St.	Single-family dwelling	1920s
33-9140	None	978 N. 1st St.	Single-family dwelling	1920s
33-9141	None	1051 N. 1st St.	Single-family dwelling	1920s
33-9142	None	1119 N. 1st St.	Single-family dwelling	1920s
33-9143	None	1138 N. 1st St.	Single-family dwelling	1910s
33-9144	None	65 Ensign St.	Single-family dwelling	1920s
33-9145	None	91 Ensign St.	Single-family dwelling	1920s
33-9147	Mixter House	1626 W. George St.	Single-family dwelling	1910s
33-9149	None	59 Lancaster Rd.	Single-family dwelling	1920s
33-9150	None	1222 W. Lincoln St.	Single-family dwelling	1920s
33-9151	None	78 W. Pendleton Rd.	Single-family dwelling	1920s
33-9152	None	145 W. Pendleton Rd.	Single-family dwelling	1920s
33-9153	Constantino's/Hopper Cafe	140 W. Ramsey St.	Single-family dwelling	1930s
33-9154	Banning City Hall	169 W. Ramsey St.	Government building	Unknown
33-9155	None	260 W. Ramsey St.	Commercial building	1920s
33-9156	Banning Medical Clinic	330 W. Ramsey St.	Commercial building	1900s

Table IV-11
Recorded Historic-Era Buildings and Other Features in the Planning Area

33-9157	None	385 W. Ramsey St.	Single-family dwelling	1920s
33-9159	Bird Insurance Agency	1025 W. Ramsey St.	Single-family dwelling	1910s
33-9160	None	1211 W. Ramsey St.	Single-family dwelling	1910s
33-9161	None	1231 W. Ramsey St.	Single-family dwelling	1920s
33-9163	Berlin Building	65 N. San Gorgonio Ave.	Commercial building	1920s
33-9164	Hazel's Thrift Shop/U.S. Post Office	125 N. San Gorgonio Ave.	Commercial building	1930s
33-9165	Stagecoach Press Building/ B.D. Wilson Building	137 N. San Gorgonio Ave.	Commercial building	1930s
33-9166	John Moore House	1023 N. San Gorgonio Ave.	Single-family dwelling	1910s
33-9167	None	1111 N. San Gorgonio Ave.	Single-family dwelling	1920s
33-9168	None	1419 N. San Gorgonio Ave.	Single-family dwelling	1910s
33-9169	None	1455 N. San Gorgonio Ave.	Single-family dwelling	1920s
33-9170	None	1558 N. San Gorgonio Ave.	Single-family dwelling	1920s
33-9171	None	1580 N. San Gorgonio Ave.	Single-family dwelling	1920s
33-9172	None	1617 N. San Gorgonio Ave.	Single-family dwelling	1920s
33-9173	None	1661 N. San Gorgonio Ave.	Single-family dwelling	?
33-9174	None	1725 N. San Gorgonio Ave.	Single-family dwelling	1930s
33-9175	None	290 E. Santa Rita Pl.	Single-family dwelling	1920s
33-9177	None	185 W. Westward Ave.	Single-family dwelling	1930s
33-9178	None	116 N. 4th St.	Single-family dwelling	1920s
33-9179	None	141 N. 4th St.	Single-family dwelling	1920s
33-12425	Historic Downtown Banning	Ramsey/Livingston/San Gorgonio/Murray	Commercial district	1880s-1920s

Of the previously recorded historical sites in the planning area, seven have been officially proclaimed as significant heritage properties by the federal, state, or county government. One of these, the Gilman Ranch, is currently listed in the National Register of Historic Places and operated by the County of Riverside as a historic park. The other six sites have all been designated as California Points of Historical Interest as well as Riverside County Landmarks. However, the earliest non-Indian settlement within the planning area are the Isaac W. Smith's and Jose Pope's ranch houses (now the Highland Springs Resort and the Gilman Ranch, respectively), were both located along the Bradshaw Trail.

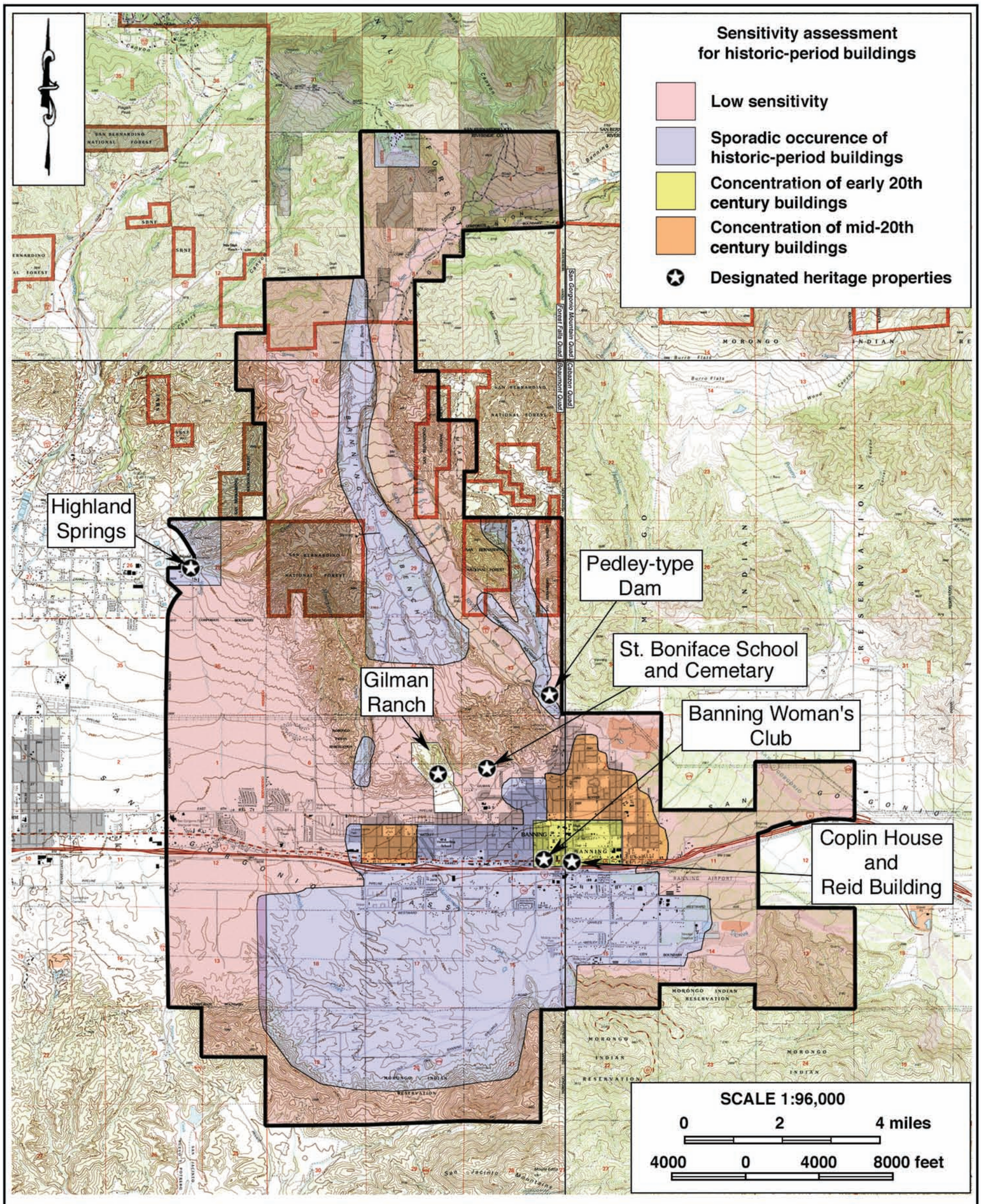
During the second half of the 19th century, a road extended northerly through the Indian village and into Banning Canyon, then known as Cummings Canyon. The Cummings' house was located along this road near the northern edge of the planning area, where large cultivated fields lined the western bank of the San Gorgonio River. In addition to the Cummings' house, several other settlers' homesteads were recorded in or near the planning area during that period. These homesteads included White's cabin, the J. H. Dixon house, and the J. C. Hannon cabin and orchard, which were found in the foothills of the San Bernardino Mountains.

Construction near the turn of the century included the Bryant House in 1885, later called the San Gorgonio Inn, and St. Boniface Indian School, built in 1889 on 80 acres purchased by the Bureau of Catholic Indian Missions. In 1911, two years before the City's incorporation, the Banning Sanitarium opened, marking the beginning of the City's efforts to market the health benefits of the region's dry climate.

Historic Resources Sensitivity Assessment

Historic structures dating from the late 1900s and early 1930s are concentrated around the urban core of the City. The highest concentration of early 20th century residences is located in an area bounded by Wilson Street on the north, Sixth Street on the west, Williams and Hays Streets on the south, and Hargrave Street on the east. The neighborhoods to the north and east of this area and around Sylvan Park farther to the west feature a relatively high percentage of residences from the mid-20th century, which are now approaching the age to be considered potentially historic.

The segment of Ramsey Street between Third and Murray Streets hosts a continuous corridor of historic-period commercial buildings, forming a business district of a distinctively historical character. These areas should be considered highly sensitive for historic-period buildings. However, historic-period buildings can be found throughout the developed portions of the planning area, with the exception of the recent subdivisions on the western boundary. Potentially sensitive historic areas are identified in Exhibit IV-7.



Source: Cultural Resources Management, Inc.

TERRA NOVA®
Planning & Research, Inc.

Banning General Plan
Historical Resources Sensitivity Map

Exhibit
IV-7

HISTORIC PRESERVATION PROGRAMS

Federal Programs Available to the City

The National Historic Preservation Act (NHPA) of 1966 mandates that all federal agencies assume responsibility for the preservation of historic properties owned or controlled by the U.S. government. Local governments may take the lead in enforcing the NHPA when involved in federal projects, such as some programs funded by the U.S. Department of Housing and Urban Development.

The Certified Local Government (CLG) program, a joint federal-state initiative administered by the National Park Service and the State Historic Preservation Officers of each state, provides technical assistance and small grants to local governments for historic preservation purposes that meet certain requirements. CLGs can benefit from historic preservation expertise, technical assistance, information exchange, special grants, and statewide preservation programs coordinated by the State Office of Historic Preservation (OHP).

The National Register of Historic Places, maintained by the Secretary of the Interior, is a nationwide inventory of sites, buildings, districts, structures, objects or other features with national, state, or local historical significance. At present, the planning area contains one property listed on the National Register of Historic Places (Gilman Ranch); in addition, other previously recorded sites in the planning area may be eligible for listing.

State Programs Available to the City

In 1992 the California Register of Historic Resources was established, which is the State of California's counterpart to the National Register of Historic Places. It includes all properties listed in or officially determined to be eligible for the National Register. The OHP also maintains a listing of California Historical Landmarks, which designates properties of statewide importance, and a listing of Points of Historical Interest, which identifies properties of countywide or regional importance. Properties included in these registers are eligible for a number of state historic preservation incentives, including property tax reductions, alternative building regulations under the State Historic Building Code, benefits provided by the California Heritage Fund, special historic preservation bond measures, and seismic retrofit tax credits. Through the provisions of the Mills Act, the City can offer private property owners of qualifying historic properties incentives for the rehabilitation and maintenance of their property for a minimum of ten years. Currently, six of the Points of Historical Interest are located within the planning area, all of which are also simultaneously designated as Riverside County Landmarks.

FUTURE DIRECTIONS

According to Public Resources Code Section 5020.1, "historical resources" include but are not limited to an object, building site, area, place, record, or manuscript which is historically or archaeologically significant. This definition also applies to architectural, engineering scientific, economic agricultural, educational, social, political, military, or cultural annals of California.

The California Environmental Quality Act identifies the manner in which the City must review and address issues related to archaeological and historic resources. The CEQA Guidelines state

that the term "historical resources" applies to any such resources listed in or determined to be eligible for listing in the California Register of Historical Resources. The relevant criteria for determining significance are briefly described below.

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.

2. Is associated with the lives of persons important in our past.

3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.

4. Has yielded, or may be likely to yield, information important in prehistory or history.

As the lead agency, the City of Banning is obligated to assure that every reasonable effort is made to locate, identify, and evaluate archaeological, historical and cultural sites within its jurisdiction.

As the community continues to develop, opportunities for documenting and preserving archaeological and historic sites and artifacts will decrease. The City should encourage the research and registration of appropriate sites and structures within its jurisdiction in order to maintain its important traditions and heritage for future generations.

GOALS, POLICIES AND PROGRAMS

Goal
Documentation, maintenance, preservation, conservation and enhancement of archaeological and historic sites, artifacts, traditions and other elements of the City's cultural heritage.

Policy 1
The City shall exercise its responsibility to identify, document and evaluate archaeological, historical and cultural resources that may be affected by proposed development projects and other activities.

Program 1.A
All new development proposals, except single family dwelling on existing lots of record, shall submit a records search for historic and cultural resources as part of the planning process.
Responsible Agency: Planning Department
Schedule: 2005-2006, Ongoing

Program 1.B
Development or land use proposals which have the potential to disturb or destroy sensitive cultural resources shall be evaluated by a qualified professional and, if necessary, comprehensive Phase I studies and appropriate mitigation measures shall be incorporated into project approvals.
Responsible Agency: Planning Department
Schedule: Ongoing

Program 1.C
The City shall implement the requirements of state law relating to cultural resources, including Government Code 65352.3, and any subsequent amendments or additions.
Responsible Agency: Planning Department
Schedule: Ongoing

Policy 2
The City shall expand and enhance its historic preservation efforts.

Program 2.A
Prepare a historic preservation plan, which outlines the goals and objectives of the City's preservation programs and serves as an official historic context statement for the evaluation of cultural resources within the City boundaries.
Responsible Agency: Planning Department
Schedule: 2006-2007

Program 2.B
The City shall consider participating in the Certified Local Government program so that it may benefit from historic preservation expertise, technical assistance, special grants, information exchange, and statewide preservation programs coordinated by the State Office of Historic Preservation. The evaluation of participation in the program shall be part of the historic preservation plan.
Responsible Agency: Planning Department, Historical Society, City Council
Schedule: 2006-2007

Program 2.C
Encourage property owners and residents to nominate qualified properties to the City's inventory system and/or any federal and state registers.
Responsible Agency: Planning Department, Morongo Band of Cahuilla Indians
Schedule: Ongoing

Program 2.D
Should the Saint Boniface School site be proposed for development, extensive analysis of the site shall be conducted, and mitigation proposed, to document its historic significance.
Responsible Agency: Planning Department
Schedule: 2005-2006, Ongoing

Policy 3
Establish and maintain a confidential inventory of archaeological and historical resources within the City, including those identified by the Eastern Information Center (EIC) at the University of California, Riverside and in focused cultural resources studies.

Policy 4
Sensitive archaeological and historic resources shall be protected from vandalism and illegal collection, to the greatest extent possible.

Program 4.A
Mapping and similar information, which identifies specific locations of sensitive cultural resources, shall be maintained in a confidential manner, and access to such information shall be provided only to those with appropriate professional or organizational ties.
Responsible Agency: Planning Department
Schedule: Immediate; continuous

Policy 5
Encourage public participation in and appreciation of the City's cultural heritage.

Program 5.A
Implement a systematic program to enhance public awareness of the City's heritage, generate broad support for its preservation, and enhance community pride.
Responsible Agency: Planning Department, Historical Society, City Council, Morongo Band of Mission Indians
Schedule: 2005-2006, Ongoing

Program 5.B
Support the efforts of local cultural associations to acquire historical materials and artifacts, and to educate the public about the City's and region's cultural heritage.
Responsible Agency: Planning Department, Historical Society, Morongo Band of Mission Indians
Schedule: 2005-2006, Ongoing

Policy 6
Support the listing of eligible structures or sites as potential historic landmarks and their inclusion in the National Register of Historic Places.

Program 6.A
Develop procedures for the designation of local landmarks and historic districts.
Responsible Agency: Planning Department, Historical Society, Morongo Band of Mission Indians
Schedule: 2005-2006

Policy 7
The City shall consider offering economic or other incentives, such as direct subsidies or application/permitting fee reductions or waivers, to property owners to encourage the maintenance and enhancement of significant cultural buildings and sites.

Program 7.A
Develop an application process for City-sponsored incentives to maintain and enhance significant buildings and sites, and provide property owners with information and guidance on eligibility requirements.
Responsible Agency: Planning Department
Schedule: 2006-2007

AIR QUALITY ELEMENT

PURPOSE

The purpose of the Air Quality Element is to provide background information on the physical and regulatory environment affecting air quality in the City and the region. It is also intended to identify goals, policies, and programs meant to balance the City's actions regarding land use, circulation and other regulatory actions and their associated potential effects on local and regional air quality. This Element, along with local and regional air quality planning efforts, is intended to address ambient air quality standards set forth by the federal Environmental Protection Agency (EPA) and the California Air Resources Board (CARB).

BACKGROUND

The Air Quality Element is directly related to the Land Use and Circulation Elements. Community and regional air quality are directly affected by land use types, patterns and intensities. They are also affected by the extent and efficiency of the City's transportation system, and the number, length and timing of traffic trips, which are discussed in greater detail in the Circulation Element. The Air Quality Element is also related to the Open Space and Conservation Element, which discusses the amount of open space planned for preservation. The Air Quality Element is also related to the Economic Development Element, which addresses the protection of natural resources, including air quality, that are important to the local economy.

REGULATORY ENVIRONMENT

Air quality is a major concern with regard to public health and welfare issues. Southern California and the Pass region continue to experience air pollution problems, despite improvements over the past two decades. Federal and state government air quality standards and regulations have been established to monitor and regulate a variety of air pollutants.

Federal Regulation

The U.S. EPA enforces the federal Clean Air Act (CAA), which was last amended in 1990, and is intended to ensure that all Americans have the same basic health and environmental protections with regard to air quality. The CAA establishes minimum air pollution standards that must be met; however, it allows states to enact and enforce more stringent standards, and delegates much of the responsibility for carrying out the CAA to state air pollution control agencies. For areas in non-compliance with federal standards, State Implementation Plans (SIPs) are developed that are designed to meet ambient air quality standards and deadlines specified in the Clean Air Act, as well as emission reduction targets set forth in the California Clean Air Act (CCCA), both further discussed below. The severity of the region's air pollution determines required emission reductions and attainment deadlines.

California Regulation

The State Legislature enacted Assembly Bill 2595, which became known as the California Clean Air Act, in 1988, and amended it in 1992. The CCAA was intended to protect the future health and welfare of the citizens of California; it was also aimed at protecting the State's environment and economy, independent of federal government actions or policy directions. Ambient air quality standards established in the CCAA, as well as deadlines for achieving those standards, are generally more stringent than those established by the federal CAA. The California Air Resources Board (CARB) has been assigned oversight of the CCAA. The CARB advises and evaluates regional air pollution control agencies' and districts' efforts regarding compliance with the CCAA requirements.

Regional Regulation

The City of Banning is located within the South Coast Air Basin (Basin), a geographic area regulated by the South Coast Air Quality Management District (SCAQMD). The South Coast Air Basin includes Orange County, and portions of Los Angeles, San Bernardino and Riverside Counties. The Basin is bordered on the west by the Pacific Ocean, and on the north and east by the San Gabriel, San Bernardino, and San Jacinto mountains.

The SCAQMD is responsible for development of the regional Air Quality Management Plan, which is a multi-tier effort to regulate pollutant emissions from a variety of sources. SCAQMD prepared the 2003 Revision to the AQMP for the South Coast Air Basin to provide a comprehensive program for compliance with all federal and state air quality planning requirements. Once approved by the SCAQMD Board and CARB, the 2003 AQMD will be submitted to U.S. EPA as a revision to the SIP.

Banning is also involved in regional management of air quality through various actions taken by the Southern California Association of Governments. The City refers all fugitive dust complaints to SCAQMD for investigation and enforcement.

CRITERIA POLLUTANTS

Criteria pollutants are those air pollutants for which federal and state air quality standards exist. They include ozone, nitrogen dioxide, sulfur dioxide, carbon monoxide, suspended particulate matter (PM_{10}) and lead, each of which described briefly below.

Ozone (O_3), formed when byproducts of the internal combustion engine react in the presence of ultraviolet sunlight, is a pungent, colorless, toxic gas commonly referred to as smog. Motor vehicles are the major source of ozone precursors. In the Pass region, conditions are occasionally well suited for the formation of photochemical smog. Excessive exposure to ozone can result in diminished breathing capacity, increased sensitivity to infections, and inflammation of the lung tissue.

Nitrogen dioxide (NO_2) is a reddish-brown gas that results from a combination of nitric oxide and oxygen. Incomplete combustion in motor vehicle engines, power plants, and other industrial operations comprise the primary sources of nitrogen dioxide in the Pass region. Short-term exposure to nitrogen dioxide can result in airway constriction in healthy individuals; individuals

with asthma or chronic obstructive pulmonary disease may also experience diminished lung capacity.

Sulfur dioxide results from the combustion of high-sulfur content fuels, such as coal and oil; it is a colorless, extremely irritating gas. Sources include motor vehicle fuel combustion, chemical manufacturing plants and sulfur recovery plants. Short-term exposure to sulfur dioxide can result in airway constriction and severe breathing difficulties in asthmatics, as well as lung tissue damage and fluid accumulation in the lungs.

Carbon monoxide (CO), which largely results from the incomplete combustion of fossil fuels in motor vehicles, is a colorless, odorless, toxic gas. High concentrations of carbon monoxide can contribute to the development of heart disease, anemia and impaired psychological behavior.

Suspended Particulate Matter consists of fine suspended particles, such as soil and mineral dust, soot and smoke, and aerosols, many of which are byproducts of fuel combustion, tire wear and natural wind erosion. Finely divided solids or liquids that are ten microns (millionths of a meter) or smaller in diameter are referred to as PM_{10}. Produced by direct particle erosion and fragmentation, PM_{10} can also be produced by sand deposited on road surfaces and ground into finer particles by motor vehicles. Fine particulate matter poses a significant threat to public health, and elevated PM_{10} levels are associated with an increase in respiratory infections and occurrences of asthma attacks. PM_{10} is currently (2004) one of the most serious air pollutants in the City and the Pass region.

Lead (Pb) occurs in the atmosphere as particulate matter resulting from leaded gasoline and the manufacturing of batteries, paint, ink and ammunition. While the elimination of leaded gasoline in recent years has reduced the hazards associated with airborne lead, excessive exposure to lead can lead to anemia, kidney disease, gastrointestinal dysfunction, and neuromuscular and neurological disorders.

AMBIENT AIR QUALITY STANDARDS

Federal and state air quality standards established for the criteria pollutants described above are designed to protect that segment of the population that is most susceptible to respiratory distress or infection, including asthmatics, the elderly, children, and those who are weak from disease or illness. State standards are generally more restrictive than federal standards, particularly as regards PM_{10} and sulfur dioxide. The following table provides a comparison of state and federal ambient air quality standards.

Table IV-12
State and Federal Ambient Air Quality Standards

	State Standards		Federal Standards	
Pollutant	**Average Time**	**Concentration**	**Average Time**	**Concentration**
Ozone	1 hour	0.09 ppm	1 hour	0.12 ppm
Carbon Monoxide	1 hour	20.0 ppm	1 hour	35.0 ppm
	8 hours	9.0 ppm	8 hours	9.0 ppm
Nitrogen Dioxide	1 hour	0.25 ppm	AAM	0.053 ppm
Sulfur Dioxide	1 hour	0.25 ppm	AAM	0.03 ppm
	24 hours	0.04 ppm	24 hours	0.14 ppm
Suspended Particulate Matter (PM_{10})	24 hours	50 $\mu g/m^3$	24 hours	150$\mu g/m^3$
	AGM	30$\mu g/m^3$	AAM	50$\mu g/m^3$

Notes: ppm = parts per million ; $\mu g/ m^3$ = micrograms per cubic meter of air
AAM = Annual Arithmetic Mean ; AGM = Annual Geometric Mean
Source: "2003 Air Quality Management Plan," South Coast Air Quality Management District

SCAQMD operates and maintains regional air quality monitoring stations throughout its jurisdiction, to determine whether existing ambient air quality complies with the standards shown above. The City of Banning is located within Source Receptor Area (SRA) 29, which includes a monitoring station at the Banning Municipal Airport. This station monitors contaminant levels and meteorological conditions on a daily basis. For PM_{10}, samples are collected approximately every seven days over a period of 24-hours, yielding about 54 samples a year.

SENSITIVE RECEPTORS

Persons or land uses that may be subject to respiratory stress and/or significant adverse impact as a result of exposure to air contaminants are considered sensitive receptors. The California Air Resources Board has indicated that children under 14, seniors over 65, athletes, and people with cardiovascular and chronic respiratory diseases are sensitive receptors. Hospitals, nursing and retirement homes, schools, playgrounds, parks, athletic facilities, and residential and transient lodging facilities are all considered sensitive land uses.

REGIONAL CLIMATE AND METEOROLOGY

The air quality of a particular locale is a function of the amount of pollutants emitted and dispersed and the climatic, meteorologic, and geophysical conditions that reduce or enhance the formation of pollutants. The central and northern parts of the City reach into the foothills of the San Bernardino Mountains. The San Jacinto Mountains occur along the southern margin of the City. The largest portion of the City occupies the narrow, east-trending valley known as the San Gorgonio Pass, which extends westward from the Coachella Valley and rises to about 2,600 feet near Beaumont. It merges with the Beaumont Plain and the San Timoteo Badlands further west. Elevations in the City of Banning range from 2,080 feet above mean sea level in the eastern part of the valley to about 5,200 feet in the mountains.

On the valley floor, temperatures range from lows in the upper 30s during winter months, to highs in the upper 90's during summer months. The average annual rainfall in central Banning is approximately 18 inches. Higher mountain slopes in the San Gorgonio Pass may receive as much as 30 inches of rainfall per year. Eastward of Banning, these averages decrease, with approximately 12 inches annually in Cabazon, to only about 8 inches per year at the eastern end of the Pass.

Natural vegetation is sparse and widely spaced, and therefore surface soils are exposed to wind activity. In the adjacent mountains, precipitation is often short and intense, which results in torrential run-off and considerable sediment deposition on the valley floor. The area is characterized by strong winds, which are funneled through the narrow San Gorgonio Pass, causing sand to become airborne. This condition, known as blowsand, poses an often destructive environmental hazard. In addition to health problems associated with the presence of dust particles in the air, dust storms reduce highway and air traffic visibility.

The planning area is also located in a region subject to strong Santa Ana winds, which generally occur in the late fall. During Santa Ana conditions, winds in excess of 40 miles per hour (mph) occur, and gusts can be even higher.

Strong winds transport and deposit large quantities of sand and dust on buildings, fabrics and automobiles, thereby reducing visibility and damaging property. Extensive wind-borne soil can dirty streets, pit windshields and obliterate landscaping. Dust on vegetation can interfere with plant respiration and stunt plant growth. The adverse health effects in humans can be severe, and include reduced lung capacity and functioning.

REGIONAL POLLUTANTS OF CONCERN

Analysis of the ambient air quality data collected at the Banning Airport monitoring station indicates that ozone and PM_{10} are the most prevalent air pollutants in the planning area. These pollutants are further discussed below. In addition to meeting federal and state air quality standards for criteria air pollutants, SCAQMD has general responsibility to control emissions of air contaminants and prevent endangerment to public health. Therefore, SCAQMD also regulates pollutants other than criteria pollutants, including Toxic Air Contaminants (TACs), and others. TACs are discussed below.

Ozone

The South Coast Air Basin has a history of exceeding state and federal ozone standards, and is currently designated as an "extreme" ozone non-attainment area under the federal Clean Air Act. This designation means that the Basin must comply with federal ozone air quality standards by November 15, 2010.

The region's ozone is generated by motor vehicles, both from U.S. Interstate 10 and other regional and local roadways, as well as other local sources. Further, prevailing daytime breezes from coastal areas to the west tend to transport ozone and its precursor emissions easterly into the Basin's inland valleys, including the Pass region, and thence into neighboring areas of the SSAB and the Mojave Desert Air Basin to the northeast. The 2003 Air Quality Management Plan

Environmental Impact Report (AQMP EIR) prepared by SCAQMD show that in 2001, the Basin exceeded federal health 1-hour standards for ozone on a total of 36 days, and the federal 8-hour standard on 100 days. The more stringent State standard was exceeded on 121 days, and the health advisory level on 15 days. The 2003 AQMP sets forth strategies and control methods to attain federal air quality standards for ozone by 2010. SCAQMD projections show that attainment of State standards is not likely to occur by 2010. At the monitoring station at the Banning Municipal Airport, federal 1-hour standards for ozone were exceeded 16 days in 2001, while federal 8-hour standards were exceeded 49 days. State 1-hour standards were exceeded 63 days. Health advisory standards were exceeded 2 days during 2001.

The Pass Region, including Banning, is located in an area subject to substantial exposure to mobile source emissions, including diesel-fueled locomotives and motor vehicles. Currently (2004), local rail facilities carry approximately 60 trains per day. Further, several segments of U.S. Interstate 10 in the planning area average more than 100,000 vehicle trips per day. This average is projected to increase over the General Plan buildout period. (Also please see the Circulation Element).

PM_{10} Emissions

The region also has a history of elevated PM_{10} emissions, which are the result of both human activities such as vehicle use and construction activity, and natural occurrences, such as windstorms. The Basin is currently designated a non-attainment area for $PM_{10.}$ Under the Federal Clean Air Act, the Basin must comply with federal PM_{10} air quality standards by December 31, 2001. The SCAQMD has applied for a five-year extension and must demonstrate compliance by 2006. It is expected that compliance with state standards will occur beyond 2010.

In 2001, PM_{10} emissions measured at the Banning Airport monitoring station exceeded federal standards one day out of the 54 days sampled over the course of the year. State standards were exceeded 7 days over the period sampled.

The City does not have its own fugitive dust ordinance, but relies on applicable state code and AQMD Rules, including Rule 403 (Fugitive Dust), for authority to enforce fugitive dust compliance as needed. As noted previously, the City coordinates with AQMD by referring complaints regarding fugitive dust violations directly to AQMD. The City has also established nuisance abatement ordinances dealing with smoke and soot, including those generated by internal combustion engines, residential fireplaces or stoves, or industrial smokestacks. Violations of these nuisance abatement ordinances over the past five years have generally been small-scale (residential) occurrences, with only one large-scale (industrial) violation during that period.

Toxic Air Contaminants

Toxic Air Contaminants (TACs) include substances such as asbestos, benzene, beryllium, inorganic arsenic, mercury, and vinyl chloride. TACs are generated by a variety of sources including electroplating and anodizing operations, gasoline distribution facilities, petroleum refineries, and others. TAC generation and emissions are regulated in the SCAQMD through a variety of federal, state and local programs. The primary health concern associated with TACs is their carcinogenic potential. Based on studies conducted by SCAQMD in the late 1980's and

1990's, cancer risk levels from TACs appeared to be decreasing since 1990. Nonetheless, mobile source components comprised the dominant risk. Approximately 70 percent of the risk is attributed to diesel particulate emissions, and about 20 percent to other toxics associated with mobile sources.

Transportation Demand Management

As required by the Riverside County Congestion Management Program, the City has adopted a Transportation Demand Management (TDM) Ordinance. The TDM Ordinance applies to new or change-of-use non-residential developments employing 100 or more persons. It requires the project proponent to demonstrate how the development will reduce the number of project-generated vehicle trips (Please also see the Circulation Element). Measures may include carpooling, carpool parking preferences, bicycle storage and showers, and telecommuting. The implementation of this ordinance can locally help to reduce the impacts of vehicles on air quality in the City.

City Use of Alternative Fuels

All full-sized Banning Transit System busses are fueled with compressed natural gas (CNG). The City-owned vehicle fleet includes two CNG fueled vehicles, and plans to replace, through attrition, existing gasoline and diesel powered fleet vehicles with CNG-fueled vehicles. The majority of Banning Unified School District (BUSD) busses are CNG fueled.

The City has recently upgraded its existing CNG fueling station, located at the City Corporate yard at 176 East Lincoln. The upgrade was a City-initiated project jointly funded by the City, Banning Unified School District, Riverside County Transportation Commission, Riverside County, and AQMD. The station is currently used by the City, BUSD, and to a limited extent by Riverside County and the Department of Forestry's Fire Division. The fueling station is also available for public use.

FUTURE DIRECTIONS

The South Coast Air Quality Management District is responsible for monitoring air pollutant levels and regulating air pollution sources. The issues addressed in the Air Quality Element are part of those set forth in California Government Code, Section 65302(d), that requires that existing transportation-related air quality impacts and trends also be addressed. The General Plan EIR quantifies potential air pollutant emissions associated with buildout of the community, including emissions associated with community traffic. In addition, the California Clean Air Act (Assembly Bill 2595) require that air quality policies and programs be developed to protect and preserve the environment and general public from the harmful effects of air pollutants.

The City works closely with AQMD to ensure compliance with applicable state codes and AQMD rules dealing with fugitive dust, as well as to ensure compliance for City-owned electrical generators and other facilities. The City has recently upgraded its compressed natural gas fueling station, which is available for public use. The City has adopted a Transportation Demand Ordinance that requires proponents of non-residential developments that employ more than 100 persons to demonstrate how they will reduce trips generated by their development.

Nonetheless, rapid population growth of the area and the proximity to major interstate and rail facilities facilitate the generation of fugitive dust, ozone and other pollutants. Therefore, the City needs to continue and expand its efforts to effectively control and improve local air quality.

GOALS, POLICIES, AND PROGRAMS

Goal
To preserve and enhance local and regional air quality for the protection of the health and welfare of the community.

Policy 1
The City shall be proactive in regulating local pollutant emitters and shall cooperate with the Southern California Association of Governments and the South Coast Air Quality Management District to assure compliance with air quality standards.

Policy 2
The City shall continue to coordinate and cooperate with local, regional and federal efforts to monitor, manage and reduce the levels of major pollutants affecting the City and region, with particular emphasis on PM_{10} and ozone emissions, as well as other emissions associated with diesel-fueled equipment and motor vehicles.

Program 2.A
On an on-going basis, the City shall continue to participate in efforts to monitor and control PM_{10} emissions from construction and other sources, and all other air pollutants of regional concern. The City shall coordinate with SCAQMD to provide all reporting data for the SCAQMD annual report.
Responsible Agency: Building and Public Works Departments, Planning Department, SCAQMD
Schedule: Continuous; On-going

Policy 3
City land use planning efforts shall assure that sensitive receptors are separated from polluting point sources.

Program 3.A
The General Plan Land Use Map and Element shall be developed and maintained to locate air pollution point sources, such as manufacturing operations and highways, at an appropriate distance from sensitive receptors, including hospitals, schools, hotels/motels and residential neighborhoods.
Responsible Agency: Planning Department, SCAQMD
Schedule: 2005-2006

Policy 4
Development proposals brought before the City shall be reviewed for their potential to adversely impact local and regional air quality and shall be required to mitigate any significant impacts.

Program 4.A
Projects that may generate significant levels of air pollution shall be required to conduct detailed impact analyses and incorporate mitigation measures into their designs using the most advanced technological methods feasible. All proposed mitigation measures shall be reviewed and approved by the City prior to the issuance of grading or demolition permits.
Responsible Agency: Planning Department
Schedule: On-going

Program 4.B
Provide consistent and effective code enforcement of construction and grading activities and off-road vehicle use to assure that the impacts of blowing sand and fugitive dust emissions are minimized.
Responsible Agency: Building Department, Code Compliance, SCAQMD
Schedule: On-going

Program 4.C
The City shall encourage immediately, and investigate legislating the reduction of TDM requirements to a level of 50 employees or more.
Responsible Agency: Public Works Department
Schedule: 2005-2006

Policy 5
The City shall promote the use of clean and/or renewable alternative energy sources for transportation, heating and cooling.

Program 5.A
Vehicles that use alternative fuel sources, such as compressed natural gas and electricity, shall be purchased and maintained for use in the City's vehicle fleet when new vehicles are purchased.
Responsible Agency: City Manager's Office
Schedule: 2005-2006

Program 5.B
The City's Compressed Natural Gas fueling station shall continue to be open to public use.
Responsible Agency: Public Works Department
Schedule: On-going

Policy 6
The City shall support the development of facilities and projects that facilitate and enhance the use of alternative modes of transportation, including pedestrian-oriented retail and activity centers, dedicated bicycle paths and lanes, and community-wide multi-use trails.

Program 6.A
The City shall pursue a balance of employment and housing opportunities that encourage pedestrian and other non-motorized transportation and minimize vehicle miles traveled.
Responsible Agency: Economic Development Department, Redevelopment Agency, Planning Department
Schedule: On-going

Program 6.B
The City shall promote the expanded availability of mass transit services, coordinating with all agencies to link residential and commercial business and employment centers with the City's residential neighborhoods and nearby communities.
Responsible Agency: Community Services Department, Economic Development Department, Redevelopment Agency, Planning Department
Schedule: Ongoing

Program 6.C
The City shall promote and support the development of ridesharing, carpooling, flexible work scheduling, telecommuting and Park and Ride programs among public and private employers.
Responsible Agency: Planning Department, Public Works Department, Community Services Department, Transit Agencies, Major Employers
Schedule: Ongoing

Program 6.D
The City shall require shade trees with non-damaging root systems to be planted in all medians on all streets, to cool the asphalt and reduce the Reactive Organic Compounds (ROC) and Volatile Organic Compounds (VOC) generated by asphalt streets and parking lots. A list of permitted trees with non-damaging root systems shall be developed.
Responsible Agency: Planning Department, Public Works Department
Schedule: Ongoing

ENERGY AND MINERAL RESOURCES ELEMENT

PURPOSE

The purpose of the Energy and Mineral Resources Element is to guide the City in the long-term management and thoughtful use of energy and mineral resources. Energy and mineral resources are an integral part of the community and local economy. They provide the essential framework that enables development. Their availability influences the pattern of land uses as well as the direction and intensity of growth in an area.

Minerals and most conventional energy resources are finite and are in increasingly limited supply. Furthermore, energy shortages and rising utility rates in southern California have become a serious concern, placing considerable burden on individuals, the community and the region. This Element addresses the community's dependence on these limited resources and the need for local and regional energy policy. Basic policy elements include increased conservation, and greater energy efficiency. Making the shift toward reliable energy resources, including greater use of renewable energy resources, is also important policy issue. The Energy and Mineral Resources Element sets forth goals, policies and programs that provide opportunities for more local control of energy production and distribution.

This Element also includes the description of conventional and renewable energy resources, quantifications of energy resource use, as well as the location and identification of mineral resources. Policies and programs serve as tools that the City can use to help insure the availability, conservation and management of these resources, while encouraging the development of balanced, innovative and long-term solutions to energy efficiency, and the expanded use of renewable resources.

BACKGROUND

The Energy and Mineral Resources Element is related to other elements in the General Plan, including Land Use, Open Space and Conservation, Circulation, Air Quality, Economic Development and other elements. A wide range of state and federal legislation and regulation are applicable to energy and mineral resource issues, including California Government Code Section 65560(b), which directs cities and counties to provide for the preservation of energy and mineral resource areas, as well as other resources. As discussed below, these requirements have direct application to the City and its Sphere-of-Influence where important mineral and energy resources have already been identified and developed. Government Code Section 65302(d) requires that General Plans include elements that address resource conservation, and set forth the areas that may be appropriate to address, including reclamation, prevention of resource degradation and preservation for long-term use.

The regulation of mineral resources is also addressed at length in Sections 2762, 2763 and 2764 of the Public Resources Code. In addition, Government Code Section 65303 allows the local

jurisdiction to add other resource conservation/management subjects that, in its opinion, relate to the physical development of the City.

The State Solar Rights Act and Solar Shade Control Act, meant to enhance opportunities for the use of solar energy, and Title 24 building standards, promulgated to reduce unnecessary energy use in new or substantially remodeled construction, are some of the state regulations affecting mineral and energy resources.

MINERAL RESOURCES

For the purpose of this element, mineral resources are defined as naturally occurring solid crystalline substances that consist of chemical elements or compounds. inorganic and organic, which are considered to be an economically valuable commodity. Mineral resources include iron, sand and gravel, limestone, and coal, but not natural gas and petroleum, which are generally considered to be energy resources. The importance of mineral deposits and their consumption is dependent upon their relative abundance and importance in business and industry. Careful consideration of rare or valuable mineral deposits is important prior to their exclusion by urban development.

Mineral deposits are nonrenewable resources, and therefore require careful and efficient development to prevent unnecessary waste or exploitation. The excavation of mineral resources can also have significant environmental impacts that may not be entirely mitigated by surface mining reclamation plans. Evidence of mining, can remain for hundreds of years if not properly reclaimed through redistribution of materials, re-contouring, fine grading and revegetation. The Surface Mining and Reclamation Act (SMARA) was developed to assure the preservation of mineral resources while concurrently addressing the need for protecting the environment.

Sand and gravel, collectively referred to as aggregate, is the primary mineral resource that is actively being developed in the eastern portion of Banning. Weathering, erosion and other geological processes have deposited materials from the surrounding mountains and hills, forming an alluvial fan with significant deposits of these mineral resources. Aggregate, and associated components, is an important component in building and construction materials, generally providing 80% to 100% of material volume for asphalt, concrete, road base, stucco and plaster. Many aggregate resources, including concrete, asphalt, and road base, can be recycled as new base, and new concrete and asphalt products.

Locally Important Mineral Resources

In 1988, the State of California Department of Conservation, Division of Mines and Geology, under direction of the Surface Mining and Reclamation Act, released a report identifying aggregate materials in the San Bernardino Production Consumption Region, which covers an area from Fontana on the west to Cabazon on the east, and from Devore on the north to Lake Elsinore and Hemet on the south. The primary focus of the report was to identify regionally significant mineral deposits in an effort to conserve and develop them; and to help in anticipating aggregate production needs of the region.

The Division of Mines and Geology developed four Mineral Resource Zones:

MRZ-1: Areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that little likelihood exists for their presence.

MRZ-2: Areas where adequate information indicates that significant mineral deposits are present, or where it is judged that a high likelihood for their presence exists.

MRZ-3: Areas containing mineral deposits, the significance of which cannot be evaluated from available data.

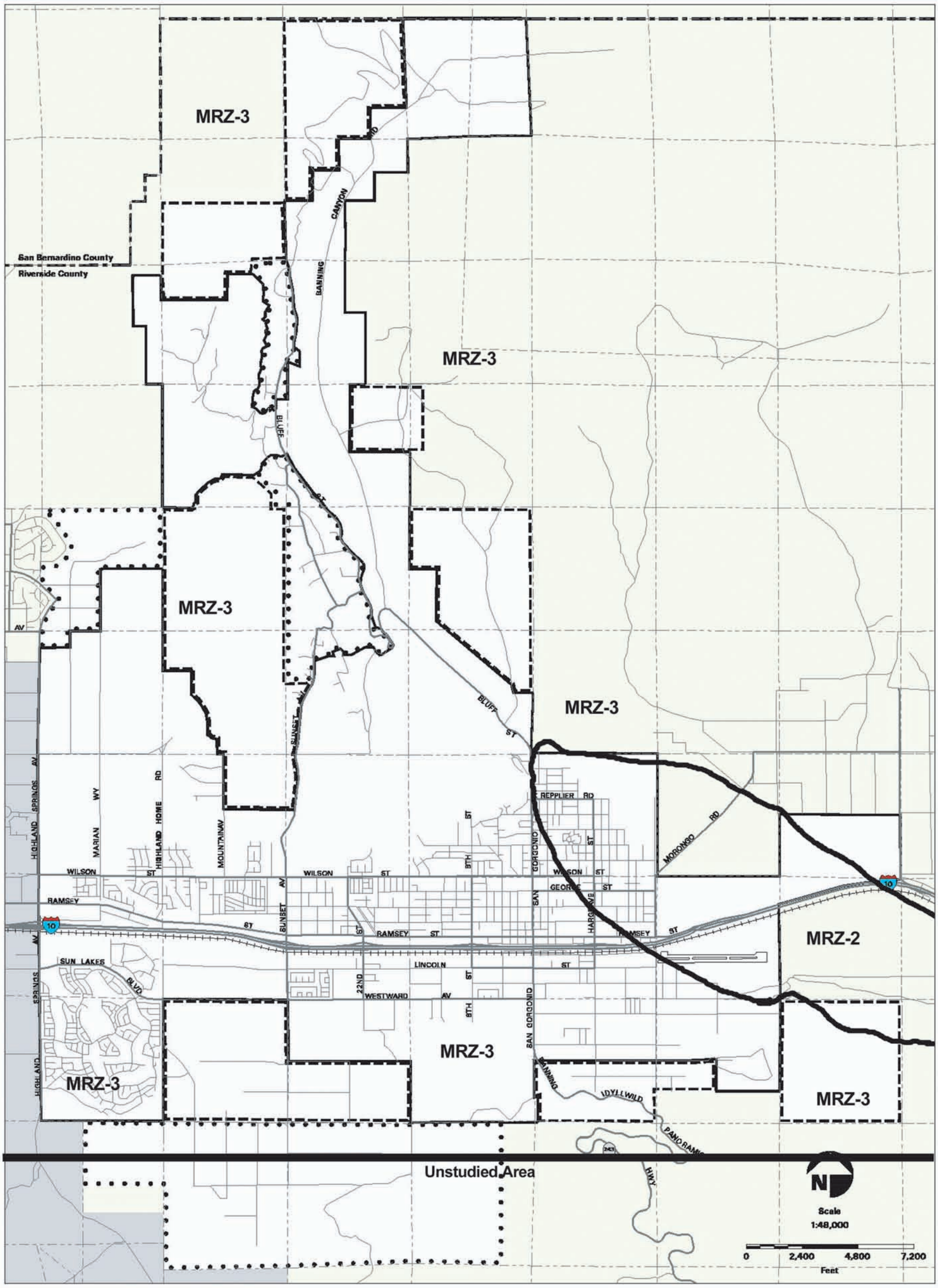
As shown in Exhibit IV-8, MRZ-3 is identified throughout most of the planning area. An area of MRZ-2 occurs in the eastern portion of the City. This designation applies to an area of approximately 6.5 miles of land along the alluvial fan of the San Gorgonio River that lies southeast of the Banning Bench, north and south of Interstate 10. The balance of the City is designated as Unstudied, with no portion of the planning area designated as MRZ-1 or MRZ-4.

Currently (2004), the Banning Quarry, operated by Robertson's Ready Mix, is the only aggregate producer in the City of Banning. The Banning Quarry is mined for rock, sand and base materials used for concrete and construction. The quarry is located in the MRZ-2 zone in the eastern portion of the City.

Energy Resources

Energy resources are essential for all land uses, and in transportation. However, the majority of energy comes from non-renewable resources, which include oil, coal and natural gas. Not only are these resources finite and limited, their development and use are typically damaging to the environment, resulting in a large economic cost. Moreover, energy resources are generally not under local control or management and therefore are not always readily available or dependable. Energy shortages, relatively high-energy costs, unpredictable energy supplies, and the uncertainties of future availability of resources have made energy production and consumption an important issue.

In the City of Banning, estimates of consumption of electricity and natural gas on a per capita or per household basis are derived from a variety of sources, including utility providers. A range of factors can affect rates of energy use, with cost playing the central role. The South Coast Air Quality Management District (SCAQMD), in cooperation with utilities, has developed a set of assumptions used to define the general level of energy consumption by use. Residential energy users, on average utilize approximately 79,000 cubic feet of natural gas, and 6,000-kilowatt hours (Kwh) per unit per year. Commercial energy consumers use approximately 35 cubic feet of natural gas per square foot per year and anywhere from 9.95 to 53.3-kilowatt hours (Kwh) per square foot per year depending on the type of commercial use.



Banning City Limits
Banning Sphere of Influence
Banning Planning Areas
County Line
Township - Range - Section
Major Roads
Minor Roads
Railroads
City of Beaumont
MRZ-2 Area

Source: California Geological Survey

City of Banning
General Plan
Mineral Resource Zones

Map Prepared on: February 11, 2004

TERRA NOVA®
Planning & Research, Inc.

Banning General Plan
Mineral Resource Zones

Exhibit
IV-8

With the exception of electrical energy generated from nuclear and renewable resources, non-renewable fossil fuels play a key role in the generation of electricity, the provision of heat, and for use in cooking and domestic hot water. Non-renewable resources are also at the foundation of today's automobile dependent economy. In addition to reducing the long-term availability of these important resources, the burning of fossil fuels results in the production of air pollutants, hazardous waste products and global warming.

Conservation methods, increasing energy efficiency, and developing and using alternative and renewable energy resources offer many benefits to both communities and the environment, and help promote a stable local economy. These efforts will also help to reduce energy shortages, provide more options and greater flexibility, and avert future energy crises.

Electric Power Services

The generation and transmission of electric power has been evolving since the early 1950s when the first commercial nuclear power plants came on-line. Since that time the use of nuclear power peaked in the 1970s and has since fallen out of favor. Meanwhile, the use of renewable resources, such as wind and solar, have steadily made progress. However, fossil fuels continue to carry most of the base-load demand, with natural gas technology helping to meet peak power demand. Natural gas is being used more widely in large utility-scale turbine systems to address base-load demand, and is also fueling emerging micro-turbine technology for on-site power generation.

Electric Power Deregulation

In 1998, Assembly Bill 1890 (AB 1890) deregulated the electricity industry, allowing Californian residents to choose their electricity provider. In doing so, California consumers were able to decide what kind of energy to support, including electricity generated from renewable energy resources. In addition to opening up the energy market, AB 1890 also created a new statewide renewable energy program. The program collected $540 million from Southern California Edison, Pacific Gas and Electric Company and San Diego Gas and Electric from 1998 to 2001, which is used to fund existing, new and emerging renewable technologies.

Deregulation also resulted in the sale of power generating facilities by the state's investor-owned utilities. It was believed that this approach would increase competition among generators and lower the cost of electric power. However, a number of factors at the beginning of the decade have resulting in expensive and unreliable sources of electricity, including greater than expected demand, lower rainfall and less available hydroelectric power, increased cost of natural gas for power generation, and the uncoordinated shutdown of power plants for maintenance. The new regulatory environment may also have provided opportunities for the new owners of power generation capacity to take advantage of circumstances and to reap significantly greater profits than was typical of integrated utility-owned generators.

Finally, deregulation has put the economic viability of the restructured utilities at risk by allowing the wholesale power generators to charge what they wish, while capping the rates that the retail power distributors could charge their customers. The gap between wholesale prices and retail caps generated billions of dollars in debt for the restructured utilities.

As deregulation of electric power continues to unfold, the City and its partners in regional government will have important opportunities to help shape the local electricity market through conservation initiatives, development and regulation of local power generation, and by influencing energy policy on a regional and state level. The City of Banning Public Works Electric Division provides electric services and facilities to the City of Banning, through the City's own electric utility.

The City Electric Division contracts with the Southern California Public Power Authority (SCPPA) for most of the City's power needs. SCPPA is a joint powers authority consisting of 10 municipal utilities and one irrigation district. Energy supplied by SCPPA is acquired from three sources, including the San Juan coal plant located in New Mexico, the Palo Verde Nuclear Generation Station in Arizona, and the Hoover hydroelectric facility on the boarder of Arizona and Nevada. In addition, the City contracts with both public and private entities for the provision of specialized services.

Electricity is conveyed to the City through a series of 115 KV transmission lines to a substation located on East Ramsey Street. From the East Ramsey Street substation, power is transmitted by one 33 KV transmission line to five distribution stations owned and operated by the City, which in turn distribute power through 4 KV and 12KV distribution systems. Within the City system, high voltage transmission lines deliver power to a substation where power is stepped down and distributed through lower voltage lines. Individual homes and businesses then receive power through a final transformer, which brings voltages down to more safe and useful levels.

Electric Power: Next Steps

The City is in the position to be the leader in the development, promotion and implementation of innovative energy strategies and technologies that address electricity generation and use. One of the most cost-effective strategies is through enhanced efficiencies and conservation. It is considerably easier to conserve energy than to produce more. Conservation also directly addresses environmental issues associated with electric energy. The City's continued efforts towards the use of alternative fuels, advanced technologies and energy conservation will also be important to locally mapping out approaches and strategies for a more secure, affordable and environmentally responsible energy future.

Natural Gas Services

Natural gas is a rapidly growing energy source that has been relatively inexpensive, clean burning and convenient. It is found in association with petroleum crude oil deposits and is transported throughout the country through high-pressure transmission lines, including those found in the City. Gas service is available to commercial, industrial and residential developments throughout the City, with costs varying with the season and amount of use. Historically, natural gas has been a versatile and affordably priced fuel. However, a rapidly growing demand is affecting the availability and cost of natural gas. Although natural gas supplies remain abundant, it is an important chemical feedstock used in a wide variety of industries and products that warrants conservation.

The Gas Company

The General Plan planning area is located within the service district of the Gas Company. The Gas Company has by far the most sophisticated and detailed technical assistance and incentive program of all energy service providers serving the City. Service planners and technical expertise from the Gas Company's various service divisions are available to assist in addressing a wide range of use issues, including land use master planning, service extension and use-specific technical consulting/problem solving. Brief summaries of the various services available from the Gas Company are provided below.

The Gas Company has developed a wide range of energy management, conservation and equipment retrofit programs for its customer base. These programs include core nonresidential customers equipment rebates up to 20% of the cost of qualifying equipment. Assistance in facilities planning and analysis is also provided to maximize energy efficiency and cost-effective equipment purchases and operations.

The Gas Company's Air Quality Assistance Program provides detailed information on current and anticipated air quality requirements and helps users through the regulatory compliance maze, including the permitting process. Business partnerships are also facilitated with an "Export Hotline" and market research available. The Gas Company also helps in the development of new technologies and process solutions primarily for industry.

Transit System

The City operates the public transit system, and utilizes a fleet of buses that are powered entirely by compressed natural gas. These buses provide an important service while helping to reduce locally generated air pollutants, improve the local environment and promote energy and environmental awareness.

The Compressed Natural Gas (CNG) Fueling station at the City of Banning Corporate Yard was recently upgraded. The upgraded facility provides expanded capacity and fast fueling ability. This facility is used for City vehicles, and is also open to the public. With the increased capacity and redundant compressor units, having adequate and reliable CNG pumping capacity will not be an issue in the foreseeable future.

Local Renewable Energy Resources

A variety of important renewable energy resources are found in the Banning region, including the abundant sunshine and high temperatures, and the San Gorgonio Wind Resource Area in the vicinity of the San Gorgonio Pass. These resources provide practical and cost-effective alternatives to conventional energy resources.

The development and utilization of local renewable energy resources could significantly reduce dependence on less environmentally friendly energy sources and may comprise a significant economic development opportunity for the City and the region.

Wind Energy

Wind energy development in the San Gorgonio Pass area began in the early 1980's, and was regulated by the U.S. Bureau of Land Management (BLM) and the County of Riverside. The San Gorgonio Wind Resource Study and substantial subsequent analysis have delineated those portions of the wind resource area that offers an economically viable (developable) wind resource. Since winds in the San Gorgonio Pass are intermittent, so too is the generation of electricity from wind turbines. Nonetheless, wind energy is emerging as an important alternative to conventional power systems. The cost of wind-generated electricity is now equal to or lower than electricity generated by coal or natural gas.

Solar Energy

The costs of manufacturing and installing solar photovoltaic systems, which involve the direct conversion of sunshine to electricity, have been dramatically reduced in recent years, but are still primarily used for special applications, including powering remote locations. In the past decade, however, photovoltaic technologies have made significant progress both as stand-alone power systems and as integrated components of building design and construction. Solar thermal systems have meanwhile been in use all over the world for many years to provide domestic hot water and to heat swimming pools. Passive solar designs are also being used to provide natural lighting and space heating.

Banning is well situated to take advantage of the continued emergence and refinement of solar technologies, with the use of abundant solar energy for both solar and photovoltaic systems.

Hydrogen Fuel Cells

Hydrogen technology is quickly becoming one of the leading renewable energy sources currently being developed and utilized. Fuel cell technology uses hydrogen to generate electricity to power vehicles, homes and businesses. Hydrogen is produced from the splitting of water and its use generates heat and water vapor but no other wastes.

Fuel cells convert chemical energy directly into electricity with greater efficiency than any other current power system. When coupled with solar or wind technologies, hydrogen power can be utilized on large scales, including primary power for commercial and industrial uses. While not new, fuel cell technologies are being developed and refined at an accelerating pace.

FUTURE DIRECTIONS

Since the onset of the industrial revolution, energy and mineral resource production and use have become essential components of infrastructure and technology development, and have greatly enhanced our quality of life. Retrieving, harnessing and using these resources have also been one of the major causes of environmental degradation, impacting wildlife habitat, affecting water and air quality, and being directly and indirectly associated with a wide range of adverse public health effects.

The economic and environmental costs associated with conventional and frequently indiscriminate mineral and energy production and use are forcing communities and countries to develop new policies and programs. The various constraints that have emerged can also be

viewed as opportunities for economic and environmental enhancement. Materials recycling, and lowering or shifting energy demand will help to control costs and require mineral and energy providers to operate more efficiently and to price their products more competitively.

The use of small-scale systems that provide local on-site power, while also being connected to the larger regional power grid, may allow for a more decentralized system of power generation in the future. Rather than one dominant technology emerging, the future may see a variety of technologies finding a place in the mix of power generators. New and old technologies are emerging in the market place, including wind turbines, photovoltaic systems, gas-fired micro-turbines, and fuel cells which can use a variety of fuels. The resulting system would be based upon locally available resources and provide a more flexible capacity that is less susceptible to interruption. However, the larger regional grid will continue to be an essential part of the electric power system, but sources of power are likely to be more varied and more widely distributed.

Encouraging conservation and the development and use of alternative and renewable energy will also expand economic opportunity. Issues of local and national economic security will also be addressed by the development and implementation of enlightened energy policies. Developing energy policies with an emphasis on conservation, local control, greater use of renewable resources and community-scale technologies, will help assure a secure and environmentally friendly energy future.

GOALS, POLICIES AND PROGRAMS

Goal
Efficient, sustainable and environmentally appropriate use and management of energy and mineral resources, assuring their long-term availability and affordability.

Policy 1
Promote energy conservation throughout all areas of the community and sectors of the local economy, including the planning and construction of urban uses and in City and regional transportation systems.

Program 1.A
The City shall strictly and consistently enforce all state mandated energy-conserving development and building codes/regulations, and shall investigate and report on the appropriateness of developing more stringent local energy performance standards.
Responsible Agencies: Building Department, Planning Department
Schedule: Ongoing

Program 1.B
The City shall continue to participate in transportation planning efforts and shall encourage the expanded use of public transit, vehicles fueled by compressed natural gas and hydrogen, buses with bike racks and other improvements that enhance overall operations and energy conservation.
Responsible Agency: City Manager's Office, Community Services Department, Public Works Department
Schedule: Ongoing

Program 1.C
The City shall strive for efficient community land use and transportation planning and design, and shall assure the provision of convenient neighborhood shopping, medical and other services located to minimize travel and facilitate the use of alternative means of transportation.
Responsible Agency: Public Works Department, Planning Department, Community Services Department
Schedule: Ongoing

Program 1.D
The City shall encourage the use of, and programs for, electric vehicles, hybrids, bicycles and pedestrian facilities.
Responsible Agency: Public Works Department, City Council
Schedule: Ongoing

Policy 2
Promote the integration of alternative energy systems, including but not limited to solar thermal, photovoltaics and other clean energy systems, directly into building design and construction.

Program 2.A
The City shall make available to residents, businesses, and the building industry information on commercially available conservation technologies, solar thermal and photovoltaic energy systems, fuel cell and other alternative energy technology. Building regulations and guidelines that provide for the safe and efficient installation of these systems shall also be provided.
Responsible Agency: Building Department, Community Development Department, Public Works Department
Schedule: 2006-2007, Ongoing

Policy 3
Proactively support long-term strategies, as well as state and federal legislation and regulations, that assure affordable and reliable production and delivery of electrical power to the community.

Policy 4
Support public and private efforts to develop and operate alternative systems of wind, solar and other electrical production, which take advantage of local renewable resources.

Program 4.A
Support and facilitate the integration of co-generation and other on-site energy production and management systems into larger industrial, commercial and institutional operations in the City to enhance operational efficiencies, reliability, and to provide additional opportunities for local power production.
Responsible Agency: Public Works Department; Planning Department; Building Department
Schedule: Ongoing.

Policy 5
Assure a balance between the availability of mineral resources and the compatibility of land uses in areas where mineral resources are mined.

Program 5.A
The City shall monitor and regulate the safe and environmentally responsible extraction and recycling of significant mineral resources located within the planning area.
Responsible Agency: Community Development Department, Public Works Department
Schedule: Ongoing.

Program 5.B
The City shall establish a formal relationship with the County Geologist or other qualified agency to monitor mineral resource operations under SMARA.
Responsible Agency: Planning Department, Riverside County Geologist.
Schedule: 2005-2006

Program 5.C
The City shall strictly enforce the provisions of the existing mining permit within City limits.
Responsible Agency: Code Compliance, Planning Department
Schedule: Ongoing