7. CONSERVATION ELEMENT

7.1 BIOLOGICAL RESOURCES

7.1.1 Background

The native habitats within the study area have undergone considerable modification over the years. The majority of the valley floor was cultivated in the past, which resulted in the removal of native plants. Introduced grasses became established when cultivation ended. Introduced grasses and native plant and wildlife species were progressively removed as the area urbanized. Animal species currently found in urbanized areas are limited to those capable of adapting to living in close proximity to man.

Many of the species that once inhabited the valley remain in nearby natural areas. There are several such areas within or adjacent to the planning area. The San Jacinto Wildlife Area, located at the southeast corner of the planning area was established in 1983. This 12,000-acre wildlife preserve is noted its diversity of migratory birds. There are three additional large areas where natural habitat is retained in public ownership: Lake Perris Recreation Area, adjacent to the southern city limits, Norton Younglove Park, east of the city limits, and the Box Springs Mountain Park, located northwest of the city limits. A considerable amount natural habitat is in private ownership in the hillsides situated at the northern and eastern end of the planning area.

Due to wide variations in soil types, terrain, and micro-climates, several different plant communities occur. Grasslands are predominant in the undeveloped portions of the valley floor. Unless cultivated, they contain grasses, annuals, shrubs, and thistle, including foxtail grass (*Hordeum*), cheatgrass (*Bromus*), mustards (*Brassica*), lupines (*Lupinus*), and Russian thistle (*Salsola kali*).

Another plant community within the study area is the Chamise Chaparral, found on steep northerly slopes within the study area. Chamise (*Adenostoma fasciculatum*) is the dominant member of this community. Other common plants in this zone include whitehorn brush (*Ceanothus crassifolius*), sugar sumac (*Rhus ovata*), yucca (*Yucca whipplei*), and black sage (*Salvia mellifera*).

The third common plant community found within the study area is Coastal Sage Scrub, generally found on hillsides. Coastal sage brush (*Artemesia californica*) is the dominant species on the north slopes while Brittlebrush (*Encelia farinosa*) dominates the south facing slopes. Other species commonly associated with this zone are: black sage (*Salvia mellifera*), white sage (*Salvia apiana*), Yucca (*Yucca shidigera*), sugar sumac (*Rhus ovata*) and California buckwheat (*Eriogonum fasciculatum*).

Coastal sage scrub vegetation

Springs and drainage courses support water-oriented, riparian species. They include elderberry (Sambucus mexicanus), sunflower (Helianthus), willows (Salix), mulefat (Baccharis viminalis), horseweed (Conyza coulteri), and wild rhubarb (Rumex hymenosepalum). The larger drainage courses also support sycamore and cottonwood trees.

Riparian vegetation

According to the California Department of Fish and Game, there is no record of any plant that has been given Federal or State status as endangered, threatened, or rare within the study area. However, the absence of listed plants does not mean that they do not exist within the study area, only that no occurrence data has been entered in the database.

The wide variations in topography and vegetation within the undeveloped portions of the study area resulted in a rich diversity of wildlife species. Mammals include animals such as mule deer can be found in the Box Springs Mountains and in the Badlands. Large carnivores, such as coyotes, bobcats, badgers, and gray fox also exist in the undeveloped portions of the study area. Opossums, raccoons, skunks, cottontail rabbits and many rodent species are common to the study area.

A wide variety of reptiles are found in the study area. Well over one hundred species of birds, including owls, hawks and other birds of prey, can be seen at various times throughout the year, either as residents or during migration periods.

According to the California Department of Fish and Game's Natural Diversity Data Base (NDDB), there are recorded occurrences of species listed as endangered or threatened within the study area as well as potentially listed species. Listed species are protected under the federal Endangered Species Act and/or the California Endangered Species Act. It is unlawful to harm an endangered or threatened species or to damage the habitat that it occupies. As such, development of property occupied by listed species is subject to serious obstacles.

The listed species include the Stephens' kangaroo rat (*Dipodomys stephensi*), the California gnatcatcher (*Polioptila californica*) and the Least bells vireo (*Vireo belli pusilus*). The potentially listed species include the Orange Throated whiptail, the San Diego horned lizard and the Short nosed pocket mouse. The absence of certain species from the Natural Diversity Data Base does not mean that they do not exist within the study area, only that no occurrence data had been entered in the database.

The Stephen's kangaroo rat (SKR), a small nocturnal rodent related to the squirrel family, is listed as an endangered species under federal law and threatened under state law. It prefers sparse cover and relatively level or gently sloping coastal sage scrub and adjoining grasses.

Development of habitat occupied by the SKR is allowed pursuant to permits from the U.S. Fish and Wildlife Service and the California Department of Fish and Game. Permits were issued to the Riverside County Habitat Conservation Agency (RCHCA), an agency formed by several jurisdictions within western Riverside County, including Moreno Valley. The permits require the RCHCA to implement a long-term habitat conservation plan (HCP) for the conservation of SKR habitat within five core reserves.

The California gnatcatcher is a small gray songbird that prefers coastal sage scrub plant communities. It can also be found in other plant communities adjacent to sage scrub habitat. The California gnatcatcher

was listed as a threatened federal species in 1993.

The least bells vireo is an insectivorous bird listed as a state and federal endangered species. It is a summer resident of dense riparian habitats in Central and Southern California and thought to winter in Mexico. Riparian portions of San Timoteo Canyon in the northeastern corner of the study area are considered suitable habitat for the least bells vireo.

7.1.2 Issues and Opportunities

Future urban development will result in the loss of natural vegetation and wildlife habitats as development spreads over the valley floor and into the surrounding hills. The vegetative and wildlife communities present in the hillside areas will be impacted to the extent that development occurs in the hillsides.

Riparian vegetation along drainage ways will also be impacted as existing flood control plans are implemented, and natural drainage courses are replaced with man-made features. While it may be possible to preserve some drainage courses in a natural condition, it will require revisions to existing master drainage plans and maintenance mechanisms.

The listing of threatened and endangered species in western Riverside County prompted the private sector and public agencies to work together toward a long-term solution to wildlife conservation. Riverside County assumed the lead role in the effort to develop a Multi-Species Habitat Conservation Plan (MSHCP) for western Riverside County, which was approved in 2003. The MSHCP is a comprehensive, multi-jurisdictional effort that includes the County and fourteen cities. Rather than deal with endangered species on a one-by-one basis, this Plan focuses on the conservation of 146 species. The MSHCP consists of a reserve system of approximately 500,000 acres of which approximately 347,000 acres were public ownership and 153,000 acres was in private ownership. The MSHCP provides landowners, developers, and those who build public infrastructure with certainty, a streamlined regulatory process, and identified project mitigation.

7.2 CULTURAL AND HISTORICAL RESOURCES

7.2.1 Background

Ancestors of the Luiseno and Cahuilla Indian tribes were the first inhabitants of Moreno Valley. They hunted game and gathered seeds and plants. They left evidence in rocks that they used to grind seeds. They also left primitive rock paintings.

Early settlers traveled through the area from northern Mexico to various mission settlements along a trail charted in 1774 by Juan Bautista de Anza. The trail passed through the San Jacinto Valley, the Perris Valley and southwest Moreno Valley.

Moreno Valley and the rest of California became part of the United States in 1850. John Butterfield operated a stagecoach line between Tucson, San Diego, Los Angeles and San Francisco. A separate stage line went through Moreno Valley from Perris Valley to Pigeon Pass and Reche Canyon.

An irrigation district was formed in 1891 for the purpose of importing water from a reservoir in the San Bernardino Mountains. Most of the valley was subdivided and two town sites were established in anticipation of the new water supply. The town of Moreno was established at the intersection of Alessandro and Redlands Boulevards. Alessandro was located along the Southern California Railway line at the intersection of Iris Avenue and Elsworth Street.

The road circulation system in Moreno Valley was established with the original subdivision map. The major north-south streets were established at one-half mile intervals with names in alphabetical order from west to east. The avenues, oriented east to west, were established at one-quarter mile intervals. The names of the avenues were also established in alphabetical order; tree names north of Alessandro Boulevard; botanical names south of Alessandro Boulevard.

Water deliveries began in 1891 from a new aqueduct that terminated at the northeast corner of the valley. The flow of water was soon interrupted by a period of drought and a legal dispute over water rights. Crops failed and most of the residents left the area by the turn of the century. Many of the original homes were relocated to other areas.

Development interest in the western side of the valley was renewed with activation of March Air Force Base in 1918. The base closed in 1922 and reopened as a flight training school in 1927.

Well drilling in the 1920's allowed local groundwater to be developed. Mutual water companies were formed, land was subdivided and people began to settle in the communities the Edgemont and Sunnymead. Development activity slowed during the depression era until March Air Force Base was reactivated during World War II.

The Cultural Preservation Advisory Board was created in 1987 to advise the City in all matters relating to the preservation of the heritage and culture of Moreno Valley. The Board was later renamed the Cultural Preservation Advisory Committee. Moreno Valley Historical Society is a private organization dedicated to the appreciation and preservation of the history of Moreno Valley.

7.2.2 Archaeological and Historical Sites

There are no sites within the Moreno Valley study area listed as a state landmark, nor are there any sites on the National Register of Historic Places. The Old Moreno Schoolhouse was designated a city landmark in 1988.

The schoolhouse was built in 1928 at the northeast corner of Alessandro Boulevard and Wilmot Street. The schoolhouse, built in the mission revival style of architecture, replaced the building constructed on the site in 1892. The City purchased the schoolhouse in 1988 with the intent of restoring the structure and grounds for public use. The restoration cost was later determined to be excessive. As a result, the building was sold and the new owners converted the structure into a residence in 2005.

The First Congregational Church of Moreno was the first church built in Moreno Valley. The church building was constructed in 1891 at the northeast corner of Alessandro Boulevard and Sterling Street in the town of Moreno. In 1943, the building was moved to 24215 Fir Avenue, east of Heacock Street. The Moreno Valley Congregation Church still uses the structure, but it was no longer used as the main sanctuary.

Moreno Valley Congregational Church

In 1987, the Archaeological Research Unit of the University of California conducted an inventory of archaeological sites within the City of Moreno Valley. A total of 168-recorded sites were located. The majority of the sites are in the hillsides and most of the identified artifacts relate to milling and food processing by native peoples. Rock art sites and the remains of an adobe structure were identified as well. The report contains recommendations for recordation, protection or excavation.

The Archaeological Research Unit also prepared a report and a map of paleontological sensitivity. The sedimentary formations of the Badlands were determined to have high potential of containing vertebrate fossils. The report recommended monitoring of the area during excavation to protect and preserve any important fossils that might be uncovered.

In the 1980's, the State of California Department of Parks and Recreation conducted an inventory of historic resources in Moreno Valley. The inventory identified 26 structures of historical interest. Most of the structures were residences. Several of the structures no longer exist.

7.2.3 Issues and Opportunities

Rapid urban development in Moreno Valley has led to a loss of several buildings of historical interest. Continued development could result in the loss of historical and cultural resources unless mitigation is undertaken prior to grading and construction. Many old structures are in poor condition and in some cases restoration may not be feasible.

7.3 SOLID WASTE

California and the region are faced with a long-term solid waste disposal problem. Existing landfills are filling up and there is a shortage of new landfills. The amount of solid waste continues to grow in step with growth in population, commerce and industry.

Locally generated solid waste is deposited in several local landfills, including the Badlands Sanitary Landfill at the eastern end of Ironwood Avenue. The Badlands Sanitary Landfill is owned and operated by the Riverside County Waste Resources Management District.
Recognizing the severity of the waste disposal problem, the state legislature enacted the California Integrated Waste Management Act of 1989 (AB939). The purpose of the Act was to reduce the amount of solid waste that must be disposed of in landfills.

The City Council adopted a "Source Reduction and Recycling Element" in 1992, describing how Moreno Valley plans to meet the goals mandated by AB939. The element includes strategies to address various components of the solid waste challenge, including the character of the waste stream, source reduction, recycling, composting, special waste (e.g. construction debris, auto bodies, medical waste, tires and appliances), education and public information, disposal facility capacity, funding and integration of the various components.

Moreno Valley works in concert with the local waste hauling company to meet its waste diversion requirements. Residential customers place recyclable materials at the curb for collection by the waste hauler, Waste Management of the Inland Empire. The waste hauler separates and markets the recyclable materials, including cardboard, paper, tin/metal, aluminum cans, plastics and glass. In 2004, fifty-one percent of the solid waste generated in Moreno Valley was diverted from landfills.

7.4 SOILS

7.4.1 Background

The United States Soils Conservation Service (SCS) mapped soils within Western Riverside County. A general classification used in soil mapping is called a soil association. An association is a landscape that has a distinctive pattern of soil types. Identification of soil associations is helpful to 1) get a general idea of the soils in an area, 2) identify large areas of land suitable for a particular purpose, and 3) to identify general areas with potential constraints.

Five soil associations are found within the Moreno Valley study area. The Monserate - Arlington - Exeter Association is found on terraces and on old alluvial fans adjacent to and within the eastern half of March Air Reserve Base. It consists of well-drained soils that developed in alluvium from predominantly granitic materials. This association is found on nearly level to moderately steep slopes from 0 to 25 percent with a surface layer of sandy loam and a shallow to deep sandy clay loam hardpan.

The Hanford - Tujunga - Greenfield Association occurs on alluvial fans and flood plains. It is common in the central portion of Moreno Valley, generally extending northeast to southeast of March Air Reserve Base. This association consists of well-drained to somewhat excessively drained soils, developed in granitic alluvium. These soils are found on nearly level to moderately steep slopes of 5 to 15 percent. They have a good topsoil layer of coarse sandy loam texture with underlying layers that are coarse sandy loam and loamy sand.

Cieneba - Rock Land - Fallbrook Association is found on uplands located in the Box Springs Mountains area, extending east to Reche Canyon as well as the Mount Russell area. These soils are formed in coarse-grained igneous rock. This association consists of somewhat excessively drained soils on undulating to steep slopes ranging from 5 to 50 percent. They generally have a poor topsoil layer of sandy loam above a layer of gravelly coarse sand and a third layer of weathered granodiorite. Rock outcrop areas are present along with weathered rock close to the surface.

The San Emigdio - Grangeville - Metz Association is found on alluvial fans and floodplains. The soils along the western side of Gilman Springs Road comprise this association. These soils are well-drained and found on nearly level to very steep slopes ranging from 0 to 50 percent. They have good topsoil and an underlying layer consisting of fine sandy loam.

The Badlands - San Timoteo Association soils occupy the area along the northern side of Gilman Springs Road into the Badlands region. This association consists of well-drained soils found on steep to very steep slopes ranging from 30 to 70 percent. The soils are variable, consisting of soft sandstone, siltstone, and beds of gravel. These soils also range in texture from sandy loam to clay loam, having poor topsoil characteristics. The very shallow depth to bedrock severely limits the use of septic tank sewage disposal systems in this area. Soil stability is considered poor to fair with significant potential for erosion.

In general, prime agricultural soils are found on the alluvial deposits of the valley floor, while the soils subject to the greatest limitations for agriculture and development are located in the Box Springs Mountains, Reche Canyon area, the Badlands and the Mount Russell area.

7.4.2 Issues and Opportunities

With exception of the Cieneba - Rock Land - Fallbrook Association and the Badlands - San Timoteo Association, soils within the study area present few limitations for

development. Conditions of shallow depth to bedrock and rock outcroppings generally occur on the steeper slopes and are the most significant physical constraint to development. Ripping may be required in order to loosen weathered rock and blasting of hard rock may be required. Although intense urban and agricultural development of these soils would be constrained, low intensity, large lot development is feasible.

As development of the study area proceeds, soils will be exposed during grading operations. During this time, soils may become susceptible to water erosion and wind erosion. The extent that erosion would occur depends on the particular soil, the extent of area being exposed, the slope, the time of year grading operations occur and erosion control methods that are used.

The use of septic tanks for sewage disposal is standard practice in the eastern portion of the Moreno Valley study area. The soils of the valley portion of the study area generally have only slight limitations for use with subsurface sewage disposal systems. However, the steeper slopes and floodplains are less suitable.

None of the soil associations in the Moreno Valley study area are significantly limited by soil corrosiveness or shrink-swell characteristics that could affect the construction of roads, foundations of structures, or other urban uses.

While the State of California and local agencies have advocated the preservation of prime agricultural soils for agricultural use, the retention of agricultural land is far more complicated than identifying prime agricultural soils and requiring that they used for agricultural purposes only. Agriculture is a business that exists only where economics and area land use are favorable toward animal and crop production. The issues affecting the potential success of an agricultural preservation program include the availability and cost of water, land use competition, urban/rural land use conflicts and the economics of agricultural production.

7.5 WATER RESOURCES

7.5.1 Background

The early history of water in Moreno Valley began with the creation of the Alessandro Irrigation District in 1891. The irrigation district was formed for the purpose of importing water from a reservoir in the San Bernardino Mountains. The reservoir was originally built for the community of Redlands.

The community of Moreno was founded at the intersection of Alessandro Boulevard and Redlands Boulevard in advance of the new water supply. An aqueduct was completed, but the flow of water ended quickly due to drought and because there was not enough water for both Redlands and Moreno. The courts decreed that City of Redlands had priority water rights. By the turn of the century most of the early farmers and settlers left the area. The farmers that remained in the area relied on winter rains and local wells.

In 1919, the Moreno Mutual Irrigation Company acquired wells in Moreno Valley and San Timoteo Canyon. Water was delivered from San Timoteo Canyon through the old aqueduct system until the 1954. Water agencies in the Yucaipa/Beaumont area successfully challenged the company's right to well water from that area.

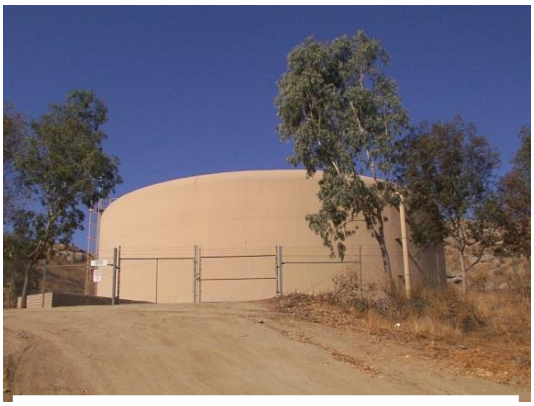
Groundwater no longer provides a significant percentage of the local water supply. There are two hydrological groundwater basins in the planning area. The Perris Basin is on the western side of Moreno Valley. The San Jacinto Basin is on eastern side of the study area.

Box Springs Mutual Water Company serves a small portion of the community, while the

primary purveyor of water in Moreno Valley since the 1950's is Eastern Municipal Water District (EMWD). EMWD, incorporated in 1950, became a member of the Metropolitan Water District in 1951. The original district boundary encompassed most of the San Jacinto Valley and Perris Valley and a small portion of Moreno Valley. Additional territory in Moreno Valley was annexed in 1953. At that time the primary water source was the Colorado River. The water was imported though the Metropolitan Water District's Colorado River Aqueduct.

EMWD completed a major water supply line along Perris Boulevard in 1954 through which water became available in 1955. The existing water companies were responsible for connecting to the main water supply system, including the Edgemont Gardens Mutual Water Company and the Sunnymead Mutual Water Company.

Up until the time that EMWD provided imported water, the local mutual water companies drew their water from local wells. Eventually, two of the mutual water companies turned over their operations to EMWD; Sunnymead Mutual Water Company did so in 1990; Edgemont Gardens (Moreno Valley) Mutual Water Company in 1997.



Water tank

The State Water Project brought additional imported water to Moreno Valley and EMWD's service area. It brought water from the rivers of northern California through a series of aqueducts, pipelines and reservoirs, including Lake Perris. Lake Perris was completed in 1973. An underground segment of the aqueduct runs from the northwest corner of Moreno Valley to Lake Perris. Water from Lake Perris is pumped to the Mills Filtration Plant in the City of Riverside before it is distributed to Moreno Valley customers.

Water from the State Water Project was needed to supplement water supplies from the Colorado River. The water supply available to California from the Colorado River will diminish as Arizona uses its legally established allocation of water. In addition, the quality of untreated water from the Colorado River is lower than the quality of State Water Project water.

The Metropolitan Water District constructed another major reservoir, the Diamond Valley Lake, in the Domenigoni Valley area south of Hemet. The reservoir holds 800,000 acre-feet of water. The water in Diamond Valley Lake improves the reliability of the water supply. It stores water that is available during wet years for use during periods of drought.

7.5.2 Issues and Opportunities

Even with the development of the Diamond Valley Reservoir, water supply, storage and conservation will be needed to meet the long-term water demands of region. EMWD has several such programs in place. For example, prior to issuance of landscape irrigation meters, new public and private developments must install landscaping and irrigation systems that operate at high levels of water use efficiency. In addition, increasing amounts of water reclaimed from sewage treatment plants is being used for landscape irrigation and agriculture. EMWD is also recharging groundwater basins and desalinating saline groundwater to protect and increase the supply of water.

Insert
Figure 7-1
Water Purveyor Service Area Map

(file name: Figure 7-1_WaterServiceArea.pdf)

The EMWD's 2000 Urban Water Management Plan predicts that supplies will meet demand through the year 2010 even under worst-case conditions. Supply reliability after 2010 depends on the outcome of the CAL-FED process, a collaborative effort of multiple state and federal agencies to resolve conflicts between urban, agricultural and environmental water interests. The goal is ensure that there will be a reliable long-term supply of water for California.

The Urban Water Management Plan contains the following statement on Page 19 regarding future water supply: "based on the regional progress to date in developing off-stream storage for surplus imported water, coupled with the local plans for resource development, the District is confident of its ability to meet the water demands of its customers through 2020."

7.6 ENERGY RESOURCES

7.6.1 Background

Modern society depends on energy resources, including electricity, natural gas and other types of fuel. Energy is used for transportation, heating, cooling, lighting and manufacturing purposes. Continued development within the study area and the nation will consume additional energy resources.

Moreno Valley is dependent on outside sources of energy, including electricity and fossil fuels. State and federal institutions and the private sector are responsible for the supply and price of electricity. Electricity used within the study area is generated in the region and at distant locations in the western United States. Electricity is derived from nonrenewable fossil fuels, such as natural gas, renewable wind energy and waterpower, and other sources. The City and Southern California Edison distribute electricity within the planning area.

The State experienced a period of supply unreliability and price volatility during 2000. The demand for electricity in California exceeded the supply generated by power plants within the state. The average price of electricity was among the highest in the nation.

As with electricity, the City does not have direct control over the supply of natural gas and gasoline. Natural gas is delivered to the area from out of state sources. The national supply of gasoline is derived from both domestic and foreign sources. Both natural gas and gasoline are nonrenewable energy sources, meaning that they cannot be replenished.

7.6.2. Issues and Opportunities

Increasing demands upon America's supply of energy has led to an increased reliance on foreign energy supplies and energy price escalation. The use of energy resources is also closely correlated with air quality.

Air pollution is generated when fossil fuels are burned to produce electricity. Emissions are released when natural gas is used for space heating and manufacturing. Motor vehicle emissions are the result of the combustion of gasoline, diesel fuels and natural gas.

Energy conservation is a way to control energy costs, reduce reliance on foreign energy supplies and minimize air pollution. Energy efficiency can be derived in the arrangement of land uses, in the design of developments and the architecture of individual buildings.

The amount of energy consumed in automobile travel can be reduced if commercial and recreational opportunities are located near residential uses. Commuter travel can be minimized if there is a reasonable balance between jobs and housing within the area. Placing high intensity uses along transit corridors can

also reduce automobile travel.

Reducing residential street width can affect microclimates and reduce the summer cooling needs of adjacent homes. The orientation of buildings can be arranged to affect the amount of heat gain. Shade trees can also cool microclimates and aid in energy conservation.

Building construction options are available to reduce energy consumption. Building construction methods include, but are not limited to, insulation of walls and ceilings, insulated windows and solar water heating systems. Many building energy conservation measures have been incorporated into Title 24 of the California Administrative Code and are required of all residential structures.

7.6.3 Energy Efficiency

The City recognizes the need to reduce energy use and greenhouse gas emissions and become a more sustainable community. In October 2012 the City of Moreno Valley approved the Energy Efficiency and Climate Action Strategy, a policy document, which identifies ways that the City of Moreno Valley can reduce energy and water consumption and greenhouse gas emissions as an organization. In addition the document outlines actions that the City can encourage and community members can employ to reduce their own energy and water consumption and greenhouse gas emissions.

The City of Moreno Valley is committed to providing a more livable, equitable, and economically vibrant community through the incorporation of sustainability features, energy efficiency, and reduction of greenhouse gas (GHG) emissions. By using energy more efficiently, harnessing renewable energy to power our buildings, recycling our waste, conserving water, and enhancing access to sustainable transportation modes, Moreno Valley will keep dollars in our local economy, create new green jobs and improve community quality of life. These General Plan efforts toward energy efficiency and reducing GHG emissions described in the City's Energy Efficiency and Climate Action Strategy and Greenhouse Gas Analysis must be considered in coordination with the City's land use decisions.

The City of Moreno Valley has demonstrated its commitment to sustainability through a variety of programs and policies. These programs include Energy Efficiency Community Block Grant (EECBG) funded energy upgrade projects, participation in the Community Energy Partnership, tracking of building energy use through the Energy Star Portfolio Manager, the Solar Incentive Program for Moreno Valley Utility customers, Energy Efficiency Fund Policy 2.17, and creating the G.R.E.E.N MoVal web page.

AGRICULTURAL RESOURCES

7.7.1 Background

Open space devoted to agriculture encompasses a minor portion of the City's total land area. The area devoted to agricultural production diminished over time as urban development encroached on agricultural lands.

Agricultural land within the study area is generally leased to farm operators. Few, if any of the farms within the valley are owner-operated. Four major types of agriculture take place in Moreno Valley: grazing, fruit orchards, dry grain farming, potato and fruit crop farming and poultry production. Nearly all of the remaining agricultural use occurs in the rural eastern portion of Moreno Valley.

To provide an economic incentive to preserve agricultural lands, the State of California passed the California Land Conservation Act, commonly referred to as the Williamson Act, in 1965. Under this act, agricultural lands are taxed at their agricultural value rather than their value for higher valued uses. In exchange, the landowner enters into a contract to retain the land in agricultural use for at least 10 years. The contract is automatically renewed annually for one year at the end of the term; therefore, once a "Notice of Nonrenewal" is filed, it is ten years until the contract expires. A Notice of Nonrenewal was filed for the land within the city limits that was under Williamson Act contract and the contract has since expired. There is a Williamson Act contract in effect on a site within the City's sphere of influence, located on the south side of Gilman Springs Road, east of Jack Rabbit Trail.

For many years the major agricultural enterprise within the study area was the University of California Field Station, located between Lasselle and Nason Streets and south of Brodiaea Avenue. Since the 1960's, the Field Station was used to raise experimental crops suited to dry and semi-dry climates.

The University decided to replace the Field Station with a research station in the Coachella Valley. The Moreno Valley Field Station Specific Plan, a mixed-use plan, was adopted for the property in 1999.

7.7.2. Issues and Opportunities

Preservation of prime agricultural land is an important state and national goal and many of the soils in Moreno Valley are well suited for agricultural production. However, soil alone does not guarantee the success of an agricultural enterprise. The high cost of land, the high cost of water and energy, fragmented ownership patterns and market conditions limit the potential return on investment. These economic factors are a disincentive to continued farming in Moreno Valley. It is, however, a viable interim use.

Sometimes nearby residents are affected by the dust, spray drift and odors associated with agricultural production. The ability to farm in close proximity to residential land uses will continue to be a community concern.

7.7 SCENIC RESOURCES

7.8.1 Background

The City of Moreno Valley lies on a relatively flat valley floor surrounded by rugged hills and mountains. The topography of the study area is defined by the Box Springs Mountains and Reche Canyon area to the north, the "Badlands" to the east, and the Mount Russell area to the south. These features provide the City with outstanding vistas.

The major aesthetic resources within the study area include views of the mountains and southerly views of the valley. The man-made environment is equally important in terms of scenic values. Buildings, landscaping and signs often dominate the view. Agricultural uses such as citrus groves are less common, but visually pleasing features.

The major scenic resources within the Moreno Valley study area are visible from State Route 60, the major transportation route in the area. Upon entering the Moreno Valley from the west, the dominant view is of the Box Springs Mountains to the immediate north and the Mount Russell foothills to the south. Both mountain ranges display numerous rock outcroppings and boulders that add visual character to these landforms.

Moreno Peak is part of a prominent landform located south of State Route 60 along Moreno Beach Drive. This landform only rises a few hundred feet above the valley

floor but has a unique location near the center of the valley. Moreno Beach Drive, the main route to Lake Perris from State Route 60, offers views of Moreno Peak and a panoramic view of Moreno Valley.

Hills Adjacent to Moreno Peak

Panoramic views of the valley can be seen from elevated segments of some local roads and from hillside residences. The views are particularly attractive on clear days and at night when the glow of city lights can be seen.

As State Route 60 traverses east through Moreno Valley, it passes through the Badlands area. Characterized by steep and eroded hillsides, the Badlands form the eastern boundary of the study area and provide a sweeping range of hills that act as a visual backdrop to the valley.

Expanses of open land are found throughout the eastern portion of the study area. These tracts of land allow for uninterrupted scenic vistas from State Route 60, Gilman Springs Road and other roadways and provide views of the San Jacinto Valley and the ephemeral Mystic Lake.

Views of the San Bernardino and San Gabriel mountains are evident at times from the valley floor. Winter snows in the San Bernardino and San Jacinto Mountains often provide a striking view.

7.8.2 Issues and Opportunities

Scenic resources contribute to the overall desirability of a community. The distinctive physical setting of Moreno Valley creates much of the City's appeal as a place in which to live and do business. Thus, Moreno

Insert
Figure 7-2
Major Scenic Resources

(file name: Figure 7-2_ScenicResources.pdf)

Valley's visual resources are also of economic value to the community.

The City of Moreno Valley has the opportunity to designate scenic routes as the basis for preserving outstanding scenic views. Special attention to the location and design of buildings, landscaping and other features should be made to protect and enhance views from scenic roadways.

7.8 MINERAL RESOURCES

The mineral resources known to be located within the study area are common materials: sand, gravel and rock. Sand and gravel is used to make concrete and as road base. There was one recently active sand and gravel quarry on record within the City's sphere of influence: the Jack Rabbit Canyon Quarry. It was inactive as of 2001. It is in a drainage course located at the northeast corner of Jack Rabbit Trail and Gilman Springs Road, adjacent to the Quail Ranch Golf Course. The extent of the associated sand and gravel deposit is very limited.

Surface mining operations are regulated in accordance with the Surface Mining and Reclamation Act of 1975. No person may conduct surface mining operations without first obtaining a surface mining permit. Surface mining permits also including mining and reclamation plans. The purpose of surface mining permits is to ensure that mining of valuable minerals can continue while the adverse environmental impacts of mining activities are minimized and mined lands are reclaimed properly.