

Chapter V

Conservation Plan



Planning Commission Public Hearing
February 5, 2002

City Council Public Hearing/Adoption
February 26, 2002

Section I

VISION

The City of Twentynine Palms will be environmentally conscious in administering its responsibility to ensure that resources are protected. Accordingly, land use decisions by the City will consider long-term impacts to natural resources, and development will occur in a manner which does not unnecessarily damage or reduce the City’s resources. Intense development will occur in the Downtown and surrounding area, and density of development will be limited in the outlying areas of the City. Industrial development will be allowed only in the industrial area as specified in the Land Use Plan.

Section II

PURPOSE

The Conservation Plan is the City’s environmental planning document; it embodies the City’s resource conservation policies for the planning period commencing at adoption and looking forward through the year 2020. The purpose of the Conservation Plan is to provide safeguards for natural resources and establish a policy statement which advocates a balance between environmental protection and development of the City.

Section III

WATER

A. Twentynine Palms Water District

Water distribution is provided by the Twentynine Palms Water District, which supplies water to the City of Twentynine Palms and parts of the adjacent unincorporated area of San Bernardino County. Development and maintenance of the District’s distribution system is based on their Master Plan which projects growth of approximately 2% per year. The Master Plan was completed in 1992 and the District is now in the preliminary stages of updating the Plan.

Some areas of the City are not served by the District. These areas are either sparsely developed or undeveloped. Extension of service to these areas will occur as a result of development. They are:

- ! Approximately 800 acres north of Two Mile Road, west of Sunrise Road.

- ! Approximately 1,000 acres in the northerly portion of the City. This area is west of Adobe Road north

of Indian Trail, and both east and west of Adobe Road north of Valle Vista Road.

- ! Approximately 14 square miles of the southeasterly and easterly portions of the City. This includes sparsely developed areas south of Baseline Road, east of Utah Trail, generally undeveloped areas east of Bullion Mountain Road, and most of the properties north of Twentynine Palms Highway in the extreme northeasterly portion of the City.

Some development has occurred in the areas not served by the District. Water service in these cases is either hauled to domestic systems or provided by private wells.

B. Water Resources

Natural aquifers located underground at various depths provide the source of the water. Earthquake faults affect the depth while soil mineral content affects the quality and potability of the water.

Additional water supplies are planned to meet the projected growth. Construction has just been completed on the District's three million gallon per day water treatment (fluoride removal) facility, and the facility is ready to come on line. Additional water reservoirs, which will add three million gallons of water storage to the existing fifteen million gallons of storage, are planned. Average daily water usage by the TPWD is approximately 2.8 million gallons. Peak usage exceeds four million gallons per day, and minimum usage is approximately 1.2 million gallons per day. Water usage increases approximately 1.5% per year.

All of the water resources currently available to the District come from the underlying groundwater within four sub-basins. The following is a geological and hydrological description of the underground aquifers, surface streams and impoundments:

Indian Cove Groundwater Basin

The Indian Cove Aquifer is approximately 4,400 acres in size. It is defined as the saturated alluvium south of the Pinto Mountain Fault and bounded on the east by Desert Quail Drive and on the west by Kerns Ave. Water estimated to be in storage, based on an average 100 foot thickness of saturated sediments, is 44,000 acre feet. Replenishment of this aquifer is by natural recharge from 13,000 acres of watershed area to the south in the Joshua Tree National Park.

Fortynine Palms Groundwater Basin

The Fortynine Palms Aquifer is approximately 1,900 acres in size. It is defined as the saturated alluvium south of the Pinto Mountain Fault and bounded on the east by Mesquite Springs Road and on the west by Desert Quail Drive. Water estimated to be in storage, based on a 50 foot thickness of saturated sediments, is 22,000 acre feet. Replenishment of this aquifer is by natural recharge from tributary drainage of 7,800 acres within the Joshua Tree National Park.

Eastern Groundwater Basin

The Eastern aquifer is approximately 2,500 acres in size. It is defined as the saturated alluvium south of the Pinto Mountain Fault and bounded on the east by Mesquite Springs Fault and on the west by Mesquite Springs Road. Water in storage within this aquifer, based on a 100 foot thickness of saturated sediments, is 50,000 acre feet. Replenishment of this aquifer is by natural recharge from tributary drainage of 27,300 acres within the Joshua Tree National Park.

Mesquite Springs Groundwater Basin

The Mesquite Springs aquifer has not had extensive groundwater studies conducted due to the generally high concentrations of fluoride. The groundwater is not potable in terms of fluoride content and must be treated for domestic use. Size and volume data is currently being researched by the Twentynine Palms Water District. However, it is estimated to store approximately 1,000,000 acre feet. While accurate boundaries are unknown at this time, they are estimated to be approximately the Pinto Mountain Fault to the south and Mesquite Springs Fault to the east and north, and Copper Mountain fault to the west. The District's fluoride removal plant located at the southwest corner of Amboy Road and Utah Trail will ultimately produce up to three million gallons per day of treated water from this aquifer. Extensive groundwater monitoring is planned to help determine safe yields and flow directions within this sub-basin.

The Twentynine Palms Water District currently operates within a state variance that allows them to serve water containing up to three parts per million of fluoride; the state maximum is two parts per million. District staff minimizes fluoride concentrations through maximizing the use of low fluoride wells. Even without the removal plant online, the District rarely exceeds the State standard of two parts per million for fluoride anywhere in the system. Fluoride levels are also expected to stabilize or lessen as a result of effective groundwater management program.

Current water demands by classification are not expected to change significantly. There is virtually no industrial use, approximately 18% commercial use and less than 1% is purchased at two district metering stations to be used where district facilities do not exist. The balance is residential usage.

Based on current demands and current growth estimates, water supply from current groundwater sources are adequate for many years, supply from the Mesquite Springs aquifer and the benefits of the District's fluoride treatment facility will be more accurately known after the facility is fully operational.

C. Water Conservation

Even though the City has an abundant water supply, this supply is recharged only by limited precipitation. To accommodate future growth, the conscientious and prudent use of this vital resource is necessary. The unavailability of imported water, and the high demands of a desert climate require judicious use of all water that is available. Accordingly, water must be conserved where possible and used wisely.

Awareness programs are vital in ensuring that a broad based educational effort results in wise use of water.

In development of landscaping plans, citizens are encouraged to utilize drought tolerant plants, suitable to the desert climate. Commercial, industrial or agricultural operations which utilize large quantities of water deserve careful consideration to ensure that water supplies are not unnecessarily depleted. Projects which will use an inordinate amount of groundwater, without an offsetting significant benefit to the City, should be denied.

Section IV

AIR QUALITY

The City of Twentynine Palms is located within the Mojave Desert Air Quality Management District (MDAQMD). The District has jurisdiction over the desert portions of San Bernardino County and Riverside County, which includes the City of Twentynine Palms, its Sphere of Influence, and the Marine Corps Air Ground Combat Center.

The United States Environmental Protection Agency and the California Air Resources Board determine the District's attainment or non-attainment status for a variety of pollutants. MDAQMD has adopted federal attainment plans for Ozone and PM10 for the District, including the City of Twentynine Palms. When projects are proposed which may have significant impacts to air quality, the District reviews them to ensure that they will not:

1. Cause or contribute to any new violation of any air quality standard,
2. Increase the frequency or severity of any existing violation of any air quality standard, or
3. Delay timely attainment of any air quality standard or any required interim emission reductions or other milestones of any federal attainment plan.

The District maintains a set of Rules and Regulations to improve and maintain air quality, and gathers air quality data from a variety of monitoring sites. A monitoring site is located adjacent to City Hall, on City-owned property. Since 1980, the site has monitored Ozone (O₃), Oxides of Nitrogen (Nox), Oxides of Sulfur (SO_x), Carbon Monoxide (CO), and Respirable Particulate Matter (PM₁₀). Meteorological data, including wind speed/direction, pressure, temperature, humidity has also been monitored by MDAQMD in the City since August 1993. The City has seen a gradual improvement in air quality since 1988. Most notably, the City has not experienced an exceedance of the federal ozone standard since 1993 or the federal PM₁₀ standard since 1991.

Prevailing winds in the District are out of the west and southwest. These prevailing winds are due to the proximity of the District to coastal areas and are channeled by the San Bernardino Mountains and the Little San Bernardino Mountains; as a result, pollution is exported from the Inland Empire, impacting local air quality to a significant degree.

Air quality values within the Joshua Tree National Park are discussed in the Park's General Management Plan (GMP). Air quality related values such as visibility of panoramas inside the Park and clear, long distance vistas outside the Park are considered to be primary attractions and essential to a visitor's enjoyment of the Park. According to the GMP, some views have already diminished because of a gradual deterioration of air quality in recent decades primarily contributed by polluting sources in the Los Angeles Basin.

Section V**GEOLOGICAL SETTING**

Twentynine Palms is part of the Mojave Desert Geomorphological Province. Elevation in the City ranges from 1,757 in the very northerly portion of the City to 3,236 near the southwest corner of the City. However, the elevation for most of the City is between 2,000 and 2,400 feet above sea level.

Hills and mountains in and around the City are composed of Precambrian metamorphic gneissic rocks and Mesozoic granitic intrusive rocks. Valley floors are covered with Quaternary alluvium and older superficial sediments, including sand and gravel eroded from the adjacent highlands.

Seismic activity in the immediate region has been primarily the result of northwest and eastward-trending fault systems. In 1972, the State of California adopted the Alquist-Priolo Special Studies Zones Act, later renamed the Alquist-Priolo Earthquake Fault Zoning Act. The Act requires the State Geologist to prepare maps showing regulatory zones around active faults within which local jurisdictions must require the preparation and submittal of geological reports for proposed development projects. Structures for human occupancy cannot be constructed within 50 feet of a known active fault. Two primary faults are within the City:

- ! The Pinto Mountain Fault is a east-west trending fault, extending east and west of the City. Total length is estimated by the California Department of Conservation to be 73 kilometers. The Pinto Mountain Fault is an active strike-slip fault with left lateral movement, capable of producing a 7.0 seismic event.

- ! The Mesquite Lake Fault is the major northwest-trending fault in the City and the surrounding area. Total length is estimated by the California Department of Conservation to be 88 kilometers. The Mesquite Lake Fault is an active strike-slip fault with right lateral movement, capable of producing a 7.1 seismic event.

Section VI

FLORA AND FAUNA

Unique flora and fauna, both in the City and in the surrounding areas, enrich the community and should be preserved where possible and protected from development. Along the City's southerly border is the Joshua Tree National Park, which contains a rich and unique variety of flora and fauna. Resources found in the Park are managed by the United States Park Service and are available for the enjoyment of all.

A. Flora

The City of Twentynine Palms and the northerly portion of the Joshua Tree National Park, are located in the Mojave Desert. Biologically diverse, the Mojave is dominated by creosote bush, mesquite, yucca, and various species of cactus. To a lesser extent, cat's claw, palo verde and desert willow may also occur. Joshua trees do not occur naturally in the City, but are found on some properties as a result of transplanting, generally from nearby stock.

Fountain Grass (*Pennisetum setaceum*) is discouraged in the City, particularly near the boundary between the City and the Joshua Tree National Park. This variety is aggressive and displaces native plants in the Joshua Tree National Park.

In the spring of the year and following favorable moisture conditions, the Mojave Desert is transformed into a brilliant patchwork of color from a wide variety of wildflowers.

B. Desert Tortoise

The desert tortoise (*Gopherus agassizii*) is found in and around the City. Tortoises occur in creosote bush, alkali sink, and tree yucca habitats in valleys, on alluvial fans, and in low rolling hills at elevations ranging from 2,000 to 4,000 feet above sea level. Tortoise populations in the immediate region are not as numerous as other areas, particularly in the northerly portions of the Mojave Desert, but their protection is nonetheless very critical.

On August 4, 1989 the U.S. Fish and Wildlife Service (USFWS) exercised its emergency authority to determine the Mojave population of the desert tortoise to be an endangered species (Federal Register: 54,149-32326-32331). The ruling was in response to an outbreak of a virulent desert tortoise upper respiratory disease syndrome which has caused significant declines in certain tortoise subpopulations and threatens to become pandemic in subpopulations already stressed as a result of habitat degradation, predation, and other factors. On October 13, 1989 the USFWS formally proposed designation of the tortoise as an endangered species (Federal Register: 54,197-42270-42278).

In April of 1990, under the authority of the Endangered Species Act, the Desert Tortoise was listed by the USFWS as threatened. Threatened species are those that are likely to become endangered if actions are not taken to protect them (endangered species are considered likely to become extinct if they are not protected.) The desert tortoise is the state Reptile of California and is also protected by the state as a threatened species.

The USFWS action was due to declines in its population density as well as the increasing loss of desert habitat from urban development and recreation. The tortoise population in the western Mojave declined drastically (up to 90 percent) between the 1970s and 1990s.

Once desert tortoises are taken from their natural setting, they cannot be returned because of the risk of upper respiratory disease spreading into native populations. For this reason, citizens are discouraged from releasing desert tortoises into the Joshua Tree National Park.

C. Wildlife

Small burrowing mammals and a wide variety of reptiles are found in the desert environment in and around the City. The area is equally diverse with wildlife communities. Many large mammals are well established in the adjacent Joshua Tree National Park, including desert bighorn sheep, mule deer, mountain lion and bobcats. The greatest diversity of wildlife is found among the small vertebrate species. It is estimated that approximately 350 vertebrate species occur within the Joshua Tree National Park, many of which are also found in the City.

Invertebrate species are also common but since they are largely inconspicuous, they remain relatively unknown. Perhaps the two most poisonous species of invertebrate are the blackwidow and brown recluse spiders. Another spider commonly seen is the non-poisonous tarantula. Scorpions may range up to four inches in length and the tail is tipped with a venomous stinger.

Several amphibians are known regionally. According to the Joshua Tree National Park General Management Plan, the side blotched lizard, chuckwalla, red spotted toad, California tree frog, and many small lizards are found within the Park boundaries. Additionally, there are 19 reported species of snakes which occur within the Park; of these, six are poisonous.

Birds are also numerous and diverse. More than 270 different species nest or visit habitats within the Joshua Tree National Park and may be found at times within the City. The Park is adjacent to a major migratory flyway in the Coachella Valley. During stormy weather many areas within the Park become critical stopover sites for unexpected species such as loons, herons, egrets, grebes and avocets. Birds most commonly seen are the gambels quail, black throated sparrow, scrub jay, common raven, and several wren species.

Raven populations in the City are increasing due to increased scavenging opportunities. According to Joshua Tree National Park staff, raven populations have increased ten-fold since 1970. Ravens reduce tortoise and other reptile populations by preying upon the young, thus upsetting the balance of nature. All reasonable measures should be taken to reduce raven populations by decreasing food supply.

Pet owners have a responsibility with regard to wildlife preservation. Stray dogs and cats are a problem in the Joshua Tree National Park as they prey upon and disturb local wildlife.

Section VII**MESQUITE DUNES**

The Mesquite Dunes includes the Mesquite Dunes Bosque and Playa Lakebed. This sensitive habitat area parallels, generally, the Mesquite Lake earthquake fault from the north central portion of the City, near the main entrance to the Marine Corps Air Ground Combat Center, trending in a southeasterly direction. The Playa Lakebed is a wetland habitat riparian area containing fairy shrimp, clam shrimp, tadpole shrimp, and water fleas.

Section VIII**HYDRAULIC FORCE****A. Flooding**

Twentynine Palms is located in a basin with southerly portions of the city located in an alluvial fan flood zone. This fan is a wide area that during heavy rains at the top of the fan can be inundated with a 100 year flood level, depending on the trajectory of the water from the up-hill source.

Although there is relatively little rainfall in a year's time, there are seasonal storms that cause flood damage to property due to rapid runoff. Precipitation in the City is usually the result of intense but short thunderstorms. It is not rare to have three-quarters of the annual rainfall occur in one single summer thunderstorm event. Runoff can be intense and can be heavily laden with sediment and debris which can be a primary cause of flood damage.

B. Master Plan of Drainage

In January 1997, NBS/Lowery Engineers and Planners of San Bernardino prepared a Master Plan of Drainage (MPD) for the San Bernardino County Transportation/Flood Control Department. The MPD included portions of the City and the surrounding drainage areas which contribute to the runoff. Flooding hazards and remedies are discussed in the MPD and it is used as a guideline for design of future flood facilities including channels, pipes, culverts, debris basins, detention basins and non-structural solutions.

C. Flood Mapping

Areas where flash flooding can occur— generally in sheet flow— are identified on the Flood Insurance Rate Map prepared by the Federal Emergency Management Agency (FEMA) dated March 18, 1996. Flood hazard areas in the City are identified as either Zone A, Zone AE, Zone AO or Zone X Shaded. Areas which are not subject to inundation are identified as Zone X.

Zone A

Areas designated Zone A are subject to inundation but specific flood elevations are not identified. Only small, generally undeveloped areas within the City are designated Zone A.

Zone AE

The Zone AE designation is for areas in which a Base Flood Elevation has been determined. Relatively few areas are so designated, generally following the San Bernardino County Flood Control District's Twentynine Palms Channel throughout the City. The AE Zone transects Twentynine Palms Highway, Adobe Road, Utah Trail, and Amboy Road, with approximate Base Flood Elevations of 2,121, 1,983, 1,891, and 1,806 feet respectively. All weather crossings are constructed at each of these points; flooding hazards are possible but infrequent.

Zone AO

AO Zones are areas in which FEMA has identified potential flood depths, generally one to three feet. AO Zones are predominant among areas identified on the Flood Insurance Rate Map.

Zone X Shaded

Zone X Shaded areas are either, 1) subject to inundation as a result of a 500-year flood, 2) areas subject to inundation as a result of a 100-year storm with average depths of less than one foot, or 3) with drainage areas less than one square mile.

Two large residential districts, the Smoketree area generally south of the Flood Control District's Twentynine Palms Channel, and the Hansen Tract in the southeast portion of the City, are included in the AO Zone. FEMA has identified potential flood depths in these areas as one foot.

Historically, the Downtown commercial area was subject to flood inundation. However, with construction of the Donnell Basin, much of the Downtown flooding has been abated and the Downtown is not within the flood zones identified on the FEMA Flood Insurance Rate Map. The County of San Bernardino Transportation/Flood Control Department has developed plans to improve and expand the Basin. When completed, this improvement will provide even greater protection for the Downtown.

Some commercial districts within the City are in areas identified on the FEMA Flood Insurance Rate Map as either AE or AO Zones. AO Zones, where the anticipated flood depth is one foot, include the north and south sides of Twentynine Palms Highway between Lupine Avenue and Mesquite Springs Road, the intersection of Utah Trail and Twentynine Palms Highway, and intermittently along National Park Drive. The only AE Zone with a commercial designation is along Amboy Road, east and west of Utah Trail. Development is allowed in these areas, habitable structures are required to be elevated above the identified flood depth.

D. Erosion

The combination of high summer temperatures, winds, and minimal rainfall, results in high evaporation and plant transpiration rates. These arid conditions support only a sparse natural groundcover, and no retention of surface water. Soils are protected against wind and water erosion by a natural surface crust and sparse vegetation. Surface disturbance of this crust and/or removal of vegetation exposes the soil to erosion.

Because of the slow recovery process of disturbed soils, grading and removal of native vegetation from larger parcels is limited to pad areas for structures, necessary driveways, and permitted uses. In cases where native vegetation is removed, landscaping reflecting a desert theme, utilizing drought resistant plants, is recommended.

Section IX NIGHT SKY

Preservation of the night sky to perpetuate the view of the stars in the evening, is identified as a valuable community resource. Light pollution, trespass, and unnecessary glare will be avoided and shielding methods will be required. Outdoor lighting is to be designed and installed in a manner that confines the direct lighting rays to the property upon which the lighting is installed.

Section X MINERAL RESOURCES

Historically, gold has been mined from the surrounding area. Most of the mining activity occurred during two boom periods, the first during the 1870s, was in the Gold Park district near the Oasis of Mara. Gold was discovered south of the Oasis in 1873 which was followed by the opening of several other mines. Many of the miners settled at the east end of the Oasis and established facilities for processing the ore.

In 1883, gold was discovered in the Dale mining district, east of the City. As the gold mining activity waned in the area which now encompasses the City, it began to boom in the Dale district. At times, the population of Old Dale reached 1,000 and the Dale mines yielded over three million dollars in gold before the turn of the century. Another brief spurt of mining activity occurred during the 1930s.

There are also identifiable rock, sand and gravel resources in and adjacent to the City. Two areas within the City are zoned for industrial use. They are the Baseline Industrial Area and the Mojave Industrial Area. One open pit mining operation has been approved by the City. Identified as the Victor Pit, the 100-acre pit is located east of Mojave Road, south of Twentynine Palms Highway, in the Mojave Industrial Area. Under the current approval, (Reclamation Plan 89M-03, approved by the City and the Department of Conservation Office of Mine Reclamation) mining of the Victor Pit will continue until December 31, 2014. The approval allows for up to 330,000 tons of sand and gravel to be mined per year.

Baseline Industrial Area is located along the north and south side of Baseline Road, east of Wilshire Avenue. There are no mining operations currently approved in this area but, under current State and local law, mining operations could be established in this area.

Section XI AGRICULTURAL RESOURCES

Agricultural production has not been significant in the region generally nor in the City of Twentynine Palms. However, small agricultural operations are allowed in the Rural Living land use district, which comprises approximately 40% of the City's total land area. Development of agricultural facilities can provide benefits, in terms of scenic beauty and in providing consumer goods at harvest. Additionally, such facilities can play a part in maintaining the City's rural atmosphere.

The conservation of water is a priority in the City, as discussed herein, and agricultural operations which use excessive amounts of water should be avoided.

Agricultural preserves such as a desert agricultural experimentation or other project suitable to the desert environment can be implemented under the Williamson Act. If such a project is proposed, the Williamson Act would provide for a contract between the property owner and the City which would restrict the land use to open space uses, including agriculture, while freezing the property taxes on the land.

Section XII
GOALS AND POLICIES

A. Overview

The following goals are established for the Conservation Plan. The purpose of each goal is established in this section. To facilitate each goal, policies are established and each policy is executed by one or more programs.

B. Goal #1

The City of Twentynine Palms will be environmentally conscious in administering its responsibility to ensure that resources are protected.

Purpose

Goal #1 establishes the primary purpose of the Conservation Plan, committing the City to a responsible plan of action in carrying out its role in environmental protection.

Policy #1.1

Land use decisions by the City will consider long-term impacts to natural resources, and development will occur in a manner which does not unnecessarily damage or reduce the City's resources.

Program 1.1.1

In implementing the requirements of the California Environmental Quality Act, consideration will be given to environmental impacts and mitigation measures will be developed to reduce impacts to a level of insignificance.

Program 1.1.2

Approval of mining operations will only be granted in cases where there is compliance with the Surface Mining and Reclamation Act of the State of California. Such approvals shall include a reclamation plan and the applicant shall post a bond to ensure reclamation occurs after cessation of mining.

Program 1.1.3

The unique habitat in the Oasis of Mara will be protected.

Policy 1.2

Intensity of development will occur in a manner which ensures environmental protection.

Program 1.2.1

Intense development will occur in the Downtown and surrounding area, and density of

development will be limited in the outlying areas of the City.

Program 1.2.2

Industrial development will be allowed only in the industrial area as specified in the Land Use Plan.

Policy #1.3

Traffic, noise and other impacts will be considered prior to any land use designation change and/or land use intensification.

Program 1.3.1

When changes in land use designation are considered and/or intensifications are considered, traffic studies will be conducted prior to approval to determine necessary changes in roadway designations.

Program 1.3.2

Impacts caused by noise, dust, and vibration will be analyzed before changes are made to land use designations which could impact existing residential and commercial areas.

C. Goal #2

The City will implement the General Plan in a manner which conserves water resources and will develop policies which ensure the wise and prudent use of this valuable resource.

Policy 2.1

Proposed activities and land uses which would significantly deplete water resources shall not be approved by the City.

Program 2.1.1

In analyzing industrial and high-density housing projects, special attention will be paid to potential water use. In cases where high water volumes of water may be used, measures will be taken to minimize water usage. Mitigation measures will be implemented for project which would otherwise result in wasteful or unnecessary use of water.

Policy 2.2

The City will educate citizens on methods of conserving water and develop programs to ensure water conservation methods are implemented.

Program 2.2.1

Awareness programs ensuring that a broad based educational effort results in wise use of water will be supported by the City.

Program 2.2.2

To protect the natural environment, planting of indigenous and drought tolerant plants, suitable to the desert climate, shall be recommended in commercial and residential landscaping plans.

D. Goal #3

Preservation of the night sky to perpetuate the view of the stars in the evening, will be preserved as a valuable community resource.

Purpose

The purpose of Goal #3 is to ensure that steps are taken to prevent deterioration of the night sky which allows for viewing of a starlit sky.

Policy 3.1

Light pollution, trespass, and unnecessary glare will be avoided and shielding methods will be required for outdoor lighting.

Program 3.1.1

A Night Sky Ordinance will require shielding of outdoor lighting and lighting will be designed and installed in a manner that confines the direct lighting rays to the property upon which the lighting is installed.

Program 3.1.2

Lighting in and near residential areas shall be minimal and shielded to prevent nuisance glare.

E. Goal #4

Air quality in the City shall be retained and all available means of preserving the City's air quality shall be pursued.

Purpose

The purpose of Goal #4 is to establish the importance of air quality as a valuable and beneficial resource.

Policy 4.1

The City will endeavor to be compliant with federal attainment plans, adopted by the Mojave Desert Air Quality Management District, for Ozone and PM10.

Program 4.1.1

For projects which may have significant impacts to air quality, the City will adopt mitigation measures to ensure that they will not cause or contribute to any violation of any air quality standard.

Program 4.1.2

Because of the increase in PM 10 as a result of unpaved roads, the City will provide assistance to citizens seeking to form a Street Improvement Assessment District.

Program 4.1.3

Commercial services shall be dispersed throughout the City so as to be located near population centers to reduce the length of travel trips.

Program 4.1.4

The City should permit and establish a large variety of land uses to achieve, in-so-far as practical, relative community self sufficiency.

Program 4.1.5

Non-motorized transportation by bicycle and pedestrian trails shall be promoted.

Program 4.1.6

The use of mass transit shall be promoted and supported by the City.

Policy 4.2

During project review, the City will evaluate air quality, land use, transportation, and economic relationships to ensure consistency and minimize conflicts.

Program 4.2.1

An analysis of potential conflicts in air quality, land use, transportation, and economic viability shall be conducted as part of the review of environmental document prepared for all future development.

F. Goal #5

Wind and water erosion shall be minimized where possible.

Purpose

The purpose of this goal is to identify erosion control as a community benefit and provide a means in which the City may express a policy statement regarding erosion control.

Policy 5.1

Surface disturbance and removal of vegetation shall be minimized.

Program 5.1.1

Because of the slow recovery process of disturbed soils, grading and removal of native vegetation from larger parcels is to be limited to pad areas for structures, necessary driveways, and permitted uses.

Program 5.1.2

Project designs that add or protect permeable surfaces shall be encouraged.

Program 5.1.3

Paved parking areas shall be limited and dust proofing methods shall be required for non-paved parking surfaces.

Program 5.1.4

Design of projects and public facilities, such as streets, shall consider drainage and potential soil erosion as a prime consideration.

Program 5.1.5

The City shall encourage design standards that enhance recharge of water through the use of permeable surfaces and detention facilities.

Policy 5.2

Flood hazards shall be minimized where possible

Program 5.2.1

The Community Development Department will provide flood map information developed by FEMA to assist developers in avoiding flood hazards of new structures.

Program 5.2.2

The City shall work in cooperation with the County of San Bernardino, Department of Transportation Flood Control Division to provide a system of adequate channels that reduce the flood hazards to private property and removes land from the alluvial flood plain hazards.

G. Goal #6

The biological resources of the Mesquite Dunes, including the Mesquite Dunes Bosque and Playa Lakebed, shall be preserved.

Purpose

The purpose of Goal #6 is to provide protection of sensitive biological resources and prevent extensive development in the Mesquite Dunes.

Policy 6.1

Development restrictions shall be implemented to protect the biological resources within the Mesquite Dunes.

Program 6.1.1

Grading shall be limited to that necessary for approved building foundations, parking, and access driveways.

Program 6.1.2

Issuance of Grading Permits for grading of land in excess of the minimum shall not be issued unless specific findings are made that the proposed Permit will not degrade the integrity of the open space resources.

Program 6.1.3

Proposed developments shall be integrated into the Dunes where possible and shall be designed and located to avoid or minimize disturbance to the dunes and other prominent natural features.

Program 6.1.4

Sand extraction is not permitted.

Program 6.1.5

No removal of the Honey Mesquite trees may be permitted without approval of the Planning Commission. In cases where trees are removed, replanting plans or other measures designed to preserve or replace trees should be required.

Program 6.1.6

A detailed clearance survey for the presence of Desert Tortoises shall be required prior to issuance of any Grading Permit or Building Permit.

Program 6.1.7

Approval of Conditional Use Permits within the Overlay requires findings that the proposal

will not result in a significant adverse environmental impact on endangered species or sensitive habitats, plants or animals, and the proposal will not degrade the scenic and open space resources of the site or areas in the vicinity of the site.