5. Conservation & Open Space Element

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Chapter 5. Conservation and Open Space

INTRODUCTION

Highland's Valuable Resource

Perhaps nothing is as important to maintaining the small town character and natural setting in Highland as the preservation of open-space land. Due to its unique setting, the City of Highland has a special duty to protect and enhance its many natural gifts—its land, water, air quality and biological resources. It is bordered on the north and east by the San Bernardino Mountains and San Bernardino National Forest. The City is traversed by two significant watersheds, contains important habitat areas and has large areas of open land on the east, including mining and agricultural activities.

The constant presence of open space is one of Highland's most treasured attributes.

Highland takes a broad and inclusive view for planning open space and natural resources and integrating them with future development is both a challenge and opportunity. The City realizes that protecting these natural resources goes beyond a passive preservation role; it requires proactive managment for the enjoyment of the entire community now and into the future.

Purpose and Function

State planning law requires both an Open Space and Conservation Element. The former concerns the "comprehensive and long-range preservation and conservation of open space land" (Government Code, Section 65563). This includes unimproved land devoted to open space uses and encompasses four principal areas: natural resource preservation, resource management, outdoor recreation and public health and safety. Because the City still contains agricultural uses in its eastern areas that contribute to open space and scenic resources, this Element also contains policies related to the future of such uses.

Related to open space preservation is the Conservation Element, whose primary goal is the conservation, development and utilization of natural resources. These resources include water, soils, rivers, wildlife, minerals and other natural resources. Conservation of cultural resources, such as

archaeological sites, is also included here although historic preservation planning is covered in the Community Design Element. Since both elements require preservation and management of natural resources, they are combined into one element.

The City also takes an even broader and more integrated view of conservation and open space planning by including parks, recreation and multi-use trails, energy conservation and natural resource education. The best way for the community to enjoy natural resources is to take advantage of outdoor recreational opportunities as well as to learn about preserving the natural systems that are so essential to quality of life.

The Conservation and Open Space Element is directly linked to the City's Land Use, Safety and Community Design Elements. Land use designations are the primary legal tool that cities use to preserve open space and provide the foundation for more specific zoning regulations and development standards. The required mapping of hazards in the Safety Element designates open space resources and cites policies related to protection of public health and safety. The Community Design Element sets policies for land use transitions and open space buffers, all related to open space and conservation efforts. References are made to these other elements where applicable.

Achieving the Vision

The citizens of Highland have always been proud of their city's rural character and have consistently expressed a desire to preserve and enhance open space and recreational opportunities. The following issues have been identified as the most important:

- Expand park and recreation opportunities for all ages
- Connect future growth to open space with adequate multi-use trails
- Continue to implement the planned trails and bikeways system
- Look for new ways to recycle and conserve water and energy
- Protect and enhance scenic vistas
- Work with local and regional agencies to protect sensitive species, habitat and watersheds and link wildlife corridors
- Add more greenbelt areas
- Improve the safety and aesthetics in sand and gravel excavation activities

Addressing these issues through policies and implementing actions is the goal of this element. Achieving the vision requires the combined and sustained efforts of the City staff, the citizens of Highland, the business community, and local and regional agencies.

Related Plans and Programs

Conservation and open space planning is truly a multi-jurisdictional effort. Managing water resources involves satisfying a myriad of federal, state and regional water quality mandates. Preserving habitats also involves coordination with state and regional agencies. Multi-use trail systems often link to countywide efforts, and recycling programs are often coordinated at the regional level. Planning for energy conservation is aided by private and public agencies, whereas park planning is more of a local effort, although requirements for recreational acreage per 1,000 residents are governed by statewide standards.

Management of watersheds and their habitat is a key priority at the regional and local levels.

Element Components

This Open Space and Conservation Element is organized around the following issue areas:

- Scenic Resources
- Agricultural Resources
- Water Resources
- Biological Resources
- Archaeological Resources
- Mineral Resources
- Parks, Recreation and Multi-Use Trails
- Energy Conservation, Green Building Practices and Solid Waste Management
- Air Quality

GOALS AND POLICIES

Scenic Resources

The rugged and dramatic topography of the San Bernardino Mountains are a visual backdrop from all areas of the City.

Highland enjoys a beautiful and dramatic setting at the base of the San Bernardino Mountains. The views and vistas that this area affords are among Highland's most treasured assets and contribute greatly to its rural, natural character. Although the City does not regulate private views, it has long realized the importance of view corridor planning in both public and private development. Preserving views of the San Bernardino Mountains and stretches of open space along City Creek and the Santa Ana River will continue to be very important to creating and maintaining a sense of community in Highland. View preservation also includes careful regulation of hillside development by encouraging low profile massing and natural colors and building materials.

GOAL 5.1

Preserve, maintain and create views and vistas throughout the community to enhance the visual experience of Highland.

Policies

This dramatic east-west view could be enhanced with appropriate arterial landscaping.

1) Incorporate view corridor planning in related development efforts and capital improvement programs.

2) Along roadway-based view corridors, frame views of attractive features of the natural and built environment with appropriately placed median and street tree landscaping. Use of fire-resistant vegetation and ample spacing between trees and shrubs is encouraged to reduce the spread of fires.

3) Enforce hillside development standards that call for natural contour grading, environmentally sensitive design, shape and siting techniques, and fire-retardant building materials.

4) Work with San Bernardino County and the City of San Bernardino to develop consistent regulations for the protection of ridgelines, slope areas and hilltops within the surrounding foothill communities.

5) Require that all excess excavated material (waste materials) be properly removed and disposed of or otherwise reincorporated into the development plan without compromising natural contours or aesthetic qualities of the site.

6) Require that hillside development be located below ridgelines and that structures themselves and accompanying landscaping conceal cut slopes and grading.

7) Encourage developers in high slope gradient areas to use raised floor systems and stepped footages to leave slope contours in a more natural state.

8) Retain existing vegetation within or alongside hillside development areas except where such vegetation poses a risk to buildings in high fire hazard zones (see Goal 6.5, Public Health and Safety Element). Use native, fire resistant, drought-tolerant plant material in fuel modification areas when existing vegetation can not be retained.

9) Preserve mature trees, natural hydrology, native plant materials and areas of visual interest.

10) Work with San Bernardino County and the City of San Bernardino to protect scenic resources located outside of the City, such as prominent ridges, slopes and hilltops.

11) Enact provisions in the municipal code to minimize soil erosion, restore natural drainage surfaces, attenuate slope instability and reduce the amount of impermeable surface.

12) Index the percentage of impermeable surface to slope gradient.

13) Develop different water-retention standards for single dwellings and larger tracts. Subdivisions should have overall implementation and water-retention strategies.

Agricultural Resources

Much of the area that is now the City of Highland was once devoted to agriculture, primarily citrus production. As the City and County have urbanized, however, there has been a steady loss in agricultural land. Demand for housing and high costs of water have made agricultural uses less cost effective, and very few acres remain. The new General Plan maintains almost 1,000 acres as "Agriculture/Equestrian" uses in the eastern part of the City. This designation is appropriate for rural and equestrian-oriented development with light agricultural uses permitted.

The land use issues involved in converting from agricultural to very low-density residential/equestrian uses center on avoiding isolated or "checker board" development, incorporating appropriate land use buffers and maintaining the rural character of the area. For example,

The Seven Oaks Area, the area generally located east of the Santa Ana River and south of the Seven Oaks Dam, contains the City's sole Agricultural Preserve. No lands within the Preserve are bound by Williamson Act contracts. Future use of the Preserve area is subject to the City adopted Rules and Procedures for the Administration of Agricultural Preserves and Contracts.

For General Plan policies related to the Preserve, please see the Seven Oaks Area section of the Land Use Element.

boundaries of development should follow natural land features and topography to avoid an arbitrary grid pattern.

GOAL 5.2

Achieve an orderly transition from agricultural uses to low-density residential/equestrian uses.

As agricultural land converts to other uses, transition areas and edges need to be compatible with surrounding uses.

Policies

1) Ensure that farmlands converted to other uses are consistent with the East Highlands Ranch Planned Development.

2) Incorporate appropriate land use transitions and buffering techniques into new development

3) Incorporate appropriate edge treatment between the agricultural/equestrian uses and higher density residential uses through landscaped buffers, greenbelts, view fencing and parkways.

4) Preserve visual reminders of the City's agricultural heritage in park design, buffer zones, public use areas and landscape plans.

Water Resources

Water is a precious resource in Southern California, and the City of Highland is in an unusually important setting with regard to water resources. Situated at the base of the San Bernardino Mountains, traversed by two important creeks that feed into the Santa Ana River, Highland has both responsibilities and opportunities. It must ensure adequate water supplies for its growing needs but must also work to reduce negative impacts of urban runoff and preserve important watersheds. Efficient use, protection and conservation of water resources are therefore high priorities in the Open Space and Conservation Element.

Supply Sources

Water providers in Southern California face the challenge of balancing growing demand amid uncertainties of supply. Variables such as weather, political and legal challenges, changing regulations and new technology can all affect the reliability of water supplies. Recent laws in California require assurances of reliable water supplies before large-scale development can be approved. In most of Southern California, local resources are supplemented with imported water supplies.

Groundwater

Water is provided to Highland by the East Valley Water District (see Public Services and Facilities Element for further discussion). The District, which includes Highland, parts of San Bernardino and unincorporated parts of the County, plans to serve a buildout population of 110,000 persons by 2015. Their projections assume an average demand for water at 250–300 gallons per day per person by 2015. The District's sole supply source is groundwater that is extracted at depths exceeding 600 feet from an aquifer known as Bunker Hill Basin. Groundwater from this basin has consistently met both State of California and the U.S. Environmental Protection Agency drinking water standards, and supply is projected to meet demand for the foreseeable future. However, energy requirements, drought and potential contamination will continue to put pressure on unlimited use of groundwater.

Surface Water

Surface water is also available to the East Valley Water District through developable rights to local streams including the Santa Ana River, City Creek and Plunge Creek. Some of the flow from these sources is already diverted by other agencies or used for agricultural purposes. Access to this water is made possible, in part, by the District's stock ownership in local irrigating companies.

For a map of Highland's major tributaries, please reference Figure 6.4 in the Public Health and Safety Element.

State Water Project

An alternative source of water for the City is the State Water Project. The San Bernardino Valley Municipal Water District imports State Project Water through the East Branch of the California Aqueduct after purchase agreements or exchanges. Under such a potential exchange program, the East Valley Water District would forgo its entitlements to Santa Ana River water.

Water Quality

Regulatory Requirements

Maintaining water quality is an increasingly complex and inter-governmental effort. In California, water resources are regulated and water rights are established at the federal, state, regional and local level. All laws, regulations and administration of water resources flows from the federal Clean Water Act whose stated purpose is to "restore and maintain the chemical, physical and biological integrity of the Nation's waters" and to make all surface waters "fishable" and "swimmable." From this mandate, state and regional water quality control boards implement water quality practices and planning.

Preserving water quality is critical where urbanized uses abut watercourses.

The California Regional Water Quality Board, the agency responsible for the administration of the Clean Water Act, is divided into regional water

quality control boards. The responsible agency for the City of Highland is the Santa Ana Regional Water Quality Control Board. This agency monitors enforcement of waste discharge permits and enforces ground and surface water quality objectives, and supports non-point source pollution prevention programs.

Other agencies are also involved in water quality, watershed protection and water reclamation. The State Fish and Game Department works to prevent unauthorized diversions of any surface water and discharge of any substance that may be deleterious to fish, plant, animal or bird life.

The EPA, Water Resources Control Board, Regional Water Quality Control Boards and the State Department of Health Services regulate reclaimed water. The state requires Regional Boards to support water reclamation and encourages best management practices to achieve these ends.

The Santa Ana River is the largest watershed in the region, flowing through three counties before emptying into the Pacific Ocean.

Watershed Protection

Protecting water quality involves managing watershed and groundwater resources and limiting discharges and urban-runoff. For Highland, maintaining and preserving water quality is important not only for domestic consumption but also for the regional impacts caused through runoff. Highland's location at the base of several watersheds of regional importance makes the implementation of these policies a very high priority.

Since local groundwater is currently and will continue to be the primary water supply source for the planning area, prevention of water pollution is essential in protecting and conserving this critical water resource. Water pollution stems from both point and non-point sources. Point sources discharge wastewater directly into a receiving water source at a discrete point, usually at the end of a pipe or conduit. Non-point sources, on the other hand, are diffuse in origin, including nuisance flows and storm water runoff from roadways, parking lots and other paved areas.

Water pollution controls for the Santa Ana River watershed are administered by the Santa Ana Regional Water Quality Control Board (SARWQCB) in accordance with its Basin Plan. The principal method is through waste discharge requirements that control the discharge of wastes that could impact surface and ground water quality. Regulatory tools enforced by SARWQCB include National Pollutant Discharge Elimination System (NPDES) permits, Waste Discharge Requirements, Water Reclamation Requirements, Water Quality Certification and Waste Discharge Prohibitions. The regulations that most directly affect the City of Highland are the NPDES permit programs pertaining to discharges from the City's municipal storm drainage system. Private homeowners who need to dispose of wastewater through an individual septic tank

Common Threats to Groundwater

Natural dangers:

- Bacteria
- Animal waste
- Fertilizers
- Plant decay
- Minerals

Household/business toxic dumping:

- Pesticides
- Motor oil
- Sewage
- Paints/solvents
- Industrial chemicals

system must obtain permits from the County of San Bernardino, Environmental Health Services Division.

Groundwater Protection

Groundwater is a fragile resource, easily polluted by improper handling of waste and toxic materials. Since groundwater moves slowly through rock and soil, pollutants are difficult to dislodge once they percolate into the soil. The East Valley Water District's sewage collection system treats over two billion gallons of wastewater through a regional treatment plant. Treated wastewater is then returned to the Santa Ana River and diverted to other sources. Water suppliers are required by law to continually test drinking water, and the quality in the planning area is generally good, with the lowest levels of total dissolved solids (TDS) of any of the groundwater basins in the Upper Santa Ana River watershed.

New development can incorporate site design practices that limit runoff. This swale captures excess runoff, trapping pollutants in grasses and soil rather than channeling them to nearby streams and rivers.

Limiting Urban Runoff

One of the most important steps that cities can take towards improving water quality is limiting urban runoff. Due to the large amount of paved surfaces in urban areas connected to storm drains, excess water is efficiently channeled into the local collection system. Unfortunately, this flow commonly contains a variety of water pollutants, including elevated levels of pathogens, sediment, trash, fertilizers, pesticides, heavy metals and petroleum products. Storm water can carry these pollutants to the eventual receiving waters, i.e., rivers, streams, lakes, bays and the ocean. In the case of Highland, urban and storm water runoff flows into the network of storm drains and is directed to regional flood control channels and the local streams and rivers, in this case Bledsoe, Plunge, Edler Gulch, City, Sand, Warm and Bald Ridge Creeks, the Old City Creek Overflow Channel, and then the Santa Ana River.

To implement its obligations under the Area Wide Urban Storm Water Permit, the City has adopted a Municipal Storm Water Management Plan (MSWMP), which consists of a variety of measures, including prohibition or regulation of specific types of discharges, inspections, avoidance of sewage spills, public education, controls on new development and redevelopment, site maintenance practices and construction site management practices. All new construction projects involving a ground disturbance of at least one acre in total area must comply with regulations issued by the regional water quality control board.

Prior to the issuance of building permits, new development and redevelopment projects subject to the City's MSWMP restrictions are also required to submit and obtain approval of a Storm Water Quality Management Plan (SWQMP) that specifies pollution control **Best Management Practices** (BMPs) to be incorporated into the project design. Structural BMPs are engineering solutions to storm water management, including storm water ponds, open channels or swales, and overhead

BEST MANAGEMENT PRACTICES

Limiting Non-Point Source Pollution

- Pollution Source Controls
  - ✓ Proper fertilizer application
  - ✓ Litter laws
  - ✓ Disposal of Household Waste
- Solid Waste Collection
  - ✓ Proper storage containers
- Proper Disposal
- Runoff Collection and Distribution
  - ✓ Detention Ponds, Swales
- Discharge Treatment
  - ✓ Constructed Wetlands
- Site Development Planning
  - ✓ Permeable surfaces – grass buffer/landscape strips
  - ✓ Directing rooftop runoff
  - ✓ Detention ponds, swales

Source: US Environmental Protection Agency

coverage of potentially polluting sources such as chemical or waste storage areas. Nonstructural BMPs are procedures and practices such as education, site planning, activity restrictions and policy measures to minimize runoff. The City regularly monitors its storm drain system to detect illegal or unwarranted discharges into the City storm water drainage system. Monitoring is accomplished by water and soil sampling and spot inspections. Fines may be imposed on businesses or individuals who discharge illegal substances into the storm drain system.

Water Conservation

Cities throughout the nation are writing water conservation into their local policies and practices, and this is especially important in dry Southern California. Efforts to conserve water are multifaceted and multijurisdictional, and the City works in tandem with the East Valley Water District and other regional water agencies to disseminate and adopt as many water-saving practices as possible. Below is a summary list of some of the major water conservation practices.

WATER CONSERVATION STRATEGIES

- Installation of water-saving devices (low-flow shower nozzles).
- Use of displacement devices (water-wise appliances).
- Careful use of water (repairing leaks, using buckets when cleaning).
- Development of efficient irrigation systems.
- Use of drought-tolerant landscaping (50 percent of domestic water use goes to landscaping).
- Limit grass use in landscaping; use ground-covering materials as an alternative.
- Development of public education programs.
- Development and implementation of water reclamation programs.
- Consider grey water strategies and storm water runoff restrictions.

GOAL 5.3

Continue to work with the East Valley Water District to meet the current and future water needs of its residents (see Public Services and Facilities Element, Section 4.2).

Policies

1) To the extent possible, preserve floodplain and aquifer recharge areas in their natural condition.

2) Continue to coordinate water resource policy with the East Valley Water District and other relevant agencies.

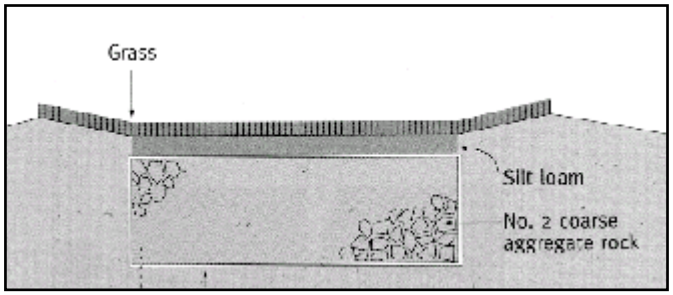
3) Expand outreach efforts, through the Environmental Learning Center and City-sponsored publications, to educate the public on water supply and water quality issues.

GOAL 5.4

Continue to preserve and enhance the water quality and natural habitat of its waterways.

Policies

1) In coordination with the East Valley Water District and the County of San Bernardino, continue to maintain and improve the hydrology and natural quality of the watersheds of Bledsoe Creek, Plunge Creek, Elder Gulch City Creek, Sand Creek, Warm Creek, Old City Creek Overflow Channel, Bald Ridge Creek, Santa Ana Canyon and the Santa Ana River.



Retention grading, which creates depressions or sunken gardens in lawns and gardens, allows rainfall to percolate into the soil.

2) Review and revise, as necessary, zoning and subdivision ordinance provisions related to protection of the City's watersheds, especially in areas that abut creek systems and natural vegetation and open space areas, to enhance the natural appearance of watershed areas without compromising flood control and safety considerations.

3) Cooperate with other agencies and participate in multi-jurisdictional efforts to improve watershed management practices.

4) Reevaluate the effect of engineering practices and specifications relative to storm channel design to avoid their appearance as "concrete ditches."

GOAL 5.5

Continue to reduce urban runoff.

Policies:

1) Use water quality best management practices (BMPs) in land planning, project-level site planning and procedural requirements as part of the Storm Water Quality Management Plan.

2) Require best management practices for all parking lots and paved storage areas within industrial and commercial zones, for the City's street network, and within the City's parks and other civic facilities.

3) Require site design practices that capture and channel specified percentages of rainfall and other runoff to permeable surfaces.

4) Conduct community outreach programs, in conjunction with the local water agency, to educate the public about reducing urban runoff.

5) Develop an informational brochure for residents and developers summarizing best management practices for reducing urban runoff.

6) Retain water on site through the use of attractively landscaped retention basins and other measures to replenish aquifers.

GOAL 5.6

Monitor and strengthen Highland's water conservation practices.

Policies

1) Continue to inspect, maintain and enhance City facilities for water conservation purposes.

2) Continue interdepartmental coordination of water use and conservation policies to improve City-facility water use.

3) Continue to specify and install water-conserving plumbing fixtures and fittings in public facilities such as parks, community

centers and government buildings in accordance with Title 24 of the California Code of Regulations.

4) Continue and expand water conservation outreach programs, in coordination with EVWD, to local schools, the public and the development community through the Environmental Learning Center, webpage links, incentive programs and community events.

5) Ensure that the latest water-saving technologies for domestic and landscaping uses are incorporated into new developments or retrofitted into existing developments where intensification is proposed.

6) Encourage the use of drought-tolerant plants and water-efficient landscape design.

7) Encourage alternatives to lawns and turf uses, except for parks, playing fields, children's play areas and other specialized uses.

8) In general, work to reduce turf landscaping. Where domestic water supplies are used in the irrigation of turf areas, encourage the use of tall fescue varieties or other warm season turf.

9) Consider underground irrigation techniques to conserve water.

10) To the extent possible, require the preservation of existing native trees and shrubs.

11) Within each model home complex, require that homes incorporate a specified amount of drought-tolerant landscaping.

12) Require residential builders to provide information, including a plant palette of xeriscape species, to prospective buyers of new homes within the City of Highland regarding drought-tolerant planting concepts.

13) Where possible, require the extensive use of mulch in landscape areas to improve the water-holding capacity of the soil by reducing evaporation and soil compaction.

14) In new developments require, and in existing uses encourage, the installation of efficient irrigation systems that minimize runoff and evaporation. Such systems include:

- Drip irrigation
- Soil moisture sensors
- Automatic irrigation systems with appropriate timing devices to minimize evaporation.

Aurantia Park uses native species, such as the monkey flower (foreground), to reduce water use.

- Subsurface, or underground, irrigation.

15) Establish landscape maintenance districts along streets for water conservation purposes.

Biological Resources

Nature is everywhere around and through Highland. Situated at the base of the San Bernardino Mountains and adjacent to the Santa Ana River and its tributaries, the City of Highland rests against a huge expanse of open space and therefore has the benefits and responsibilities of managing its biological resources wisely.

Not only does the City contain large expanses of open space, natural hillsides, alluvial flood plains and natural stream channels, it also contains and borders habitat considered crucial to several endangered species. Biological resources are regulated and protected by federal (U.S. Fish and Wildlife Service) and state (California Department of Fish and Game) and the County of San Bernardino, but the City also has an important role to play because it contains and abuts many of these sensitive areas. In fact, the City falls within two existing conservation planning areas and is part of proposed conservation plans, including the Upper Santa Ana River Wash Land Management and Habitat Conservation Plan (HCP) and the San Bernardino Valley-wide Multi-Species HCP. Therefore, the City must coordinate its land use planning with several agencies at the county, regional, state and federal level in addition to educating its citizenry about its precious biological resources.

Highland contains and borders many natural areas, including stream, marsh, alluvial fan, scrub and woodland habitats.

Existing Biological Resources

The native plants and animals that once inhabited the City of Highland have undergone considerable transition over the years. Due to urban expansion and growth, wildlife that once inhabited the Valley floor is now limited to nearby undisturbed areas to the north, northeast and east of the city limits. Riparian habitats, within woodlands and forest communities, occur in the foothill and mountain portions of the City. Unique habitats such as Riversidian sage scrub and alluvial fan sage scrub occur within the floodplain areas to the south. Some of these natural communities are further reduced when adjoining urban uses, such as fuel modification zones for fire safety, infringe into undeveloped areas of the City.

Various levels of government regulate the biodiversity of California. Depending on any number of conditions and causes, certain plant and animal species or vegetation communities can be designated as sensitive, rare, threatened or endangered. A listing of sensitive species that have been found and may occur in a particular area can be found in the

California Department of Fish and Game's California Natural Diversity Data Base (CNDDB).

Animal and Plant Communities

There are a large number of animal and plant communities within and adjacent to the City, several of which are significant biological habitats. Many are associated with the watercourses that traverse the City and drainages in the canyons of the foothills and mountains. Stands of riparian vegetation, including California sycamore, willows and cottonwood line these areas. Upland habitats include coastal sage scrub and chaparral. Native habitats within the developed parts of the City are few and include annual grasslands with nonnative grasses, disturbed areas with sparse amounts of native species, and landscaped areas. According to previous biological surveys, the following sensitive native habitats have been identified within or adjacent to the City.

Natural Communities

- Valley Needlegrass Grassland
- Wildflower Field (California Annual Grassland)
- Riversidian Alluvial Fan Sage Scrub
- Southern Willow Scrub
- Southern Coast Live Oak Riparian Forest
- Southern Cottonwood-Willow Riparian Forest
- Southern Riparian Forest
- White Alder Riparian Forest
- Southern Sycamore Alder Riparian Woodland
- California Walnut Woodland
- Freshwater Seep

Figure 5.1 depicts the areas in the City where sensitive biological resources may be found.

Sensitive Species

The City contains habitat for species that are designated as "endangered" or "threatened" under the Endangered Species Act of 1973.

San Bernardino Kangaroo Rat

San Bernardino Kangaroo Rat

The City contains habitat for the San Bernardino Kangaroo Rat (SBKR, *Dipodomys merriami parvus*). This rodent, known for its jumping ability and desert survival skills, lives in sandy habitats of alluvial fans that are characterized by periodic flooding and sparse scrub vegetation. SBKR is one of nineteen recognized subspecies of Merriam's kangaroo rat and is distinguished as the only species of kangaroo rat with four toes on each of its hind feet. The SBKR was emergency listed as endangered in January 1998 when its population had been reduced by approximately 95 percent, due to habitat loss, urban development, degradation, water conservation activities and fragmentation owing to sand and gravel mining operations.

Historically, its range extended from San Bernardino Valley in San Bernardino County to the Menifee Valley in Riverside County. Currently, SBKR occupy approximately 32,480 acres of areas called critical habitat, primarily in three main blocks: the Santa Ana Wash, the San Jacinto Wash, and Lytle Creek and Cajon Wash.

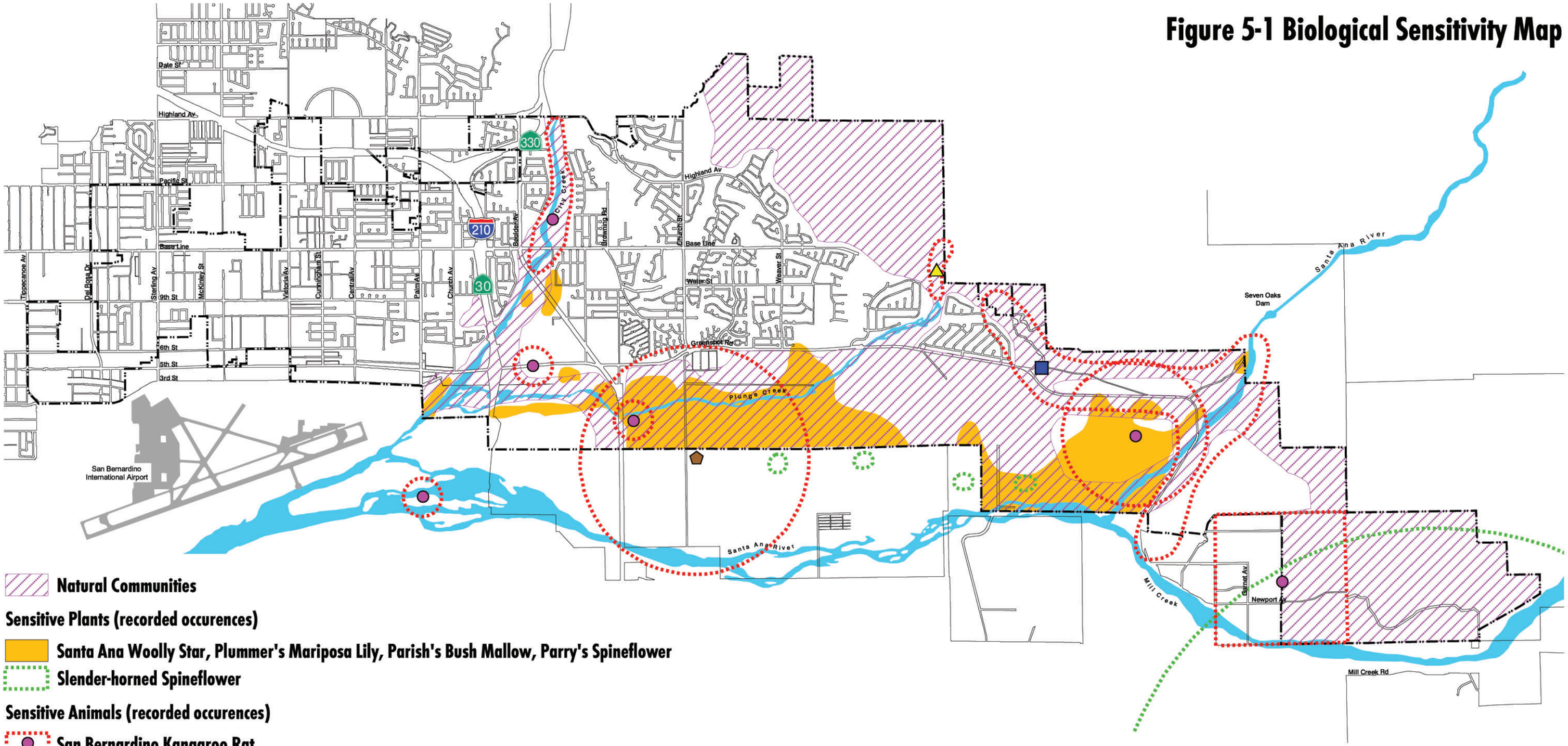
Santa Ana River Woolly Star

Santa Ana Woolly Star

The upper Santa Ana River Wash is also an important component in the planning of the proposed Upper Santa Ana River Land Management and Habitat Conservation Plan, part of which falls within the City of Highland. Within the riverbed are two endangered plant species: the Santa Ana River woolly star (*Eriastrum densifolium ssp. sanctorum*) and the slender-horned spineflower (*Dodecahema leptoceras*). One of these plants, the woolly star, of the family Polemoniaceae, is a wild flowering plant that grows 10 to 30 inches tall from a woody base, with irregularly divided leaves along its stem. The entire plant has a silvery white, woolly appearance. It blooms every year from late May to mid-August, generating blue-lavender flowers.

This species originally occurred on higher floodplain terraces. Its range has now been significantly reduced along the Santa Ana River. Past and present threats facing this plant include developments within the flood plain, grazing by domestic animals, competition from plants exotic to the area, and urbanization. In an effort to mitigate such instances, 764 acres of alluvial fan sage scrub within the Santa Ana River wash have been preserved as the Woolly Star Preservation Area (WSPA). The WSPA is in is a section of flood plain downstream of Seven Oaks Dam and was established in 1998 by the U.S. Army Corps of Engineers to minimize the effects of the dam on the Santa Ana River woolly star.

Figure 5-1 Biological Sensitivity Map



Source: California Natural Diversity Database, 2005; USGS Redlands & Yucaipa Quadrangles.

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Slender-Horned Spineflower

The slender-horned spineflower is a small annual of the buckwheat family found in the silted, flood deposited, older alluvial areas of Los Angeles, Riverside and San Bernardino counties. It is found from 700 to 2,500 feet in elevation in central and eastern Southern California. This plant holds a cluster of small leaves and spreading flowering stems, which produce up to five white flowers with pink stripes from a total of 12 different stems in an intricate fashion. It is threatened by development projects, flood control activities, sand and gravel mining and urbanization. Slender-horned spineflower has been reported as occurring in the upper Santa Ana River wash in Highland and in Lytle Creek.

Slender-horned spineflower

Coastal California Gnatcatcher

The coastal California gnatcatcher (*Polioptila californica californica*) is a small, long-tailed, dark blue-gray and grayish-white bird. This subspecies is restricted to coastal southern California from Ventura and San Bernardino Counties, south to northwestern Baja, Mexico. It typically occurs in or near sage scrub habitat, including Riversidian sage scrub and alluvial fan scrub. The gnatcatcher was listed by the U.S. Fish and Wildlife Service as "threatened" in 1993. It has been the impetus for the regional, "habitat based" conservation efforts that use Natural Community Conservation Plans to reconcile the competing needs of environmental protection and economic development. Critical habitat for the gnatcatcher was designated in October 2000. The unit of critical habitat in San Bernardino County covers over 74,000 acres and includes lands within the City along the San Bernardino Mountain foothills and along City Creek and the Santa Ana River Wash.

Planning to Preserve Biological Diversity

Existing Conservation Areas

In addition to the WSPA described above, three parcels totaling 760 acres in the Santa Ana River were designated in 1994 by the Bureau of Land Management as an Area of Critical Concern (ACEC) and Research Natural Area (RNA) for the protection of habitat for the Santa Ana River woolly star and the slender-horned spineflower. Portions of Highland also fall within this conservation area.

Critical habitat identifies areas, occupied or that may be occupied by federally protected species, that are essential to the conservation of these species. The U.S. Fish and Wildlife Service, since the last update of the General Plan, has designated critical habitat for the SBKR and the coastal California gnatcatcher, portions of which fall within the City limits. In general, projects that are located within critical habitat can involve consultation with the resource agencies regarding possible effects of the

sensitive species and conservation measures that may be needed to offset these effects.

Regional Efforts

Planning for species preservation has taken a much broader perspective over the last several decades. While still working to preserve individual species, governmental efforts have focused on preserving larger, regional habitats while trying to accommodate compatible land use. In 1991, the California Department of Fish and Game adopted the Natural Community Conservation Planning (NCCP) program. This program takes a broad-based ecosystem approach to planning for the protection of biological resources. It is intended to provide for a regional approach to protect plants, animals and habitats and streamline the existing permitting processes while accommodating compatible land uses. Presently, there is no approved HCP/NCCP plan for San Bernardino County. There are two proposed HCPs currently in the planning stages.

Upper Santa Ana River Wash Land Management and Habitat Conservation Plan

The proposed Upper Santa Ana River Wash Land Management and HCP involves approximately 4,365 acres located in the upper Santa Ana River wash. This conservation effort has been developed over the past several years to develop a consensus-based land use strategy for the Upper Santa Ana River alluvial fan, which supports most of the remaining Santa Ana River woolly star, slender-horned spineflower and other rare plant and animal species. The aim is to develop a reserve and conservation plan that protects the most important habitat areas while allowing sand and gravel extraction and water spreading activities to continue. It would most likely include the existing WSPA and Santa Ana River ACEC and RNA area. The construction of the Seven Oaks Dam in 1999, which affects water flows and sand transfer to downstream areas, was a driving force in these conservation efforts.

San Bernardino Valleywide Multi Species Habitat Conservation Plan

The City of Highland falls within the proposed San Bernardino Valley-wide Multi Species Habitat Conservation Plan (MSHCP). The MSHCP was proposed to encompass approximately 500 square miles containing six unique habitat types, six state endangered or threatened species, 13 federally endangered or threatened species, and over 53 species of special concern San Bernardino County, through their Natural History Museum staff, have been conducting biological and botanical surveys in order to identify habitat needs and requirements for the various sensitive species. This status of this plan is uncertain at this time, and completion is not anticipated anytime in the near future.

GOAL 5.7

Maintain, protect and preserve biologically significant habitats, including riparian areas, woodlands and other areas of natural significance.

Policies

1) Continue participation, in cooperation with relevant agencies and jurisdictions, in the preparation, planning and implementation of Habitat Conservation Plans and preservation areas.

2) Ensure that all development, including roads proposed adjacent to riparian and other biologically sensitive habitat, avoid significant impacts to such areas.

3) Require that new development proposed in such locations be designed to:

   - Minimize or eliminate the potential for unauthorized entry into the sensitive area;
   - Create buffer areas adjacent to the sensitive area, incorporating the most passive uses of the adjacent property;
   - Protect the visual seclusion of forage areas from road intrusion by providing vegetative buffering;
   - Provide wildlife movement linkages to water sources and other habitat areas;
   - Provide native vegetation that can be used by wildlife for cover along roadsides; and
   - Protect wildlife crossings and corridors.

4) Design lighting systems so as to avoid intrusion of night lighting into the sensitive area.

5) As part of the environmental review process, require that projects determined to be located within a biologically sensitive area prepare documentation on the impacts of such development along with mitigation and mitigation monitoring programs.

6) Ensure that required biological assessments are conducted in cooperation with the California Department of Fish and Game and the U.S. Fish and Wildlife Service.

7) Within existing natural and naturalized areas, preserve existing mature trees and vegetation.

8) Within rural and hillside residential areas, permit only such natural vegetation to be removed as is necessary to locate home sites, construct access roads and ensure fire safety.

9) Enforce requirements that healthy, mature individual specimen trees be preserved in place, as per the City Municipal Code.

10) Require builders and developers to prune, treat and maintain existing trees and plant new ones within future rights-of-way, public lands, common areas and development projects.

11) Enforce the tree preservation ordinance as a means of managing the preservation of trees and their removal, where necessary.

12) Require replacement at a 2:1 ratio of all mature trees (those with 24-inch diameters or greater measured 4½ feet above the ground) that are removed.

13) Develop an outreach program to schools and the community about the preservation and management of the City's rich biological resources.

Archaeological Resources

The City of Highland recognizes the importance of preserving sites of archaeological significance. Although the City's prehistory is not well defined, the area was inhabited by Native Americans of the Serrano, Cahuillia and Gabrieleno groups. In 1860, over 3,000 Native Americans lived in San Bernardino County.

One of the Native American tribes closely associated with the City of Highland is the San Manuel Band of Mission Indians. Also known as People of the Pines, this sect of the Serrano Indians has resided in what is currently the City of Highland for over three hundred years. Their presence in the region pre-dates Spanish settlers coming to the area in the early 1700s. The San Manuel Reservation originated in 1891 and is located immediately north of the City of Highland. This group strongly values their history; this belief is conveyed in the adage, "Our Past is the foundation of our future." Today, the San Manuel Band of Mission Indians is a vital part of the Highland community. Additionally, the group actively works to educate and inform others about their history through the Tribal Unity and Cultural Awareness Program.

Many of the archaeological resources located in the City of Highland document the culture, activities and history of the San Manuel Band of Mission Indians. Because these archaeological resources chronicle the evolution of this group in particular, it is important that the City acknowledges the San Manuel Band of Mission Indians' connection and

investment in all archaeological resources. It is the City of Highland's goal to collaborate with the San Manuel Band of Mission Indians regarding all new development in historically significant areas.

There are several sites to the north of the City and specific areas that have been designated as "archaeologically sensitive" areas with a high probability for discovery of archaeological resources if disturbed by development. Within this area, several Historic and Prehistoric sites have been catalogued. Figure 5.2 identifies these areas of sensitivity for archaeological resources.

Preservation Strategies

Since the area's archaeological resources are widely spread throughout the City, the best preservation approach would be a site-by-site analysis using the development review process. This type of analysis is required by state law through the California Environmental Quality Act's (CEQA) environmental review process. This review would need to be coordinated through the County Archaeological Information Center located at the San Bernardino Museum and would involve:

- Archival research
- Field reconnaissance/survey and resource extraction
- Cultural Resource Report preparation

If resources are identified, the individual project applicant would work with the City of Highland, the Archaeological Information Center and a qualified archaeologist to determine the proper mitigation for the site in question.

GOAL 5.8

Protect, document and minimize disruption of sites that have archaeological significance.

Policies

1) Avoid significant impacts in all new developments within areas determined to be archaeologically sensitive through the following measures:

   - Conduct an archaeological records search with the Archaeological Information Center in order to identify potential on-site sensitivities;
   - In cooperation with a qualified archaeologist, develop mitigation measures for projects found to be located in or near sensitive areas or sites; and

- Require that environmental review be conducted for all applications within the area designated as archaeologically sensitive, including but not limited to grading, earth moving and stockpiling, and building and demolition permits.

2) Include the following statement as a condition of approval on all development projects:

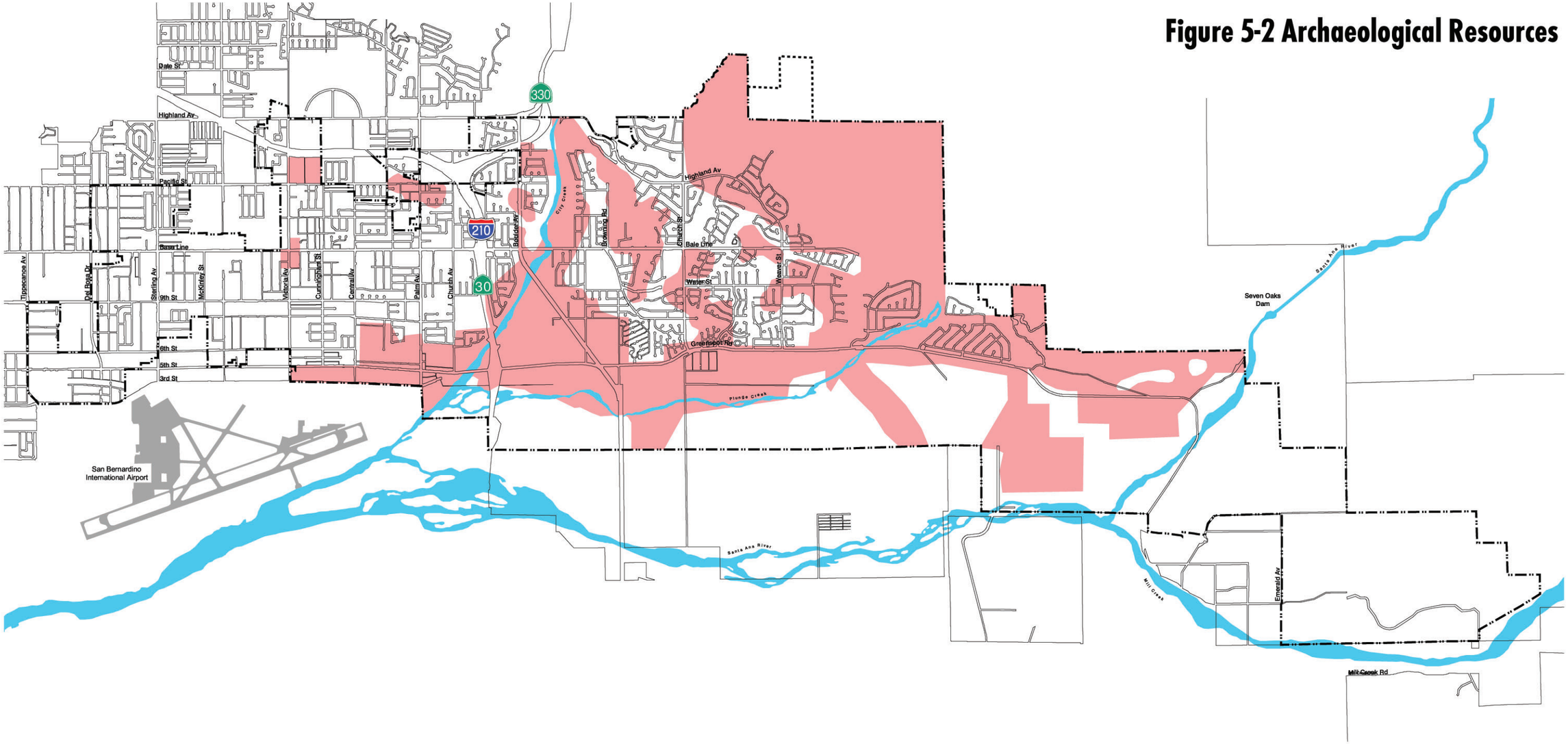
   "If cultural resources are discovered during project construction, all work in the area of the find shall cease, and a qualified archaeologist shall be retained by the project sponsor to investigate the find, and to make recommendations on its disposition. If human remains are encountered during construction, all work shall cease and the San Bernardino County Coroner's Office shall be contacted pursuant to Health and Safety Code provisions."

3) Coordinate with the San Manuel Band of Mission Indians when proposals for development projects are filed within the Areas of Sensitivity for Archaeological Resources (illustrated in Figure 5.2) through the following actions:

   - Notify the San Manuel Band of Mission Indians via notification mailings about proposed projects in archaeologically sensitive areas; and

   - Invite comments and suggestions to be forwarded to City staff and appropriate decision makers to aid the preservation and development review processes.

Figure 5-2 Archaeological Resources



Areas of Sensitivity for Archaeological Resources

City Boundary

Sphere of Influence

Source: AIC, 2004

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Mineral Resources

The City of Highland, due to its large washes and stream channels, contains regionally significant construction aggregate and mineral resources. The primary minerals found in the area are iron, decorative rocks, clay, limestone, sand and gravel. From a planning perspective, the City overlies areas identified as Mineral Resource Zones (MRZs, Categories 1–3) (see Figure 3.2). Category 1 areas contain no significant aggregate deposits. Category 2 indicates that significant deposits are likely to be present. Category 3 represents areas whose significance cannot be evaluated from available data. More than half of the City is underlain by MRZ-2 rated mineral resources, with most of the remaining categorized as MRZ-3. As the Table below indicates, most of the MRZ zones exist in areas that have already been developed. Currently, there are approximately 4,439 acres that have not been developed.

Table 5.1: Mineral Resource Zones

Category	*Total Acres*	*Remaining Undeveloped Acres*
MRZ-1	6	0
MRZ-2	6,052	2,345
MRZ-3	5,846	2,094
Total	11,904	4,439

Source: State of California and the County of San Bernardino

California's Surface and Mining and Reclamation Act of 1975 focuses on the continuing need for mineral resources and the assurance that significant impacts of surface mining will be mitigated. The California Geological Survey Minerals Resources Project helps chart information on nonfuel mineral production. The Minerals Hazardous Project maps and monitors the minerals that are directly affiliated with public health and safety issues. Such minerals are heavy metals, asbestos, mercury and radon. According to the California Department of Health Services, these minerals have not been found through the tests conducted.

While most land uses have options to site development, mineral extraction is limited where the minerals naturally occur. Because these areas can also support development in most cases, mineral resources are often ignored as a profitable commodity and important component of Highland's economy. Mineral resources within and adjacent to Highland have been classified as significant by both the State Geologist and San Bernardino County. As such, these resources should be protected and managed or they will be lost due to encroachment of incompatible land uses.

Despite their economic benefits, mining operations are generally incompatible with the uses that surround them and leave behind unsightly scars. The process of mineral extraction can create a variety of potential impacts to the environment, including air pollution emissions, truck traffic, noise and harm to sensitive flora and fauna. Mining operations should be required to minimize aesthetic impacts to surrounding uses and provide reclamation of mining areas following their use.

Proper management of these mineral resources will protect not only future development of mineral deposit areas, but will also guide the exploitation of mineral deposits so that adverse impacts caused by mineral extraction will be reduced or eliminated. Policies in this section seek to conserve areas identified as containing significant mineral deposits for potential future use; to promote the reasonable, safe and orderly operation of mining and extraction activities where environmental, aesthetic and adjacent land use compatibility impacts can be adequately mitigated; and to provide guidance for the eventual reclamation of extraction sites.

GOAL 5.9

Manage mineral resources and extraction policies for short and long term safety, economic and land use compatibility considerations.

Policies

1) Identify any significant mineral resources within the City and, as feasible, protect them from encroachment by residential or other incompatible development, for future use.

2) Adopt policies and procedures for mining and processing of mineral resources.

3) Develop criteria for location and operation of mineral processing to minimize adverse impacts to the environment, watersheds, wildlife, aesthetic resources, public health and safety, and adjacent land uses.

4) Establish and implement Mining Reclamation Plans for any proposed mining operations in compliance with existing local, state and federal policies and statutes. Review land development proposals near resource areas or mining operations for land use compatibility.

5) Require that mining plans include, but not be limited to the following:

   - Effects on terrain, natural and man-made slopes, permeability of soil, groundwater quality;
   - Protection of water quality through erosion, runoff and sedimentation control;
   - Protection of wildlife;
   - Control of noise, dust, vibration, smoke, odors and lighting;
   - Plans for rehabilitation and reclamation of lands; and
   - Proposed timing of extraction and reclamation activities
   - Offsite routes of travel.

6) Investigate the adoption of a reclamation fee program designed to mitigate remaining scars from previous quarry operations.

7) Pursue and implement a joint-powers agreement with adjacent cities and involved agencies for the management of natural resources located in the Santa Ana River Wash.

8) Permit non-mining uses within the designated Open Space District only if a finding is made that no significant impacts on future regional mineral resources will result from project approval.

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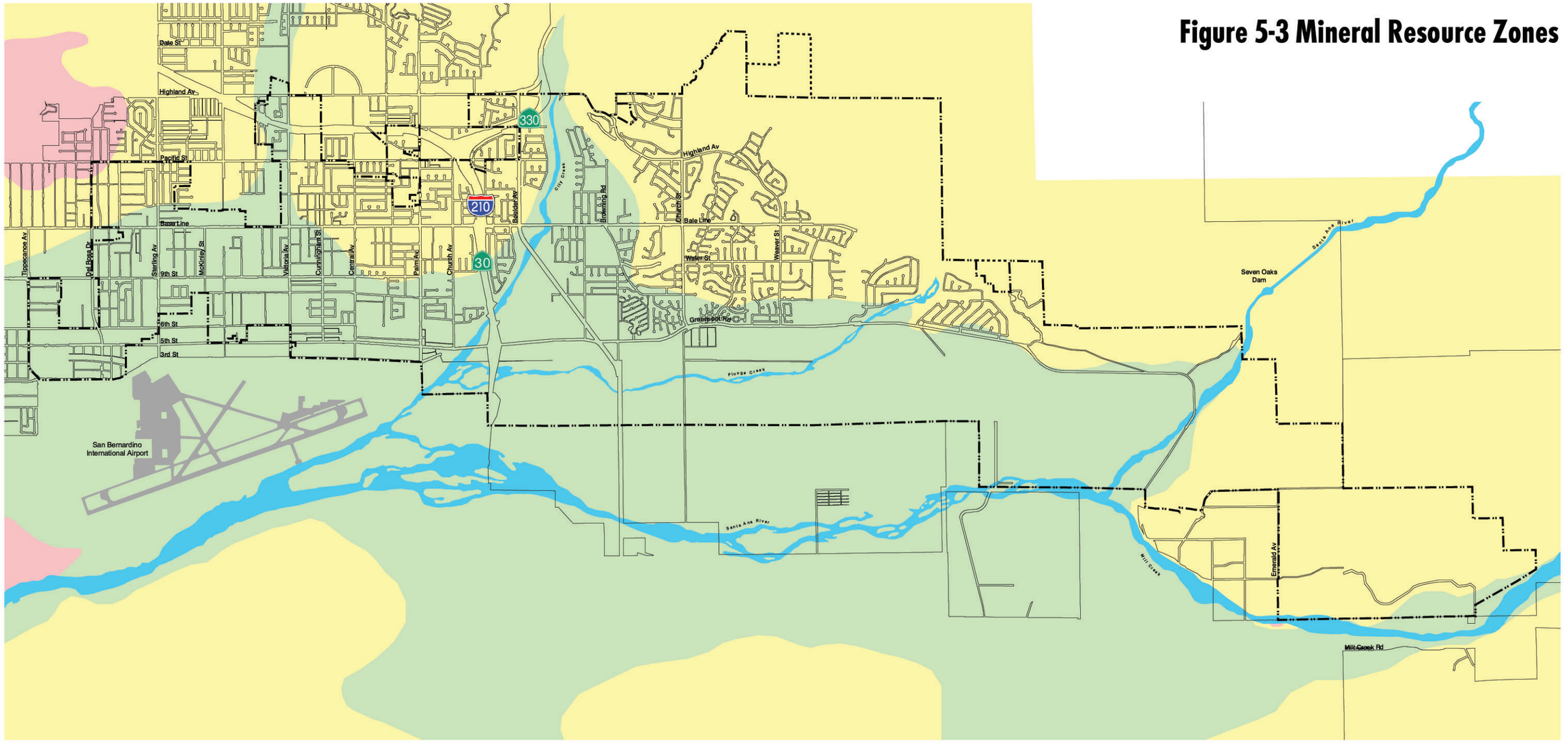
Figure 5-3 Mineral Resource Zones



MRZ-1
MRZ-2
MRZ-3

City Boundary
Sphere of Influence

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Parks and Recreation

Located at the foot of the San Bernardino Mountains, Highland offers a wide array of recreational opportunities. Bordered by the San Bernardino National Forest, the geographic setting provides for such activities as biking, hiking, sightseeing, horseback riding and winter sports. Within its city limits, the community also contains active and passive parks and recreation and community centers. The challenge for Highland, as with all cities in the region, will be to provide enough parks with the desired facilities to serve a growing population. Through a combination of development impact fees, capital budgeting and land acquisition agreements, Highland is working to develop the most comprehensive parks and recreation program possible, and these efforts can be guided by a Parks and Recreation Master Plan, separate from, but consistent with, the policies contained in this General Plan.

Aurantia Park is a multi-use passive park with regional design references.

The City has the advantage of being close to a number of excellent regional recreational amenities. It is located within one hour of the vacation resort areas of Big Bear Lake and Lake Arrowhead, the San Gorgonio Wilderness and the San Jacinto Mountains. The San Bernardino National Forest provides for outdoor activities as diverse as swimming, boating, hiking, camping, downhill skiing and cross-country skiing. Other surrounding regional recreation areas include: Lake Perris and Lake Elsinore, Lake Skinner County Park, Yucaipa Regional Park, Glen Helen Regional Park and Mt. San Jacinto State Park.

Types of Parks

There are many types of parks and recreational facilities in Highland, and their description provides the basis for setting future goals and standards. Below is a description of the hierarchy of basic types of parks. In addition, Figure 5.4 depicts sample sizes, configurations and amenities provided by each of the park types located in Highland.

Mini-Parks. Often called pocket parks, sub-neighborhood parks or play lots, they serve built-up, urbanized areas and are commonly developed in conjunction with specific plans, planned developments and community centers.

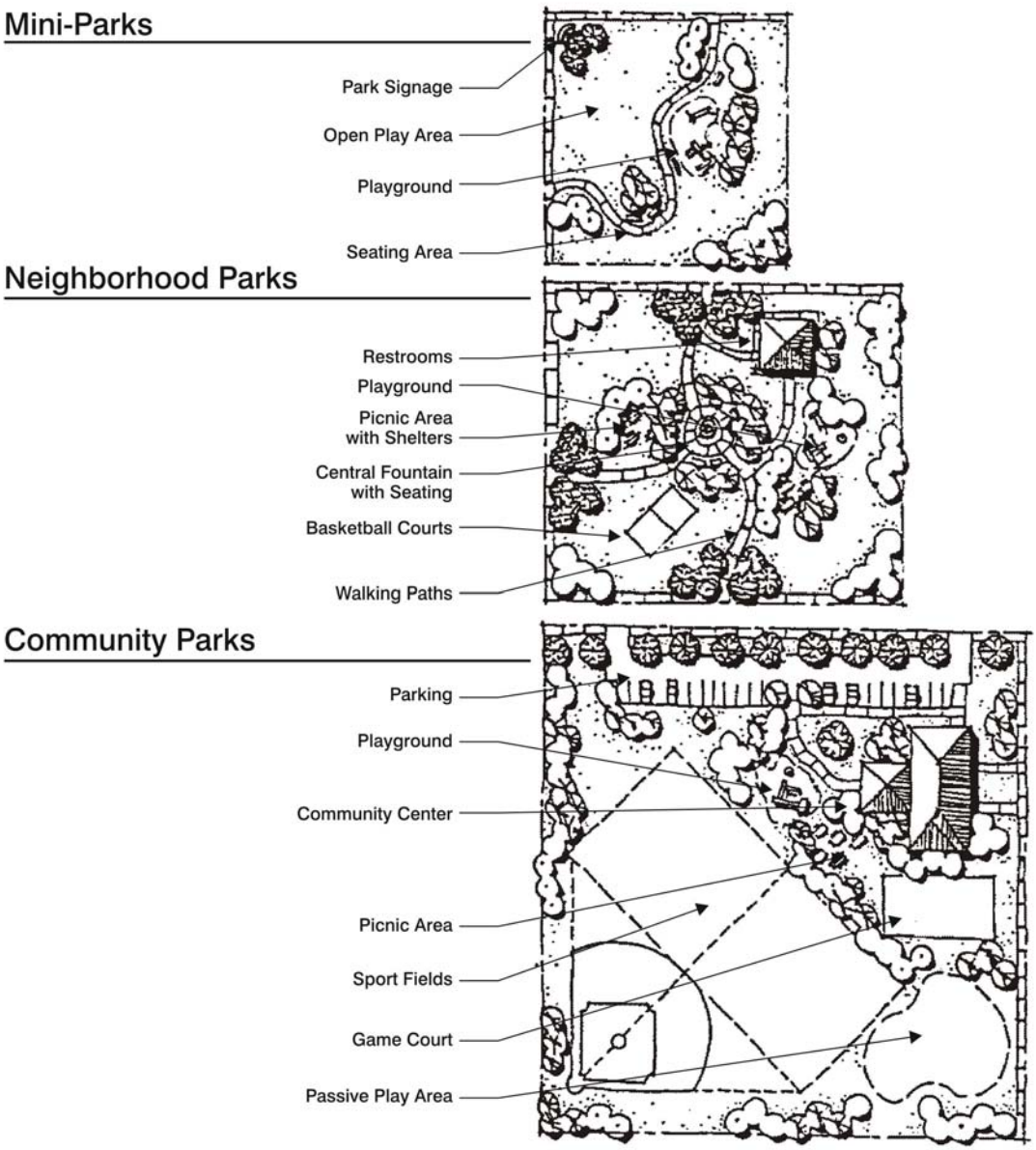
Neighborhood Parks. From 10 to 20 acres, these are walk or bike-to parks located within the neighborhood they serve. They include both active and passive designs and include such facilities as picnic areas, informal fields, tot lots, court games, passive green space and off-street parking. These facilities usually represent a separate property delineated by a fence.

Community Parks. These facilities are 20 to 40 acres with a service radius of 1.5 miles. Their typical amenities include lighted sports fields and courts,

picnic facilities, play areas, restrooms, off-street parking, pool and service yards.

Regional Parks. Consisting of 100 acres or more and attracting users from a service radius of up to an hour's drive, these facilities contain a wide range of amenities from hiking areas, scenic areas and major sports facilities. Using this criterion, there are numerous regional facilities available to Highland's residents including the San Bernardino National Forest and the recreational facilities associated with three major universities.

Figure 5.4: Park Types



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Park Standards and Facilities

Throughout the country, park planning is conducted by establishing a ratio of park acreage per population. The open space ratio established for the Highland is 2.5 acres per 1,000 residents, which includes a ratio of 2.0 acres of developed park acreage and 0.5 acre of undeveloped natural parkland. In California, park standards are provided by the Quimby Act of 1975, which gave cities the authority to pass parkland impact fees or dedication ordinances, recognizing the tremendous strain that local cities were under to provide enough parkland and open space for their residents. It is the City's intention to exceed state-mandated minimums, which generally fall in the 4 to 5 acres per 1,000 citizen range.

With regard to types of facilities within parks, no single set of accepted standards exists, partly due to the diverse needs of different communities and population changes. Nevertheless, the National Recreation and Parks Association (NRPA) has published benchmark guidelines for communities to consider and they are summarized below in Table 5.2.

Table 5.2: Recreation Facilities and Standards

Park Type	*Primary Function*	*Space Standard*	*Service Area Radius*	*Tot Lot*	*Picnic Area*	*Passive Area*	*Restrooms*	*Basketball*	*Volleyball*	*Tennis*	*Baseball*	*Soccer*	*Community Center*	*Nature*	*Swimming*
Mini	Passive	Up to 1 AC	¼ mi.	●	●	●									
Neighborhood	Passive/ Active	5-20 AC	¼ to ½ mi.	●	●	●	■	■	■	■	✹	✹			
Community	Active	20-100 AC	½ to 3 mi.	●	●	●	●	●	■	■	■	■	✹	✹	✹

● Facility should be included in all parks.

■ Facility may be included in park.

✹ Facility will be limited to a few parks.

Existing Park Supply and Demand

Park and recreation facilities are in short supply in the City, partly the result of a lack of developable space. For future planning, given a projected build-out population of 69,582, Highland should have approximately 143.8 acres of developed park acreage and 36 acres of undeveloped natural parkland, totaling 179 acres based on the standard of two acres of parkland per 1,000 residents.

Among Highland's recreational facilities are: Cunningham Park and Canyon Oaks Park, both of which are two-acre neighborhood parks; Aurantia Park, a ten-acre passive park; and the 17-acre Central Avenue Park. The Jerry Lewis Community Center, consisting of a 30,000 square-foot multi-use facility containing a gymnasium, several multi-purpose rooms, a kitchen and offices, is surrounded by Central Avenue Park. A major Public Library and Environmental Learning Center is to be located nearby. Additional recreational needs of the City are met by the sports fields and playgrounds of the eight schools in the City, parks or schools in surrounding cities, vacant lots and a few privately held fields that serve as informal ball fields and gathering places.

Part of the parkland shortfall can be partially alleviated through joint-use school/park facilities. The City has worked to establish joint-use agreements with the San Bernardino and Redlands School Districts for targeted schools. It should be pointed out that such agreements provide active recreational space but not passive parkland. Also, joint-use agreements are severable by local school boards and, as such, cannot be relied on exclusively to alleviate the parkland shortfall. Thus, the City realizes that such programs, although beneficial to the community, are not a substitute for acquiring additional parkland.

Target Planning Areas and Future Needs

Park planning relies on establishing target areas and service area boundaries for each type of recreation facility. This depends on forecasting population growth and land use patterns. Figure 5.5 shows ten service areas for the City, three immediate needs target areas, and existing and proposed park facilities. The target areas in the central parts of the City are high priorities for neighborhood park development, even though their provision may cause an overlap in service area boundaries.

For residents of the East Highlands area, there appears to be ample park space. It should be noted that East Highlands Ranch has 113.6 acres of active recreational space including walking, hiking, or biking trails and 940.3 acres of natural and visual open space for the private use of its residents; however, this parkland is not counted toward the parkland requirements that must be met by the City because it is private. It should also be noted that the California Youth Soccer Association (CYSA)

Soccer Complex, a regional recreation facility, is located just outside of the City (north of Base Line and west of Victoria Avenue).

Planning for the Future

Determining future park and recreation demand is an ongoing process that considers changes in population growth, user preferences and implementation of a Parks and Recreation Master Plan. Current demographic trends favor more facilities for young people and consequent demand for organized sports facilities within community parks. The City will continue to take a proactive role in park planning by collecting fees, acquiring land and designing the parks themselves. The following issues have been identified for the effective planning of future park and recreation facilities:

- Available school site facilities and recreational opportunities within private developments can offset some of the shortfall in parks space, but as iterated above, should not be relied upon exclusively for meeting this need.
- The western portion of Highland has only two stand-alone parks that are not associated with school facilities.
- Based on a park standard of 2.5 acres per 1,000 residents, there is a deficit in park space. These deficiencies exist mainly at the neighborhood and community park level.
- In the year 2000, the largest share of Highland's population (20.4 percent) was in the 0–9 year old age group. Combining the number of 10–19 year olds with the number of 0–9-year-olds in Highland, gave the City a population where 38.4 percent of its residents were under 20 years of age in 2000. Increases in the child-age population will necessitate the provision of additional lands for youth sports and activities in the future.
- Quimby funds and general revenues may be insufficient to acquire, develop, maintain and operate the additional recreational facilities needed. The City must, therefore, employ creative techniques such as land banking to secure additional land for parks.

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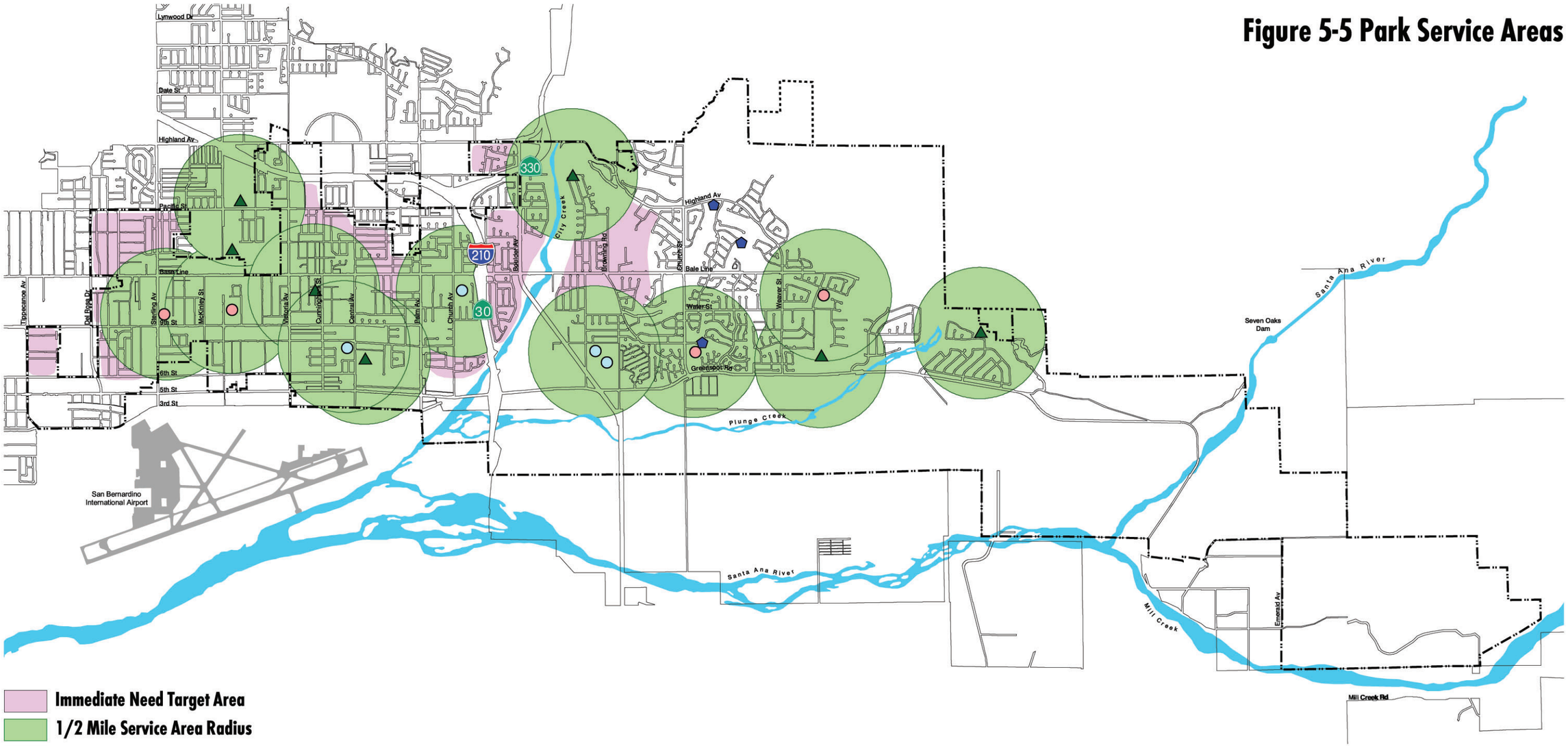
Figure 5-5 Park Service Areas



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GOAL 5.10

Maintain a high-quality system of parks that meet the needs of all segments of the community.

Policies

Adequate Supply of Parks

1) Develop and periodically update a Parks and Recreation Master Plan, with direction from the Planning Commission, Design Review Board and City Council, to identify specific future sites for additional parks and recreational open space.

2) Supplement existing development fee program for parkland acquisition with other funding sources, grants and programs (fee sponsors, corporate sponsors, fund raising, for example).

3) Use the redevelopment process for the selection, acquisition and funding of additional parkland in western portions of the City.

4) Prepare a phased strategy for developing new facilities.

5) Assess areas of potential annexation into the City and, if necessary, negotiate an agreement with the County of San Bernardino to provide parks meeting City standards within areas of eventual annexation into the City.

The latest in playground equipment and softscape surfaces will make this park a favorite with kids and their parents.

Parks for Diverse Needs

6) Conduct periodic assessments of park and recreation facilities and services, including user surveys.

7) Provide handicap access to all parks.

8) Develop a multi-dimensional recreation program for all citizen groups in Highland including exercise, arts and crafts and cultural enrichment.

Park Design

9) Provide a variety of activity options, including active and passive uses, within each park.

10) Study the desirability of developing "specialty parks" such as skate, dirt bike, fishing and art parks.

11) Evaluate the facilities and amenities of all City parks as part of the periodic update of the Parks and Recreation Master Plan.

12) Conduct periodic user surveys on the design of public parks.

13) Conduct service-area based design charettes with community members on park design.

14) Give priority to the acquisition of large parcels for the development of Community Parks that accommodate athletic fields.

15) Encourage design competitions for new and remodeled parks.

Parks in Newly Developing Areas

16) Continue to implement the local park ordinance through developer dedication of parkland or in-lieu fees.

17) Require that new specific plans and planned unit developments (PUDs) incorporate sufficient park and recreation facilities along with natural open space areas, where appropriate, to serve the needs of their future residents.

18) Given the residential focus in Highland, increase park standard acreage ratios above state required minimums.

19) Connect newly developed parks, wherever practical, to the existing and future bicycle and recreational trail system.

20) Initiate a long-term program to correct park deficiencies.

21) Adopt a density bonus program for development that includes usable park and open space lands above the City-required standard.

22) Develop recreational opportunities within the Greenspot area.

Park Safety and Maintenance

23) Design parks in accordance with contemporary safety standards and "CPTED" (Crime Prevention Through Environmental Design) principles.

24) Periodically evaluate parks for safety and maintenance.

25) Conduct evaluation of park improvements to test for safety compliance, crime prevention and effective maintenance.

Joint-Use Agreements with School District

26) Pursue joint public/private development of recreation facilities, especially in areas where joint development would maximize use of existing facilities, as well as add new land to the facility.

27) Develop and implement a facilities plan that indicates the potential development of recreational facilities, their costs and implementation at selected school sites.

28) Establish clear policies about the proper community use of school facilities including maintenance, scheduling, fees and regulations.

Park Accessibility and Signage

29) Locate parks and recreation facilities within convenient walking and biking distance of all neighborhoods.

30) Integrate park and recreation facilities with existing and future trail and bikeways, wherever practical.

31) Prepare templates for proper on and off-site signage for all parks.

Multi-Use Trails

Trails and equestrian use have a strong tradition in Highland. In the early days of the City's development, citrus crops were pulled by horses along an extensive system of trails. The proximity of mountains, rivers and open space has made equestrian, hiking and biking uses both popular and practical. The views afforded from area trails and bikeways are some of the finest in the region. An accessible trail system not only promotes exercise, but also links community facilities and neighborhoods together. Successful implementation of the Multi-Use Trails Master Plan depends on strong community support, careful planning and consistent funding. Figure 5.6 summarizes the proposed mixed use trail system for Highland.

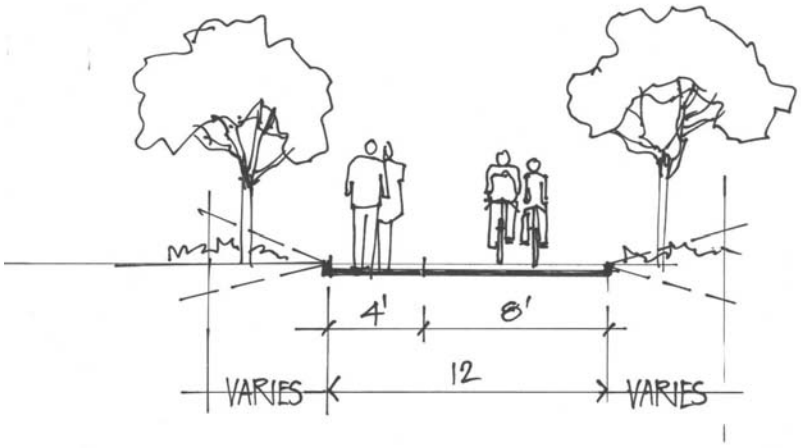
Types of Trails

Just as there are different types of parks for which to plan, there are also different types of trails and bike paths for different uses. Multi-use on City of Highland recreational trails in urban areas may include bicycling and hiking. In natural or low-use areas, multiple-use may include any combination of bicycling, hiking, or equestrian uses. An off-street recreational trail system combines hiking, equestrian and Class 1 bike trails. Such trails are primarily used for recreation, but can also be used to provide access to community facilities, such as transit stops or schools. Dedicated bike lanes, or Class 2 Bikeways, consist of a dedicated lane along the pavement edge of streets and provide an alternative to the automobile throughout the city. Off–road vehicles such as ATVs and dirt bikes, which are currently using private lands, should also have a trail system. The following are commonly used trail and bicycle lane standards:

This multi-use trail in east Highland connects neighborhoods with minimal street crossings, providing access for pedestrians, bicycles and equestrians.

Multi-Use Trails are combined trails that accommodate hikers, joggers, bicyclists and equestrians with improved surface of concrete or asphalt for the bike and an unimproved surface for equestrian uses. Hiking portions of trail may or may not be improved, depending on the nature of the trail and the surroundings. Minimum width for two bikes is 8 feet 5 inches for one bike and 4 to 7 feet for hikers and equestrians. Separating medians can be used, especially at major crossings and near nodes. Major trail nodes occur where trail systems begin or where they cross as well as places where important information needs to be given to users.

Equestrian/Hiking Trails are wide enough to allow two horses to pass: minimum 10-foot width and 10-foot vertical clearance from overhanging branches.



See the Circulation Element for further discussion of bikeway standards.

Class I Bikeways (Bike Paths) are provided for corridors nor served by streets or highways; excellent for use along rivers, channels and utility rights-of-way or easements; recommended width for two-way bike path is 8 feet.

Class 2 Bike Lanes are for use along roadways in urban settings; minimum land width of 4 feet between the gutter or parking lane and the auto travel lane; used in developed areas with significant bicycle travel demand.

Class 3 Bicycle Routes connect Class 1 and 2 Bikeways, usually in developed areas; length varies depending on access routes.

The biggest priorities for Highland are for both multi-use trails and bikeways. Since the majority of existing trails are for both equestrian and hiking uses, a high priority is to complete the planning and implementation of the Multi-Use Trails Master Plan recommended by the Community Trails Committee. Also, since there is a shortage of trails

and bikeways in western portions of the City, a high priority is to develop connections to other trails. These plans are coordinated with the City of San Bernardino where bikeways cross both jurisdictions.

Existing Trail System

In the early agricultural period of Highland's development, an extensive system of informal trails developed, mostly associated with equestrian transport routes. Over time, the gentle, sloping and scenic terrain attracted even more recreational uses. Some of these early routes are now becoming a formal trail system. The majority of the trails are located in the vicinity of East Highlands Ranch and the more rural portions of East Highland. Trail opportunities in the western portions of the City are limited because of urbanization and subsequent lack of open space.

Regional Connections – Santa Ana River and the Scenic Trail System

Highland's location at the base of the San Bernardino Mountains gives its citizens and visitors major opportunities to access to City-maintained trails and the regional network of multi-use trails. In fact, the City is home to or is close to several trails designated as Scenic Trails by the County of San Bernardino (see Figure 5.6, Multi-Use Trails), including:

- Santa Ana River Trail
- San Bernardino Green Belt Trail
- City Creek Trail

Of major significance is the Santa Ana River Trail. This river corridor is approximately 110 miles long and covers three counties from the crest of the San Bernardino Mountains to the Pacific Ocean. About 2 of the 18 miles that lie in San Bernardino County have been paved as bicycle paths and are accessible to Highland. The remaining portion of the project will be addressed with future funding sources. The eastern portion of the River corridor provides a peaceful, natural setting, which would facilitate high-quality rural and equestrian-oriented development in areas not subject to flooding. This system of trails interconnects with the other regional/local trails within Orange, Riverside and San Bernardino Counties.

Trail Planning

A formal trail system was initiated when the East Highland Ranch began construction in the early 1980s. It is envisioned that this trail system will be improved to City standards while other trails will become the responsibility of the City. Recommendations by the Equestrian Trails Committee, formed in the late 1980s, lead to City adoption of the

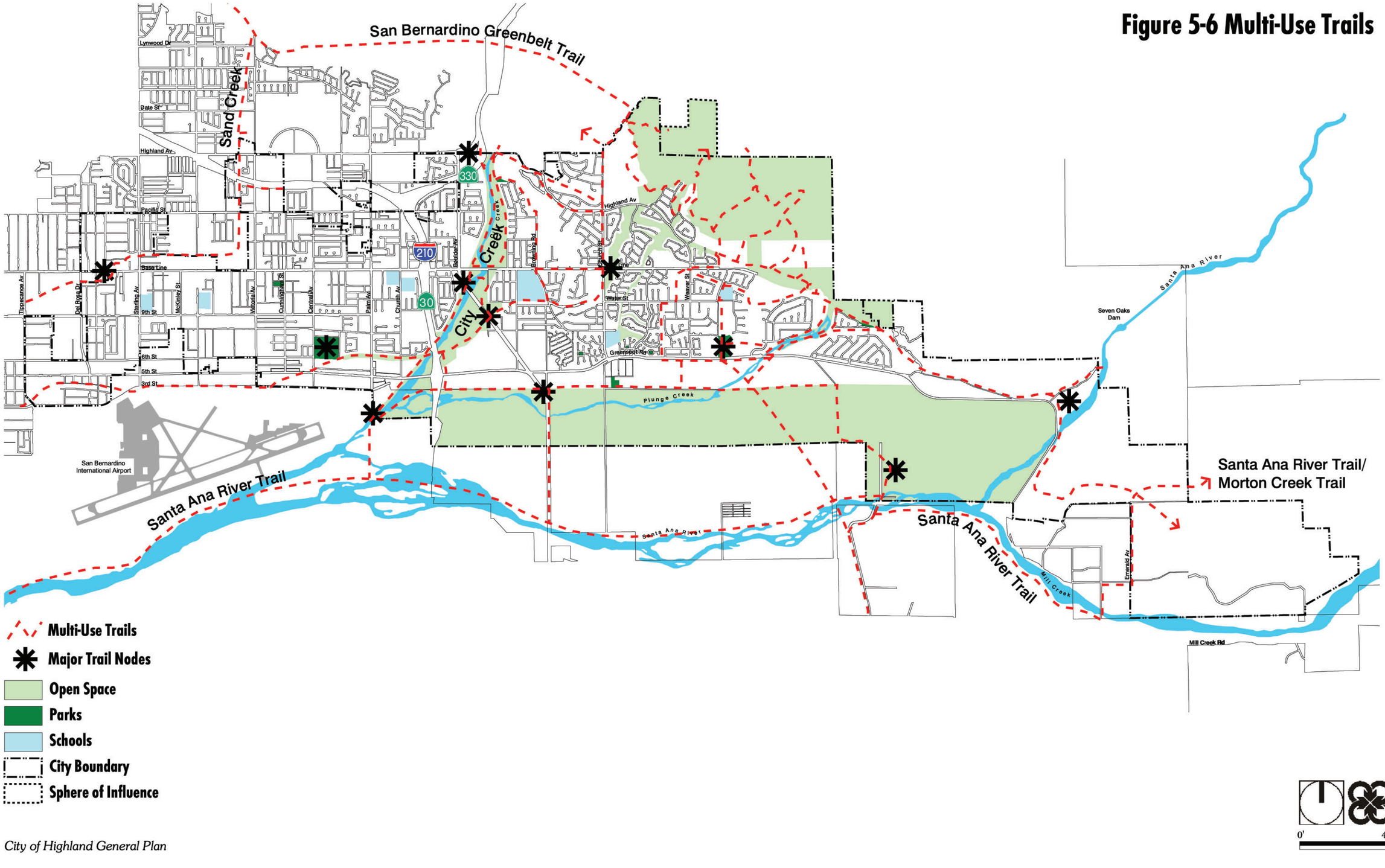
Conceptual East Highlands Equestrian Map in 1989. Realizing the importance of other non-equestrian users, a Community Trails Committee was established in 1990 to advise the City on the planning, acquisition and maintenance of a Multi-Use Trails Master Plan.

A major focus for the City will be to complete a truly integrated multi-use Master Plan for trails. This will include not only expanded equestrian and hiking trails, but also improved bikeways throughout the City. In addition, the City's Master Plan will improve links to the regional network of trails and bikeways.

Trail Construction and Maintenance

There are many challenges in trail planning. The long distances involved and the public/private ownership patterns can pose maintenance and liability issues. Use of floodplains, channels and public rights-of-way can save on acquisition costs, and use of recycled material such as crushed concrete can keep construction costs down. Maintenance costs can be reduced by using volunteer groups, "Adopt a Trail" programs, contracted labor such as the California Conservation Corps, and public awareness programs. Private trail systems are usually maintained through Homeowner's Association provisions.

Figure 5-6 Multi-Use Trails



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GOAL 5.11

Provide excellent opportunities and facilities for hiking, equestrian and bicycle use through the Multi-Use Trail Master Plan.

Policies

1) Require, where appropriate, that residential, commercial and industrial developments within the City dedicate and construct trail links within their boundaries as part of the Multi-Use Trail Master Plan.

2) Provide equestrian, bicycling and pedestrian staging areas consistent with plan standards.

3) Support the acquisition of trail rights-of-way through dedication in conjunction with development activity or acts of philanthropy that occur prior to adoption of a route plan.

4) Where possible, locate trail easements within City-required landscaping or other easements.

5) Preserve, to the extent possible, existing formal and informal trail routes in the City, in particular routes that provide major north-south and east-west access.

6) Where an established trail is jeopardized by impending development or subdivision activity, require the dedication of trail easements, where appropriate, to establish a planned trail system alignment.

7) Require proposed development adjacent to trail systems to dedicate land for trailhead access points.

8) Where feasible, use active and abandoned roads, flood control, utility and railroad rights-of-way, and other easements for potential sites for expanded trail use.

9) Refine, adopt and implement the Multi-Use Trails Master Plan to include, at a minimum, the following:

   - Indication of an exact trail location (e.g., which side of street, channel, etc.);
   - Identification of each trail with a name, approximate length and type;
   - Specific design standards for each trail;

- Identification of logical rest areas and facilities;
- Establishment of sign standards and locations for the various types of trails; and
- Suggested funding sources and implementation strategies.

10) Work with local, state and federal agencies; adjoining cities and jurisdictions; interest groups; and private landowners, in an effort to promote a Citywide trail system, and to secure trail access through purchase, easement, or by other means.

11) Locate trail linkages to minimize conflicts with motorized traffic.

GOAL 5.12

Develop and maintain trail and bikeway connections to recreational facilities, schools, existing transportation routes, natural features and regional trail systems.

Policies

1) Provide trail connections between and/or along the major city and surrounding regional facilities, sites and features indicated on the Multi-Use Trails Master Plan.

2) Provide bicycle and pedestrian trails along major home-to-work, home-to-school and other travel routes, where appropriate.

3) Seek to construct or assist in the construction of those portions of the San Bernardino County Regional Trail system that are located within Highland.

4) Require the dedication of trail easements, where appropriate, for establishing a planned trails system alignment, or where an established trail is jeopardized by impending development or subdivision activity.

5) Where possible, designate and design new trail development near transit routes or heavily traveled areas.

GOAL 5.13

Ensure the maximum safety and enjoyment of all trail system users.

Policies

1) Establish an educational program that will protect the health and safety of trail users by encouraging proper etiquette and procedures.

2) Access should be provided to the maximum extent feasible to trail users of all abilities and all ages.

3) Adopt the following hierarchy of users on the City's trail system:

   - Bicyclists must yield right-of-way to all other users.
   - Runners must yield to hikers and equestrians (note: horses should not be on trails predominantly intended for bikes and pedestrians).
   - Hikers must yield to equestrians.

4) Implement two general levels of trail use:

   - Low Use and Natural Area: Standards shall apply to sections of the trail where terrain, remoteness, expected low usage, easement, or other restrictions make larger, multiple trails infeasible.
   - Urban (Maximum Accessibility): Standards define a relative flat, wide trail for use where little physical challenge is required and where wheelchair access can be accomplished. The grades are low, and the trail is wide and compacted or surfaced.

5) Require that cyclists adhere to the following requirements:

   - Alert hikers and equestrians of their presence.
   - Travel no faster than 15 mph, unless conditions warrant reduced speed.
   - Slow to 5 mph when passing and dismount when necessary.

6) Promote adherence to the following code of off-road bicycling responsibility, as developed by the International Mountain Bicycling Association:

   - Ride on open trails only.
   - Control your bicycle.

- Always yield trail.
- Never spook animals.
- Leave no trace.
- Plan Ahead.

7) Maintain adequate line-of-sight on multiple use trails as determined by the City Engineer.

8) Incorporate, where feasible and without compromising safety, all compatible multiple uses on a single trail.

9) Where a single trail is not feasible or there is heavy use, provide alternate or parallel routes and/or design separate, dual trails.

10) Allow ample space in right-of-way for safe passage of users, for signing, fencing, separation of trails, trailheads and where appropriate, landscaping.

11) For trails in developed areas, provide a setback of at least 5 feet so that trail fence can be set back from the curb and planting strip.

12) Along narrow equestrian/hiking trails (less than 6 feet wide) with steep side slopes (greater than 30 percent), provide passing areas at regular intervals to allow hikers and other equestrians to pass.

13) Inform all trail users of the system's etiquette requirements through trailhead signs.

14) Reserve the right to temporarily close trails for safety and maintenance reasons, and post signs at convenient locations and outlets indicating the extent and probable length of closure.

GOAL 5.14

Maintain and enhance the trail system's clear and informative signage.

Policies

1) Continue to use consistent and established sign styles and other symbols, for the trails system.

2) To the extent possible, develop signs that use easily identifiable symbols, natural materials and colors, and vandal-resistant construction.

3) Place signs in clearly visible areas such as at access points, trail heads, rest facilities and road crossings.

4) Use positive rather than negative language, emphasizing permitted activities rather than extensive "No!" signing, where appropriate.

5) Relate the number of signs to trail usage. More signage is appropriate in urban or high-use areas rather than natural or low-use areas.

6) Develop a highly informative sign program incorporating such information as:

- Destinations and mileage indicators along the trail route;
- Connections to other trails and community facilities;
- Areas where access is hazardous or restricted;
- Areas in which dogs or other animals are not allowed;
- Educational exhibits and informational displays;
- Delineation of private property adjacent to trails;
- Habitat restoration along or near trails;
- Recognition of areas dedicated to or sponsored by an organization or individual;
- Vista points, pullouts, or rest stops;
- Etiquette or permitted and nonpermitted uses; and
- Speed limits for bicyclists and equestrians.

This small post sign at Aurantia Park uses symbols to communicate with users. Although in the center rather than the side of a trail head, the scale and color of the sign make it less obtrusive.

GOAL 5.15

Develop a multi-faceted program of trail maintenance with public and private participation.

Policies

1) Monitor public use of trail system on a regular basis so that maintenance issues can be addressed on a timely basis.

2) Enforce trail regulations as a means of controlling trail use, and ensure that regulations for different trail segments within various jurisdictions do not conflict.

3) Develop a program to enlist volunteers and volunteer organizations on trail development, operations and maintenance, education, and enforcement activities.

4) Locate trailheads in areas of high visibility and access.

5) Develop or open to public use trails and/or easements only after a public agency (which may be the City of Highland) or private organization agrees to accept maintenance and liability responsibilities.

6) Conduct a feasibility study of a possible off-road vehicle park or recreation area.

7) Maintain an up-to-date map of all existing and proposed dedicated public trail easements in the General Plan.

8) Ensure that all proposed trails leading from the City into the San Bernardino National Forest are coordinated with the San Bernardino National Forest Service and consistent with the County of San Bernardino National Forest Land and Resource Management Plan.

Energy Conservation, Green Building Design and Recycling

Using resources wisely saves money and helps the environment, and the City of Highland is connecting its citizens to these trends. This Open Space and Conservation Element analyzes energy conservation opportunities and describes the policies and actions that can make the City more energy wise. Energy conservation is not only about using appliances wisely, but also about designing buildings to use renewable energy rather than waste it—the so-called "green building" or sustainable energy practices. Conserving also means less waste. Managing solid waste, through recycling and other programs, conserves precious space in landfills.

Energy-Saving Practices and Green Building Design

Energy conservation is a comprehensive process, involving a myriad of groups—renters, homeowners, cities, utility companies and the development community. The City of Highland can be a role model in energy efficiency and sharing information with its residents and encouraging energy-wide practices and development.

With its hot summers and cool winters, the City is in a good position to benefit from energy conservation information. Utility providers such as Southern California Edison and government agencies have a wealth of information to share, and the City continues to disseminate it to its citizens. The United States Department of Energy and the Environmental Protection Agency have long sponsored conservation efforts such as the Energy Star Program that encourages superior energy efficiency by residents and businesses. The American Institute of Architects' (AIA) Committee on the Environment (COTE) maintains a powerful website on sustainable design. Many jurisdictions have enrolled in the Community Energy Efficiency Program (CEEP), which provides incentives for builders who attain energy savings 30 percent above the National Model Energy Code.

The City also has a role in encouraging energy-efficient, "green" buildings. Providing information and incentives for builders whose designs work with solar and wind patterns can save money and add comfort to homes and businesses. Local utilities have continued to offer incentives to builders who meet "Energy Star" or comfort wise standards that are at least 15 percent above Title 24 of the California Building Code. The City of Highland continues to pride itself on environmental quality and is developing the foundation for a strong "green building" program.

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For additional information on energy conservation, please visit the following websites:

- Southern California Edison – www.sce.com
- The U.S. Department of Energy – www.eren.doe.gov/consumerinfo/energy_savers
- Power Protection -– www.powerprotectiononline.org
- The California Energy Commission -– www.consumerenergycenter.org
- Energy Star Program – www.energystar.gov
- The Energy Commission's "Your California Home Page" – www.idea-server.com/CAHome
- Flex Your Power Official Site – www.flexyourpower.ca.gov
- Southern California Gas Company – www.socalgas.com
- American Institute of Architects – www.aia.org/cote

GOAL 5.16

Continue to encourage, support and adopt energy-conservation practices.

Policies

1) Consolidate and adopt energy-saving practices for all City departments.

2) Monitor energy usage for all City facilities.

3) Provide information on free energy audits for the public given by public utilities.

4) Distribute energy-conservation information, in both English and Spanish, to residents and businesses through:

   - Links to energy agencies and utilities on City's homepage
   - Brochures available at City Hall and other public facilities
   - Information and tips on utility bills.
   - Outreach programs to schools and businesses.
   - Environmental Learning Center

5) Coordinate energy-related policies and actions with local utilities and energy agencies.

GOAL 5.17

Encourage site design practices that reduce and conserve energy use.

Policies

1) Encourage energy and environmentally sustainable designs—such as "Green Development Standards"—in the design and approval of new projects.

2) Orient buildings on the site to maximize the natural ventilation provided by prevailing breezes.

3) Incorporate passive solar design techniques including building orientation, energy-saving materials, roof overhangs, and window and door placement.

4) Increase minimum building insulation standards.

5) Encourage landscape design that cools buildings and blocks solar rays, such as the planting of deciduous trees on south and west facing elevations, and give Title 24 credit for landscaping.

6) Channel runoff to permeable surfaces through the design of roofs and rain gutter systems and drainage courses.

7) Encourage energy-efficient retrofitting of existing buildings, where practical, throughout the City including assisting applicants in the installation of more efficient HVAC (heating, ventilation, air conditioning) systems.

8) Distribute and participate in incentive programs for incorporation of solar and photovoltaic panels (active solar) into existing or new buildings.

9) Establish a "green building" site design incentive program, such as density or height bonuses, reduced parking requirements, expedited plan check, and recognition programs.

10) Adopt LEED (Leadership in Energy and Environmental Design) design standards for public buildings.

11) Participate in the CEEP (Community Energy Efficiency Program) Certificate and Recognition Program.

12) Encourage a grey water recycling plan.

Solid Waste Management/Recycling

Recycling saves resources and has become an important state, regional and local concern. The goal is to reduce the growing waste stream generated by residences and businesses and to find sufficient land for its disposal. The State's Integrated Waste Management Act of 1989 required that cities reduce their solid waste diversions to landfill by 50 percent by the year 2000. After this date, cities could set even higher goals.

For additional information regarding solid waste services and facilities, please refer to the Public Services and Facilities Element.

Solid waste management involves source reduction, recycling and composting, and safe transformation and disposal of solid wastes. The City of Highland operates under the County of San Bernardino Solid Waste Management Division (SWMD) and is responsible for the operation and management of the County of San Bernardino's solid waste disposal system that consists of six regional landfills, eight transfer stations and five community collection centers.

The City of Highland has developed an array of recycling programs in an effort to reduce the amount of solid waste to local landfills. These programs include a no-cost citywide curbside recycling program for Highland households; office recycling in all City departments; and education programs on recycling. Additionally, the City participates in "Merry Mulch," a program sponsored by San Bernardino County that encourages residents to provide Christmas trees for mulching at regional landfills. Another program is "Spring Clean-Up" day sponsored by the City's Chamber of Commerce and local businesses. This program encourages residents to bring large bulky items to a designated location in the City for disposal. Private sector recycling programs represent additional opportunities for recycling programs.

GOAL 5.18

Continue to improve Highland's solid waste management and recycling efforts.

Policies

1) Continue to provide services to resident and businesses that facilitate community cleanup, curbside collections and diversion of oil and other hazardous waste materials

2) Where joint programs offer improved efficiency or reduced cost, collaborate with other entities in waste recycling efforts.

3) Maintain a comprehensive public education program, coordinated, in part, through the Environmental Learning Center, to stimulate recycling, reuse and waste reduction by its resident and businesses.

4) Continue to implement the policies and programs identified in the City's SRR (Source Reduction and Recycling Element) and HHW (Household Hazardous Waste Element), and develop measures to evaluate their effectiveness.

5) Evaluate and update hazardous waste management programs and implement improvements based on current best practices.

6) Evaluate and update community education programs on solid and hazardous waste disposal to insure that this information is as broadly available as possible, especially through the school system.

7) Aggressively pursue polluters and develop a fine program for distributors of fliers and leaflets found in parking lots.

Air Quality Planning

The enjoyment of Highland's scenic resources depends on clean air. Its location at the base of the Southland's tallest mountain range puts it in a highly visible and somewhat vulnerable position with regard to air quality. Furthermore, as one of the many cities in the South Coast Air Quality Management District, the City is not only affected by regional trends in air pollution but is also a participant in air quality planning.

Background

The City of Highland lies within The South Coast Air Quality Management District (AQMD), the air pollution control agency for all of Orange County and the urban portions of Los Angeles, Riverside and

San Bernardino Counties. The SCAQMD prepares an Air Quality Management Plan every three years, following its mandate from the Federal Clean Air Act. Among the many strategies used by the District to reduce pollution, the primary effort is the reduction of vehicle trips, since mobile sources such as automobiles constitute the number one contributor to air quality.

More recently, a growing strategy in the fight against air pollution is effective land use planning. Efficient land use planning—mixed/multi-use development, accessible retail centers, pedestrian amenities and transit-oriented development—can reduce unnecessary vehicle trips. Although not a large city within the SCAQMD, changes in Highland's development patterns and general plan land use designations contribute towards fewer vehicle trips. In particular, the City is planning an increase in:

- Mixed and multi-use planning;
- Consolidation of retail development to more accessible centers;
- Pedestrian connections to adjoining retail and office development;
- Development of a Town Center that would discourage out-of-town shopping trips;
- In-fill development for greater efficiency of land use; and
- Improvement of trail systems.

Policies described in this section are meant not as additional City regulations but to create incentives and support for local and regional efforts to help clean the air.

Sources of Air Pollution

- **Combustion**—primarily from automobile engines; the largest source of air pollution
- **Natural sources**—oil seeps, vegetation, windblown dust
- **Evaporation of organic liquids**—used in coating and cleaning processes
- **Abrasion**—primarily between tires and roadways
- **Industrial processes and construction**—windblown fumes and particulate matter

GOAL 5.19

Continue to support air quality planning through land use policies, outreach efforts and coordination with regional air quality agencies.

Policies

1) Reduce locally generated emissions through traffic flow improvements (including signal synchronization) and construction management practices.

2) Encourage the use of public transit within the City through coordination with regional transit providers and publication of routes and timetables on the City website and publications.

3) Encourage land use planning and urban design that reduces vehicle trips through mixed and multi-use development,

consolidation of commercial development along major arterials, provision of pedestrian connections from residential to retail areas, and development of a multi-use Town Center.

4) Establish performance standards for clustering residential areas near commercial services where mixed use is not feasible.

5) Expand citizen and business outreach and education programs, disseminated and conducted in the Environmental Learning Center, relating to policies that improve air quality

6) Provide incentives such as permit streamlining for industrial/commercial or residential development projects that meet or exceed air quality practices.

7) Encourage employers to develop trip reduction plans to promote alternative work schedules, ridesharing, telecommuting and work-at-home programs, employee education and preferential parking.

8) Conduct City staff in-service training, in conjunction with regional air quality agencies, on the latest policies, techniques, programs and technology for air quality planning.

9) Work with SANBAG to develop guidelines for the location and design of land uses that are sensitive to air pollution.

10) Reduce particulate emissions from roads, parking lots, construction sites and agricultural lands to the maximum extent practical through dust suppression, street cleaning and other practices.

11) Establish grading and building permitting procedures so that all construction involving demolition or earth movement reduces fugitive dust emissions through the appropriate techniques (e.g., wetting).

12) Incorporate the provisions of SCAQMD Rule 403 (Fugitive Dust) into City land use administration rules and procedures.

13) Continue comprehensive efforts to reduce energy consumption.

14) Offer incentives to home-based businesses, carpool networks and park-and-ride facilities.

15) Evaluate the desirability of developing a multi-modal, transit hub in the City.