

CITY OF NORCO

GENERAL PLAN CONSERVATION ELEMENT



UPDATE ADOPTION DATE: December 17, 2014

NORCO

CONSERVATION ELEMENT

2014 UPDATE

ADOPTED BY CITY COUNCIL
RESOLUTION NO. 2014-71
December 17, 2014



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1.0 INTRODUCTION TO THE CONSERVATION ELEMENT

The City of Norco was incorporated to preserve a small plot agricultural/animal keeping/equestrian lifestyle. Primary to this goal is the maintenance of residential lots that will accommodate and encourage animal keeping and agriculture at a family scale, a concept that dates back to early colonial times. The Land Use Element establishes the primary goal of the community, which is the maintenance of that kind of lifestyle. All other elements of the General Plan must be consistent. The Conservation Element works in conjunction with the Land Use Element in providing the life quality standards that will sustain the community, and support the preservation of small plot agriculture/animal keeping/equestrian lifestyle as a viable overall land use. In an urban setting, the City of Norco provides a unique opportunity to maintain this lifestyle that is not readily available elsewhere in the region.

1.1 PURPOSE OF THE CONSERVATION ELEMENT

The purpose of the Conservation Element is to provide direction to the City regarding the preservation, development, and utilization of natural resources. The State has mandated that the General Plan provide for the conservation of natural resources for the use and enjoyment of future generations. Natural resources discussed in this element include water, energy, soils, minerals, and wildlife. For issues regarding land resources and use, see the Land Use Element.

1.2 SCOPE AND FORMAT OF ELEMENT

The element is composed of four sections. The first section includes a description of the Element's purpose and background for inclusion in the General Plan. The second section contains the City's goals and policy statements for the conservation of its resources including water, energy, soil, and wildlife. The third section is the Conservation Plan defining what the City needs to achieve with respect to its resources. The fourth section of the Conservation Element contains the implementation measures to accomplish the stated goals and policies.

2.0 CONSERVATION ELEMENT GOALS AND POLICIES

2.1 CONSERVATION ISSUES AND PROBLEMS

2.1.1 **ADEQUATE AND POTABLE WATER SUPPLY:** The City's average annual water production requirement is projected to increase from 6,000 acre-feet in 2014 to approximately 9,000 acre-feet when the City will be nearing build-out conditions. The Temescal Basin is the City's primary source for water because of quality and the comparatively low cost of extraction. The City's safe yield from that basin has been estimated to be 5,000 acre-feet necessitating the need to continue to find additional sources of water.



2.1.2 **ENERGY SUPPLY:** Since the City does not produce any of its own electrical power, the City is subject to market conditions that it has only minimal influence on. If there is a protracted downturn in power availability, or some other factor produces prolonged increases in the cost of energy, the City becomes vulnerable to maintaining its lifestyle. In addition, this places the City's potential to attract new development and jobs at a disadvantage to cities that supply their own electricity (i.e. Riverside) and may be able to weather market conditions better.

2.1.3 **WILDLIFE PROTECTION:** The City recognizes that the protection of wildlife resources and open space is an integral part of maintaining the City's small plot agriculture/animal keeping/equestrian lifestyle and rural image.

Inherent to this is the protection of the primary vegetative/habitat communities that support the species endemic to the Norco area. The hillside areas as are one of the primary undisturbed habitat areas and a large amount of acreage has been preserved in open space to achieve that objective.

The Santa Ana River, is also already primarily preserved in open space, but the status of its native habitat is in a state of flux as officials work to supplant arundo with native habitat species. Arundo is a non-native plant that invaded many of the river and stream beds in the ecoregion systematically supplanting native vegetation. Continued removal of the arundo will ensure that the Santa Ana River can once again be a sustainable habitat area for native species.

2.1.4 **WASTE MANAGEMENT:** Because of the small plot agricultural, animal-keeping, and equestrian nature of the community there is the issue of manure management that is unique to Norco from the other cities in the western Riverside County area. The current practice of having the manure transported to drying beds outside of the City is a short-term solution.

A long-term solution needs to be developed for the City to maintain its animal-keeping lifestyle. The development of a manure-to-energy plant either for the City by itself or as part of a regional plant that can serve the needs of rural areas in Riverside County and surrounding counties is a long-term solution that needs to be pursued diligently.

2.2 WATER RESOURCES QUALITY GOAL-CONTINUOUSLY MAINTAIN AN ADEQUATE WATER SUPPLY THAT EXCEEDS MINIMUM STATE AND FEDERAL WATER QUALITY REQUIREMENTS

2.2.1 **WATER SUPPLY POLICY:** The City will continue to seek ways to increase the available water resources through the preservation of existing resources, and the development of new ones.



Policy 2.2.1a. Continue to promote water conservation through the use of xeriscape designs in new development. Additionally, public spaces shall incorporate xeriscape landscaping where feasible.

Policy 2.2.1b. Continue to provide information to the public on ways to conserve water and reduce consumption. Water conservation measures shall be specific to the type of user (i.e. residential, animal-keeping, and commercial).

Policy 2.2.1c. The City, along with other member agencies of the Western Riverside County Regional Wastewater Authority, should monitor the demand for reclaimed water, and then file Petitions of Change with the Regional Water Quality Control Board on an as-needed basis to reduce the amount of reclaimed water that is discharged into the Santa Ana River from the Archibald Treatment Facility. That water could then be available for transmission into the City's reclaimed water infrastructure system already in place to deliver water for park irrigation and other future facilities. New projects (both public and private) should include as part of each project the installation of infrastructure for reclaimed water where the installation for future use is feasible.

Policy 2.2.1d. Insure that there are adequate increases in water production and distribution capabilities to meet future growth demands.

2.2.2 **POTABLE WATER QUALITY POLICY:** Continue to monitor water quality and use the different available resources for water supply to insure that the City has an uninterrupted supply of potable and aesthetic water.

Policy 2.2.2a. Develop and maintain inter-agency agreements and infrastructure improvements to have back-up water supply sources from adjoining water districts during times of emergencies and system maintenance requirements.

2.2.3 **REGIONAL WATER QUALITY POLICY:** Continue regional cooperative agreements and actions for the protection of regional water resources.

Policy 2.2.3a. Protect water resources from pollutants through enforcement of the the Clean Water Act with the issuance of National Pollutant Discharge Elimination System (NPDES) permits for new development, as applicable, including Storm Water Pollution Protection Plans (SWPPP) during construction, and Water Quality Management Plans (WQMP) post construction.

Policy 2.2.3b. Ensure through continuing public information campaigns that all residents with large animals are aware that manure spreading as a means of disposal is strictly prohibited to prevent contamination to ground water supplies, and that only temporary storage is allowed until collection by a City-approved waste hauler. In conjunction with Goal 2.6 (Development of Energy Resources) the City should seek financing opportunities for the development of a manure to



energy processing facility now that the feasibility of such an operation for this area has been demonstrated.

Policy 2.2.3c. The City, in cooperation with the Riverside County Department of Environmental Health, should vigorously enforce regulations regarding the dumping of commercial and industrial hazardous wastes to prevent contamination to groundwater supplies.

Policy 2.2.3d. Continue partnering with the Regional Water Quality Control Board and neighboring water agencies for regional solutions to long range water quality issues.

Policy 2.2.3e. Continue monitoring water quality and implement measures as needed to maintain the aesthetic quality of the water as well as the potability.

2.3 WATER RESOURCES SUPPLY GOAL- PRESERVE RESOURCES BY REDUCING THE DEMAND FOR WATER IN CITY FACILITIES, AND IN PRIVATE DOMESTIC USE.

2.3.1 PUBLIC WATER CONSERVATION POLICY: The City should reduce demand for water in City facilities including parks, landscaped areas, and public buildings.

Policy 2.3.1a. Implement as feasible computer monitoring and soil sensors to control landscape watering.

Policy 2.3.1b. Watering of public landscaped areas should occur during early morning and/or late evening hours to minimize water loss from evaporation.

Policy 2.3.1c. Water storage facilities should be constructed as feasible for the purpose of storing run-off water to recharge groundwater supplies.

2.3.2 PRIVATE DOMESTIC WATER CONSERVATION POLICY:

Policy 2.3.2a. Require the installation of flow restriction fixtures in all new development.

Policy 2.3.2b. Promote public awareness programs of methods to preserve water resources including making available lists of feasible planting materials that are drought tolerant and/or low water users.

Policy 2.3.2c. Establish an emergency conservation plan to include public agencies, businesses, and residences for times when water supplies are particularly low so as to maintain water supplies to maintain animal keeping.



Policy 2.3.2d. Encourage the installation of the latest technology available for animal keeping watering systems that can reduce the overall amount of water being used.

2.4 WATER RESOURCES, PUBLIC AWARENESS GOAL- MAINTAIN PUBLIC AWARENESS OF WATER QUALITY ISSUES AND INDIVIDUAL RESPONSIBILITIES AS RESIDENTS

2.4.1 WATER CONTAMINATION POLICY

Policy 2.4.1a. Continue public awareness programs of water quality management requirements and best management practices pertaining to animal-keeping to reduce run-off contaminants to the Santa Ana River.

2.5 USE OF ENERGY RESOURCES GOAL-ENCOURAGE THE EFFICIENT USE OF ENERGY RESOURCES.

2.5.1 RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL POLICY.

Policy 2.5.1a. Encourage new construction and project design that uses, or takes advantage of renewable energy resources, including but not limited to solar energy design.

Policy 2.5.1b. Provide updated energy information documents for builders as needed to reflect the most recent Title 24 energy efficiency requirements and standards and other applicable new laws, requirements, and feasible building standards as may be available.

Policy 2.5.1c. Update requirements and policies as necessary to reflect the most cost effective advances in energy production and conservation.

2.5.2 CITY POLICY.

Policy 2.5.2a. Use the most energy efficient designs for City facilities and equipment as feasible to achieve energy conservation.

Policy 2.5.2b. Conduct periodic energy audits as needed to analyze efficiency of heating, cooling, lighting, and water delivery in City facilities; the operation efficiency of city vehicles; and the modes of transportation being used by City employees to determine if savings can be made with reasonable adjustments.

Policy 2.5.2c. † Work towards greater energy efficiency by minimizing dependence on energy from non-renewable resources, replacing it with energy from renewable resources.



Policy 2.5.2d. Support the development of non-polluting renewable energy resources through public education, and incentive programs where such incentives are feasible.

Policy 2.5.2f. Support alternative modes of transportation as feasible including the equestrian trail system, public transportation, bicycles, etc. to reduce the demand on non-renewable energy resources.

Policy 2.5.2g. Continue to investigate opportunities and options for the ultimate development of a manure waste-to-energy processing plant.

Policy 2.5.2i. Continuously review new and emerging technologies for the conservation and generation of electricity, and shall update policies as feasible and applicable.

2.6 DEVELOPMENT OF ENERGY RESOURCES GOAL- SEEK OPPORTUNITIES TO DEVELOP AND PROMOTE RENEWABLE ENERGY RESOURCES.

Policy 2.6.1a. Now that the feasibility of a manure-to-energy processing facility has been demonstrated for this area, seek funding opportunities for the development of such a facility.

Policy 2.6.1b. Research and promote where feasible the production of energy with other alternative renewable resources.

Policy 2.6.1c. Monitor opportunities for government grants to participate in innovative renewable energy resource programs that can benefit residences and businesses.

2.7 SOIL RESOURCES GOAL- ENCOURAGE OWNERS AND DEVELOPERS TO IMPLEMENT POLICIES AND IMPROVEMENTS TO REDUCE SOIL EROSION.

2.7.1 VACANT PROPERTY POLICY

Policy 2.7.1a. Encourage property owners of vacant land to provide windbreaks in the form of trees and shrubs to minimize wind erosion where blowing dust is a constant and continual problem.

Policy 2.7.1b. Existing vegetative cover that does not present a fire hazard should be maintained to reduce wind and storm run-off erosion. Where the maintenance of existing vegetation presents a fire hazard encourage wildflower seeding, or other ground cover, that can help preserve topsoil.

Policy 2.7.1c. Encourage the construction of strategically-placed on-site drainage swales for storm water retention that can help replenish groundwater resources



and reduce the amount of run-off leaving a site that has the potential to carry away topsoil.

2.7.2 DEVELOPMENT PROPERTY POLICY

Policy 2.7.2a. Require all new development to be in compliance with its respective National Pollutant Discharge Elimination System (NPDES) Permit and corresponding Water Quality Management Plan as applicable, and to not create a situation that would cause a violation of the City of Norco NPDES Permit.

Policy 2.7.2b. On property that has been graded for construction but is not scheduled for immediate construction, require wildflower seeding or other appropriate and aesthetic groundcover to maintain soil resources.

Policy 2.7c. Require approved development plans prior to the issuance of grading permits on commercial, industrial, and multi-unit residential sites. Require the submittal of a first draft of plan check plans for a building permit application prior to the issuance of a grading permit for a single-family home or an accessory building to a single-family home.

2.8 WILDLIFE RESOURCES GOAL- CONSERVE AND PROTECT NATURAL PLANT AND ANIMAL COMMUNITIES, AS WELL AS CRITICAL HABITATS FOR ENDANGERED SPECIES.

2.8.1 LOCALIZED WILDLIFE PROTECTION POLICY: For project sites with isolated wildlife features not subject to protection by the MSHCP (Section 2.8.4) including ponds, tree groves, vegetated groves, vegetated drainage swales, etc., conserve and protect such areas as much as feasibly possible in open space areas as part of an overall landscaping plan.

2.8.2 BIOLOGICAL ASSESSMENT POLICY: As part of the development review process for all development proposals, the City should require habitat and biological assessments in areas expected to contain significant or important plant and wildlife communities identifying species types and locations.

2.8.3 WILDLIFE IMPACT MITIGATION POLICY: The City should require development that has been found to have a potential adverse impact on sensitive species habitat to mitigate the potential impacts of proposed habitat changes.

2.8.4 REGIONAL HABITAT PROTECTION POLICY: Maintain membership and active participation in the Multi-Species Habitat Conservation Plan (MSHCP) of the Riverside Conservation Authority.

Policy 2.8.4a. Implement the requirements of the MSHCP for public and private development projects including the collection of mitigation fees.



Policy 2.8.4b. Comply with the “Other Plan Requirements” of the MSHCP including requirements for: Riparian/Riverine and Fairy Shrimp Habitat; Narrow Endemic Plants; Criteria Area Survey Species; and Urban/Wildlife Interface Guidelines.

Policy 2.8.4c. Employ Best Management Practices of the MSHCP in project siting and design for both public and private development projects.

Policy 2.8.4d. For projects within a Criteria Cell, transmit project information to the Riverside Conservation Authority for a Joint Project Review.

- 2.8.5 PUBLIC LANDS POLICY: Support programs to consolidate public lands as well as programs to acquire private open space as a means of preserving existing viable habitats areas not already protected through the MSHCP (2.8.4

Policy 2.8.5a. Seek future opportunities for joint use/maintenance, or ownership of Lake Norconian to provide protection to habitat that has established itself there.

Policy 2.8.5b. Maintain as open space the open habitat areas dedicated with the development of Norco Ridge Ranch and Norco Hills Specific Plans.

Policy 2.8.5c. Implement the Preservation and Development (PAD) zone with the first goal of preserving from development those areas with significant biological or geographical features or those open areas that help establish the identity of the community and preserve open habitat areas.

- 2.8.6 NATURAL VEGETATION POLICY: Review all new development so as to remove only the minimal amount of natural vegetation as possible, and require revegetation of graded areas with native plant species consistent with public safety requirements.

- 2.8.7 WILDLIFE MIGRATORY CORRIDOR POLICY: Protect and enhance known wildlife migratory corridors and help create new corridors whenever possible.

- 2.8.8 SANTA ANA RIVER POLICY: Continue to cooperate in the removal and eradication of the Arundo plant community in the Santa Ana River area, along with efforts to reestablish native vegetation again.

- 2.9 **CLIMATE ACTION PLAN/SUSTAINABLE COMMUNITY GOAL-DEVELOP AND MAINTAIN NORCO AND ITS SMALL-PLOT AGRICULTURAL, ANIMAL KEEPING, AND EQUESTRIAN, LIFESTYLE AS A COMMUNITY THAT IS ECONOMICALLY, SOCIALLY, AND ENVIRONMENTALLY SUSTAINABLE.**

- 2.9.1 WRCOG SUBREGIONAL CLIMATE ACTION PLAN: As one of the 12 cities that are part of the Western Riverside County Council of Governments (WRCOG) Climate Action Plan (CAP), be an active participant in the Subregional CAP



emissions reduction target measures and action steps, to achieve compliance with the California Global Warming Solutions Act of 2006 (AB 32). Consider adoption of the WRCOG CAP as the City's CAP.

- 2.9.2 2012-2035 REGIONAL TRANSPORTATION PLAN/SUSTAINABLE COMMUNITIES STRATEGY: Implement the applicable local strategies as feasible from the RTP/SCS 2012-2035.
- 2.9.3 ALTERNATIVE TRANSPORTATION POLICY: Increase opportunities and accessibility for trail riding, cycling, and walking. These can include more hitching posts and bike storage facilities at commercial sites, and more interior-block pedestrian paths that are in addition to street-side sidewalks and connect commercial, office, and public building sites in a more functional pedestrian circulation system (see related policies in the Circulation Element).
- 2.9.4 MASS TRANSPORTATION POLICY: Work directly with the Riverside Transit Agency to maintain adequate bus service including adequate frequency of buses, coverage of high traffic routes and points in the City, and adequate options for those with limited mobility.
- 2.9.5 TRANSPORTATION DEMAND MANAGEMENT POLICY: Encourage, and as appropriate require, car share or ride sharing programs with new developments anticipated to have one or more large employers. Encourage multiple-site transportation demand management programs (see related policies in the Circulation Element).
- 2.9.6 TRANSPORTATION NEIGHBORHOOD ELECTRIC VEHICAL POLICY: Implement facility development to accommodate regional NEV routes.
- 2.9.7 TRANSPORTATION SIGNAL COORDINATION POLICY: Incorporate technology to synchronize traffic signals along the City's primary travel routes.
- 2.9.8 ALTERNATIVE FUEL POLICY: Continually work to identify and remove as feasible any City barriers to the expanded use of low-carbon vehicles including the establishment of new energy/fuel stations within existing and new development projects, and the use of state and federal funds for the construction of other new stations as funds may become available.
- 2.9.9 LAND USE GREEN SPACE POLICY: Expand the community tree canopy and reduce the urban heat island effect by developing tree preservation and tree establishment programs. Programs could include the protection of signature trees or vegetative stands with project development and other programs to plant and maintain new trees community-wide, both public and private (see related policies in the Land Use Element).



- 2.9.10 **LAND USE AGRICULTURAL POLICY:** Encourage local production of food consistent with the City's small plot agricultural lifestyle and zoning. Establish a local farmers market to help in the distribution of goods that are produced here.
- 2.9.11 **LAND USE PARKING MANAGEMENT POLICY:** Encourage shared parking and pedestrian access between adjacent similar land uses to encourage walking while at the same time discouraging short vehicle trips between close destinations.
- 2.9.12 **LAND USE MIXED USE DEVELOPMENT POLICY:** Encourage a mix of land uses around high-density projects to encourage walking for convenience items as opposed to vehicle trips.
- 2.9.13 **ENERGY ACTION PLAN POLICY:** Adopt a Local Energy Action Plan for community-wide energy efficiency.
- 2.9.14 **PUBLIC UTILITY EFFICIENCY POLICY:** Replace traffic and street lights with high efficiency bulbs.
- 2.9.15 **BUILDING UTILITY EFFICIENCY POLICY:** In addition to compliance with the California Green Building Code requirements, encourage innovation in residential and non-residential design to further minimize ultimate consumption of energy and water resources including the development of green roofs.
- 2.9.16 **BUILDING RESOURCE CONSERVATION POLICY:** Adopt and revise regulations as needed to promote graywater and stormwater collection and storage systems for on-site use. Adopt and revise regulations as needed to promote the development of solar energy systems. Increase energy efficiency and the use of renewable energy resources in public buildings.
- 2.9.17 **CONSTRUCTION WASTE REDUCTION POLICY:** Incorporate standards in addition to the California Green Building Code that maximize the recycling of construction materials and construction debris to save landfill capacity.
- 2.9.18 **WASTE SOURCE REDUCTION POLICY:** Encourage on-site composting and recycling of food scrap and paper waste materials for diversion from landfills.
- 2.9.19 **YARD WASTE REDUCTION POLICY:** Expand green-waste collection bins community-wide for diversion from landfills that will help avoid methane production and provide the materials for composting and mulching.



3.0 THE CONSERVATION PLAN

3.1 WATER MASTER PLAN

The Water Resource Master Plan of the Conservation Element contains information regarding the conservation, utilization, and development of water resources and is based on the projections of the Water Facilities Master Plan, August 2001. The first Master Water Plan was created in 1975. A new one replaced it in 1985. A Water Supply Study was prepared in 1996 and is the basis for the last Water Master Plan created in 2001. Current and future water sources; and overall supply, quantity, and quality are discussed.

The City of Norco provides its own water through a division of the Public Works Department.

3.1.1 EXISTING SETTING

The Water Division encompasses a service area of approximately 9,808 acres, of which approximately 56% are zoned residential and small plot agriculture/animal keeping/equestrian residential land uses. Of the remaining land area, 6% is zoned commercial, 3% industrial, 9% mixed-use commercial and preservation, and 26% is zoned for other uses (i.e. open space, streets, and freeway). In 2014 the City provides service to 27,160 people through 7,500 domestic water service connections.

3.1.2 REGIONAL SETTING

In California water resources are controlled by regional water quality control boards (RWQCB) that are appointed by the State. A RWQCB is charged with the responsibilities of protecting waters from pollution, and protecting rights to that water. The RWQCB controls the discharge of pollutants to groundwater resources and controls where and how agencies can dig wells. The City of Norco is located in the Basin Plan for the Santa Ana Region which encompasses the drainage area of the Santa Ana River. The drainage area is about 2,000 square miles beginning at the headwaters of the river in the San Bernardino Mountains running down to the river's outlet at the coast. The RWQCB-8 controls both surface waters and groundwater basins.

Groundwater basins are underground bodies of water suspended in layers of sand/gravel that are confined by impermeable geologic structures such as upthrusts of subterranean bedrock and mountain ranges. Groundwater basin boundaries correspond roughly to river basin boundaries though they do not necessarily have to be coterminous. Groundwater basins work much the same way as a series of dams do along a river. Within the larger ground water basin, there are smaller sub-basins created by natural subterranean barriers. The groundwater descends through these subterranean "steps" as it descends towards the ocean. The basins are separate bodies of



EXHIBIT 3.1 WATER MASTER PLAN

LEGEND

LINE PRESSURE ZONES

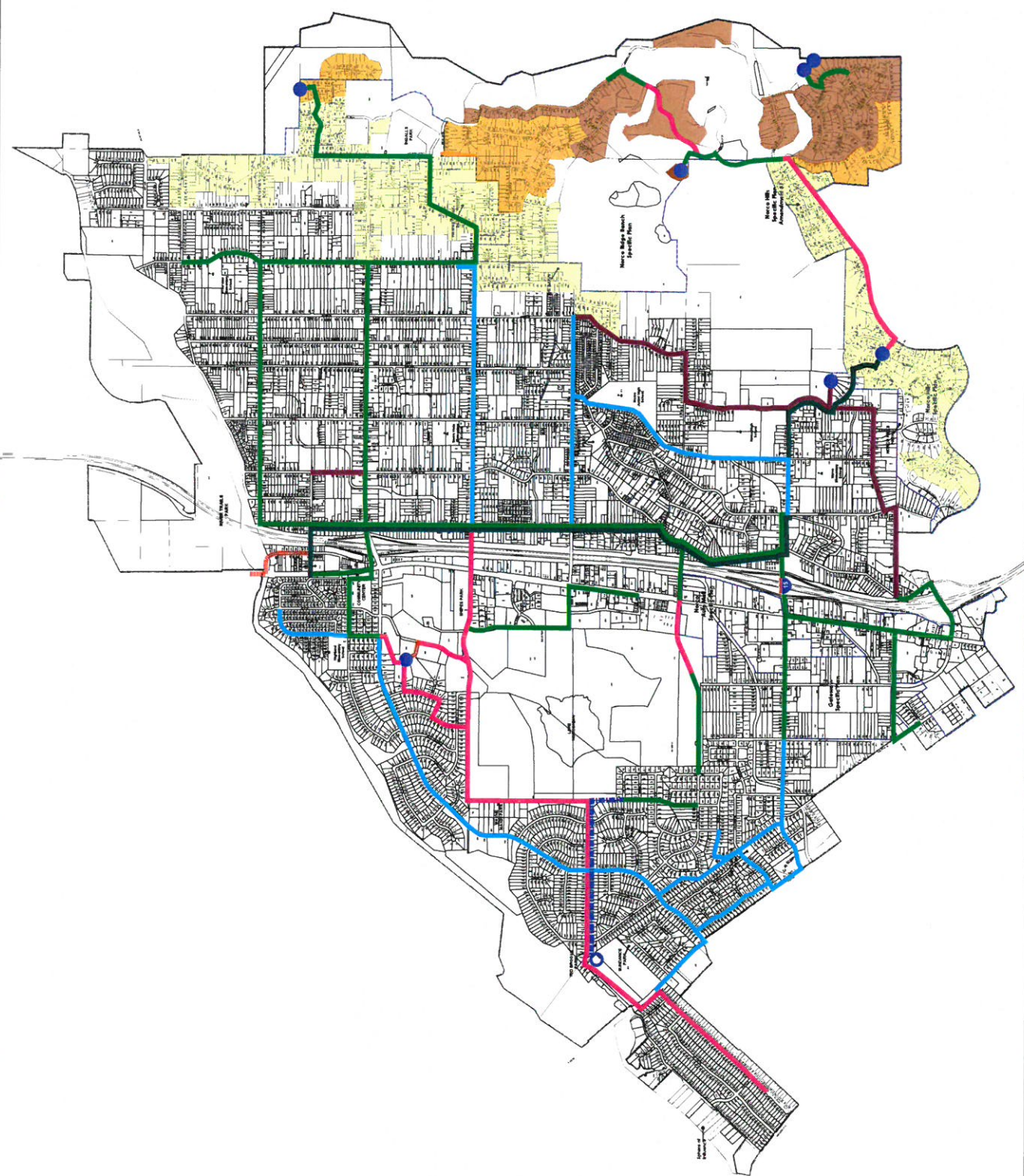
- Pressure Zone 1230'
- Pressure Zone 1080'
- Pressure Zone 1020'
- Pressure Zone 857'

MAIN DISTRIBUTION LINES

- 24-inch Line
- 18-inch Line
- 16-inch Line
- 14-inch Line
- 12-inch Line
- 10-inch Line
- Proposed 20-inch Line

All other water lines are 8" or less.

Existing Reservoir
Proposed Reservoir



water but each are interrelated to one another through overflow and sharing within the same overall basin water supply.

Overdraft and pollution in one sub-basin can affect water quality in downstream sub-basins. One of the primary purposes of the RWQCB-SAR is to first prevent the pollution from entering the groundwater flow and then to prevent the flow and expansion of pollutants that already exist. There are two of these sub-basins that serve the Norco area. The Temescal Basin is the area south of the river and west of Norco hills. The Chino basin includes the area from the Santa Ana River north. The Santa Ana River as the southern boundary of the Chino basin is an adjudicated boundary as opposed to a physical barrier between two sub-basins.

3.1.3 EXISTING FACILITIES

The existing system (Exhibit 3.1, Water Master Plan) consists of six groundwater wells (four active in the Temescal groundwater basin and two currently inactive in the Chino groundwater basin), that have a combined capacity of 5,000 gallons per minute (GPM). The City also has back-up connections to the Jurupa Community Services District (JCSD) and to the City of Corona with capacity for 620 gpm and 4,000 gpm respectively.

The City imports water from the Metropolitan Water District of Southern California (MWDSC) that is purchased through the Western Municipal Water District (WMWD) and supplied from the MWDSC Henry J. Mills Treatment Facility in Corona. In addition the City is a member agency of the Chino Desalter Authority with an annual obligation to purchase 1,000 acre feet of treated groundwater water from that facility; and has entered into a purchase agreement with WMWD for 4,400 acre feet of treated groundwater annually from the Arlington Desalter.

The water from both desalter facilities is treated through reverse osmosis to make it potable. The treated water from these two facilities accounts for roughly 68% of the City's annual water demand in 2014.

The City has seven potable water reservoirs with a capacity of 12.0 MG. The City operates two blending stations that blend high nitrate water from the Temescal basin with imported water and treated water from the Arlington Deslater. As various areas of the City develop and system improvements are made, the Master Water Plan should be re-analyzed to insure that facilities are being constructed as required to meet the City's water demand.

The specific capacity for wells decreases over time. Well site 11 has decreased approximately 5% since 2000. Well site 12 has decreased approximately 10% since 2000. Well site 13 has increased 10% because of rehabilitation in 2004. Well site 14 has decreased approximately 10% since 1995. The specific capacity of a well degenerates over time as fine waterborne material gets lodged in the aquifer zone near the well's gravel pack. Wells can be rehabilitated to improve specific capacity, but not totally restored.



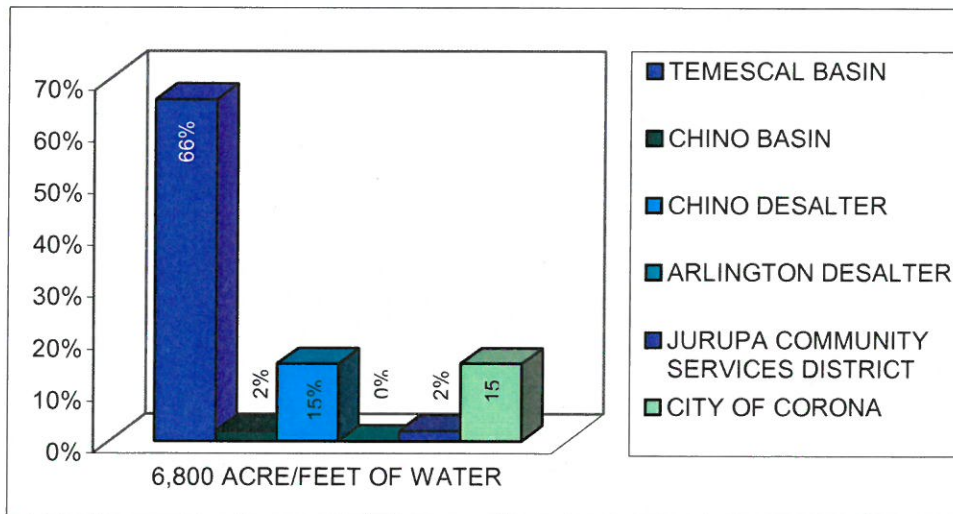
Well sites can ultimately be abandoned because the level of ground water has receded to a point where the cost of digging deeper is prohibitive compared to finding other resources; and/or when the level of contaminants has grown to a point that it becomes too costly to treat the water as compared to obtaining new resources. Overdraft of the ground water basin (see "Definitions", Safe Yield-Overdraft) combined with uncontrolled pollution discharge affects the ground water basin and the life of the wells that pump therefrom.

3.1.4 WATER RESOURCES

There are several potential sources for the City's water supply that have been investigated and evaluated:

- Temescal groundwater basin
- Chino groundwater basin
- Jurupa Community Services District connection
- City of Corona connection
- WMWD connection for imported water
- WMWD connection to Arlington desalter
- WMWD connection to Chino west desalter
- WMWD connection to Chino east desalter
- City of Riverside connection

EXHIBIT 3.2
WATER RESOURCES - 2001



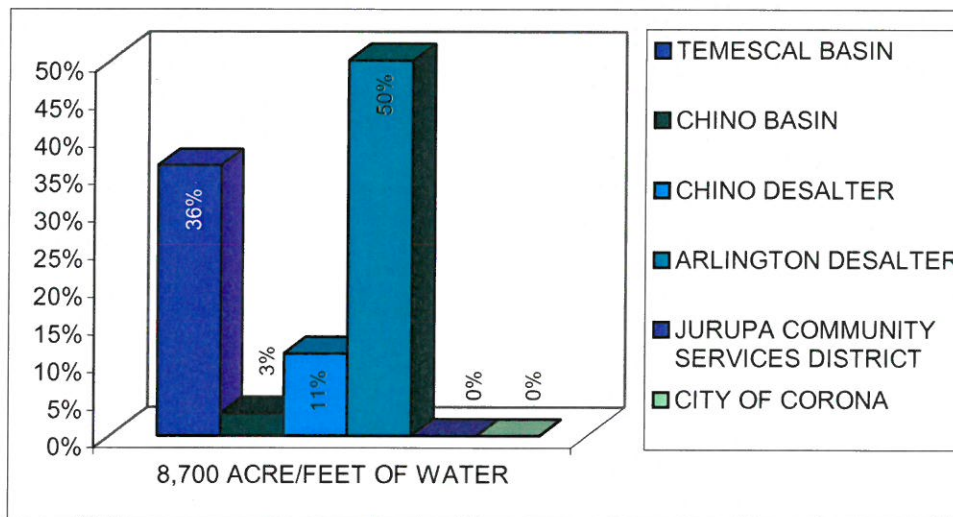
The feasibility of any water resource is a combination of the availability and the cost of extraction and/or treatment. The least expensive source for the City is the Temescal basin; however, the City's portion of the basin's safe yield is not enough water to meet all of the City's needs for the future.



In 2001 the City of Norco’s main source of water was wells in the Temescal groundwater basin representing about sixty-six percent (66%) of the water supply (Exhibit 3.2, Water Resources - 2001). Water taken from the Western Municipal Water District Chino Desalter is used to mix with the well water taken from the Temescal and Chino basins. Additionally, the City has backup connections to JCSD and the City of Corona to insure that maximum levels of salt containment are not exceeded for the City’s potable water supply.

In 2015 the City is expected to use 8,700 acre feet of water, 30% of which will come from the Temescal Basin. It is anticipated that the biggest source of water will be the Arlington desalter going forward rather than the Temescal basin. The City phased out any need to have to buy water from the City of Corona and/or JCSD except in emergency situations through a mutual-aid agreement. (Exhibit 3.3, Water Resources – 2005)

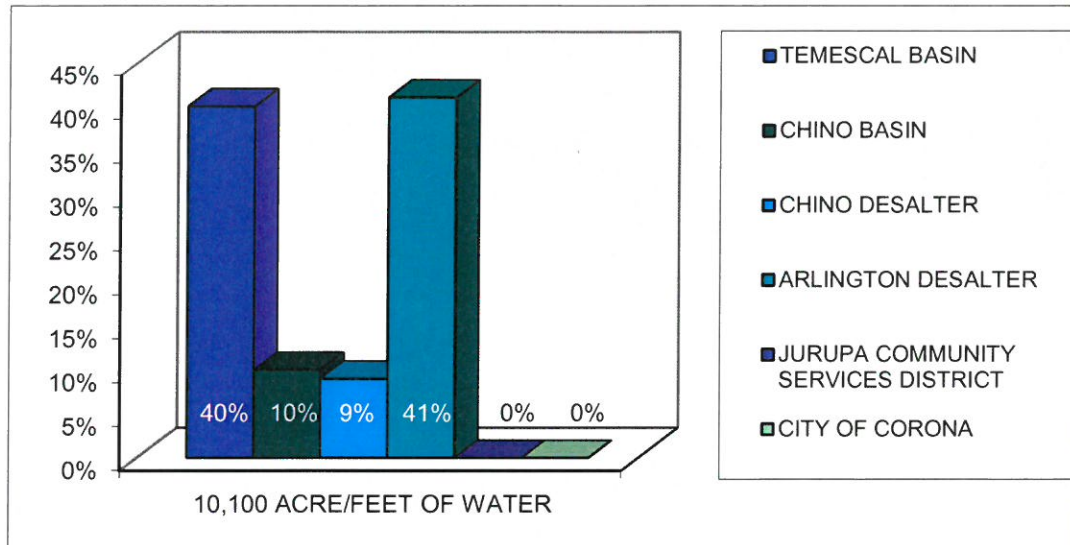
EXHIBIT 3.3
WATER RESOURCES - 2005



When buildout of the City occurs, it is estimated that the City will use 10,100 acre feet of water. Forty percent (40%) of the water will come from the Temescal ground water basin and forty-one percent (41%) from the Arlington desalter. Nine percent (9%) will come from the Chino desalter and ten percent (10%) from the Chino ground water basin. (Exhibit 3.4, Project Water Resources – Buildout, 2010).



**EXHIBIT 3.4
PROJECTED WATER RESOURCES – BUILDOUT**



3.1.5 EXISTING WATER QUALITY

Well water for potable water supplies in this region is generally well below maximum containment levels for salts, and is safe to drink. The City has connections with the City of Corona and JCSD for peak periods when the City may not have adequate capacity to meet daily demand, and also meet fire and emergency demands. When the City approaches peak demands the City must draw water from wells that exceed maximum containment levels for nitrates. Back-up water supplies from either Corona or JCSD are used to mix with well water to bring salt containment below maximum levels.

Salts, such as nitrates, are minute particles suspended in water that once they reach certain levels are considered a contaminant to the water supply. All of the wells produce water with moderate levels of nitrates that vary within a range. There are rare situations where water from certain wells can exceed maximum state containment levels for nitrates. The level of nitrates in the water supplies in this area occurs because of previous contamination from extensive dairy farming. Polluted runoff from increased urbanization also increases potential contamination to groundwater supplies.

Groundwater quality is an important concern to the City. The City will continue to rely on groundwater resources in the future. The city continually tests wells for contamination and overall water quality to ensure that the best possible drinking water for the community is available. The quality of water in Norco currently meets or exceeds all state and federal water quality standards (Table 3.1, Water Quality Report).



In 1987, tests were done on four wells owned by the California Rehabilitation Center located southeasterly of Bluff Street. The shallower wells showed high concentrations of manganese with moderate concentrations of nitrates and total dissolved solids (TDS), while the lower well showed high concentrations of flouride. Since 1988, the nitrate levels have steadily increased. The latest test of the City's wells showed similar results. All of the five operating wells showed moderately high concentrations of nitrates and TDS. The two lower wells also had concentrations of flouride. While the Chino basin wells have a higher potential for nitrate concentration, the City has other water sources to mix in so that the ultimate water supply exceeds all state and federal requirements.

3.1.6 UTILIZATION OF WATER RESOURCES

The residential and small plot agricultural land uses in the City represent the highest demand for water. It is estimated that the trend will continue with residential/small plot agriculture having the highest utilization demands for water in the future. The City needs to have storage requirements to cover day to day delivery demands and also to cover emergency requirements. Emergency storage is required to maintain service in the event of regional power outages or massive concurrent pumping plant failures.

TABLE 3.1
WATER QUALITY
(parts per million unless otherwise noted)

| PRIMARY HEALTH RELATED STANDARDS | STATE MCL* | STATE PHG* | NORCO STATISTICS | |
|----------------------------------|------------|------------|------------------|-------------|
| | | | AVERAGE | RANGE |
| Microbiological | 5% | 0 | <1% | <1% |
| Total Trihalomethanes | .1 | NA | .031 | .002 - .074 |
| Tetrachloroethane | .005 | 0 | ND | ND - .001 |
| Trichloroethylene | .005 | 0 | .001 | ND - .033 |
| Nitrate | 45 | 45 | 11.3 | ND - 59.9 |
| Flouride | 2 | 1 | 1.6 | 1.29 - 4.03 |
| Arsenic | .05 | NS | .0067 | ND - .038 |
| Aluminum | 1 | NS | 0 | ND - .008 |
| Barium | 1 | 2 | .03 | ND - .114 |
| Gross Alpha (pico curies/liter) | 15 | NS | 1.17 | ND - 4.51 |
| Uranium (pico curies/liter) | 20 | NS | 1.0 | ND - 5.1 |
| Lead | .015 | NS | < .015 | <.015-.0456 |
| Copper | 1.3 | NS | < 1.3 | ND - .679 |
| Chloride | 500 | NS | 134.5 | 39 - 227 |
| Sulfate | 500 | NS | 69.3 | 17 - 148 |
| Total Dissolved Solids (TDS) | 1,000 | NS | 511.3 | 331 - 663 |

There are time-of-use storage amounts that are necessary to maintain service during peak power periods when pumping plants are shut down in compliance



with TOU operating schedules. Time-of-use is a process where pumping and filling of reservoirs are done at times when energy costs are lower. This requires additional storage requirements.

In addition, the City needs to have adequate storage requirements for fire protection. In the 857 pressure zone, the storage requirement is 4,000 gpm for four hours. In the 1021 pressure zone, the requirement is 3,500 gpm for four hours (Exhibit 3.5, Water Pressure Zones). The recommended storage requirement for the 857 pressure zone is 7.7 million gallons for current conditions and 10.1 million gallons for ultimate development. The requirements in the 1,021 north and 1150 pressure zones are 1.6 million gallons and 1.8 million gallons respectively. When the area of the 1021 south pressure zone is developed, the recommended storage requirement is 1.8 million gallons per day.

Currently the City has a storage capacity of 9 million gallons per day in six storage reservoirs and a recommended storage requirement of 9.3 million gallons per day. For ultimate development, the recommended storage requirement will be 13.7 million gallons per day (not including any time-of-use storage requirements). Ultimately there may be a reservoir constructed on the Wyle Laboratories property, the size of which is not known.

3.1.7 CONSERVATION OF WATER RESOURCES

The City has enacted codes such as the Water Conservation Section of the Norco Municipal Code, to encourage conservation of this vital resource. The City will continue to update the Code as needed to help meet the goal of conserving water. Additionally, the City provides public service pamphlets to the community on how to protect and preserve water, including information on how to prevent water contamination and pollution. The City will continue on an annual basis to inform and educate the community on water issues in efforts to conserve and protect the water for existing needs and future generations.

Also, the City has adopted requirements via the Planning, Engineering, and Building and Safety Divisions to conserve water. Such programs include xeriscape landscaping, the use of reclaim water, the use of low flow plumbing fixtures, and other conservation programs to protect and preserve the City's water resources.

3.1.8 DEVELOPMENT OF NEW WATER RESOURCES

To meet existing requirements, the City has constructed two new wells since 2001 and has purchased 4,400 acre feet of additional water from the Arlington Desalter. The City will continue to maintain and improve its current infrastructure in order to provide water for existing and future use.

3.1.9 OTHER WATER RESOURCES

There are two water bodies in the City which are not utilized for consumption and are categorized as "other resources", **Lake Norconian** (man made) and the



Santa Ana River. They both are surface waters and are used primarily for aesthetic and recreational purposes. Lake Norconian is located at the Naval Warfare Assessment Center (NWAC) which is primarily off-limits to the public, and the Santa Ana River runs along the northern boundary of the City.

Lake Norconian is a manmade lake that was created for recreational purposes with the Norconian Hotel back in the 1920's. When the hotel closed, the property was ultimately split between the NWAC and the State. The State converted the hotel building into a drug rehabilitation incarceration center (building now closed) and since that time, the lake has had little public use. Some fishing still occurs with a local fishing license obtained at the NWAC facilities office. Fish species consist of bass and catfish left over from previous years of stocking. The NWAC promotes a policy of catch and release since they do not re-stock the lake anymore. The City is now responsible for maintaining the lake level and wells that were owned and maintained by NWAC have been transferred to the City.

Over the years the lake has become an important riparian habitat for birds. Each year the Audobon Society counts that number of species and individual birds that are found at the lake on a particular day, generally sometime in December. Some of the species that have been found are land birds and others are migratory. The limitation of the observation to one day per year makes it difficult to determine how critical the lake is to either of these types of species. Until 2000, the count consisted of a total number only, without any breakdown as to what type of species made up the total. There has not been any consistent effort to monitor specific species from year to year.

The **Santa Ana River** forms the northern boundary of the City and is a naturally occurring element in the landscape, though it has been changed greatly through human intervention. The river itself in a natural condition has a high flow season in early spring and a low flow season in late fall. In a natural state, the river could at times be dry toward the end of summer during times of drought. The river now has flow in it year-round from treatment plant effluent that is continuously put into the river channel. The river itself is not used for potable water supplies but serves an important function in the re-generation of ground water aquifers, especially in Orange County. The function of the river for recreational purposes is limited to the aesthetic values for riverside trails (equestrian, pedestrian, and bicycle) and parks. Swimming is not permitted in the river because of the treatment plant effluent.

As a riparian habitat, the river supports numerous species including plants, animals, fish, and fowl both for habitat and foraging. While the river does not directly supply potable water, as a resource to wildlife it needs to be preserved and enhanced wherever possible. These issues and opportunities are discussed in more detail in Section 3.5, Wildlife Resources



3.2 ENERGY RESOURCES

The Energy Resource Plan of the Conservation Element provides information regarding the conservation, utilization, and development of energy resources. Also, current and future resources are discussed.

The City of Norco is serviced by Southern California Edison (SCE). SCE is a regional power broker that provides much of the electricity for residents in Southern California that do not live in municipalities or districts that provide their own electricity.

3.2.1 CONSERVATION OF ENERGY RESOURCES

Energy is a basic and essential resource to maintain the livability of Norco as an animal keeping/equestrian community. The generation of energy requires ongoing depletion of non-renewable resources, the costly extraction and transport of these resources, and the cost of transmission facilities. Currently, Norco's electrical energy is primarily from nonrenewable resources as provided by the power generating companies. The concept of non-renewable resources combined with the overall cost of delivering electrical power, means that conservation of energy is an important piece in the energy puzzle for the sustainability of Norco's lifestyle.

The City recognizes the importance of energy conservation and has taken proactive measures to reduce its energy consumption. Some of the steps City government has taken to conserve electrical power include:

Public Buildings:

- 1.) Thermostats set at 68 degrees in the winter and 75 degrees in the summer.
- 2.) Occupancy sensors installed in non-office rooms.
- 3.) Overhead lighting reduced.
- 4.) Tinted building windows with full southern exposure.
- 5.) Reduced hours and days of ball field lighting.

The City recognizes that the cost and supply of energy resources can become a serious concern for Norco businesses and residents as a result of business decisions that the City has no control over. In order to address this concern, the Planning Commission has expressed interest in establishing a "Blue Ribbon Committee" to explore alternate means for energy conservation and local production. The City may also want to consider the designation of an energy coordinator that could oversee all energy conservation issues as they pertain to the different city departments.

Because of its unique equestrian lifestyle, Norco offers opportunities to conserve energy by encouraging alternative modes of transportation. Although the City is only 14 square miles, there are over 80 miles of designated equestrian trails providing equestrian access to all parts of the City. The City should continue



encouraging businesses to provide hitching posts and watering facilities adjacent to trails. All new residential developments are required to include an equestrian trail on at least one side of the street. Trails on both sides should be required where appropriate. In addition the City should continue actively encouraging the completion of the Coast to Crest Trail along the Santa Ana River. This will be a multi-purpose trail accommodating equestrians, bicyclists and hikers that could provide intra-city transport exclusive of automobiles.

3.2.2 UTILIZATION OF ENERGY RESOURCES, DIRECT AND INDIRECT

Ample and reasonably priced energy is crucial to everyday living, and a thriving community. Energy allows residents to work, play, produce, and meet day to day essential living needs. Energy is used in both a direct and indirect manner. Examples of direct uses of energy are transportation, lighting, heating or cooling structures, and for the operation of machinery and appliances. Direct energy use is easy to identify, affect, and promote energy conservation.

Indirect energy use is more difficult to identify as it is the energy embodied in the production of materials or goods. For example, the construction of a new school embodies all of the energy that went into the process of making the school, i.e., transportation of the materials to the site; the energy required to produce the lumber, glass, nails, and all other materials; and the energy consumed on the construction site. Conservation of indirect energy resources is more difficult due to the large geographic area and multiple levels of participation involved. It requires the cooperation and coordination between government and businesses.

3.2.3 SOURCE AND SUPPLY OF ENERGY RESOURCES

Energy is regulated via the California Public Utilities Commission, the California Energy Commission, and the Federal Energy Regulatory Commission, the three of which play an important role in the source and supply of energy we receive. In the past a single utility company based on a geographic area, was responsible for all stages of energy production and delivery: **generation** (producing electricity by transforming other forms of energy), **transmission** (transporting that electricity from generation point to the Electric Service Provider or ESP) and **distribution** (from the provider to the customer).

Most of Norco's electrical consumption is imported and derived from nonrenewable resources. Nonrenewable resources are finite, necessitating the need to continuously find and extract new scarce resources. Fossil fuels provide much of the resource for power generation as can be seen in Table 3.2 (Electricity Sources for California). The production of energy is done regionally and controlled by state regulations. The immediate options that citizens of Norco have to reduce dependence on imported electricity are to conserve first, and then take advantage of technology that allows for on-site generation for individual consumption (e.g. solar, wind, etc.). The City for its part needs to continue to push for the conversion of manure to energy, whether it ultimately is a City facility or the City is part of a regional facility.



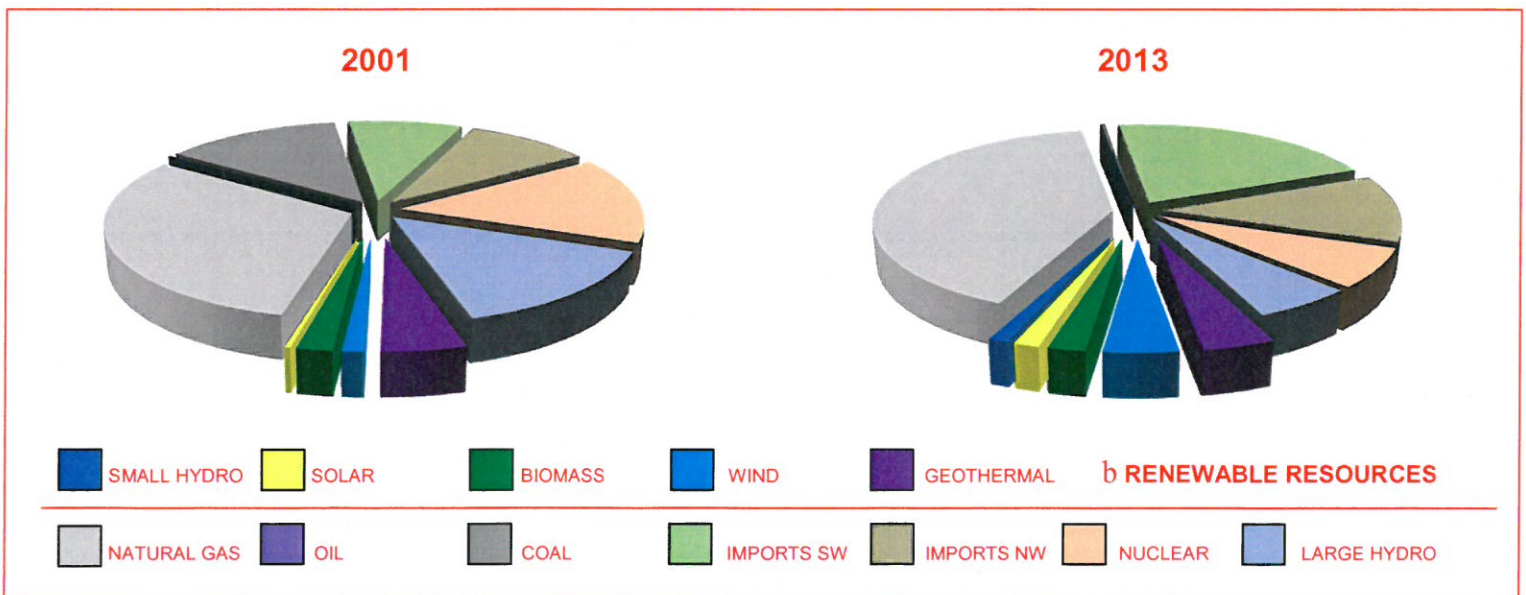
The state is looking at renewable energy development to help alleviate energy shortages, provide clean air, reduce greenhouse gases, lower rates, and stimulate technological advances. A blue-ribbon committee could keep abreast of available programs that could assist Norco in its efforts to improve its own energy program.

TABLE 3.2
ELECTRICITY SOURCES FOR CALIFORNIA 2013

| Resource Type | Gigawatt-Hours | Percentage |
|---------------------|----------------|---------------|
| Large Hydro | 20,754 | 10.39 |
| Nuclear | 17,860 | 8.94 |
| Coal | 1,018 | .51 |
| Oil | 38 | .02 |
| Natural Gas | 120,863 | 60.5 |
| Renewables | 39,236 | 19.64 |
| Small Hydro | | 1.67 |
| Geothermal | 12,485 | 6.25 |
| Biomass | 6,423 | 3.21 |
| Wind | 12,694 | 6.35 |
| Solar | 4291 | 2.15 |
| Imports - Northwest | 35,036 | 11.83 |
| Imports - Southwest | 61,759 | 20.82 |
| TOTAL | 296,628 | 100.00 |

Source: California Energy Commission (2011)

EXHIBIT 3.5
CALIFORNIA ELECTRICITY SOURCES



3.2.4 DEVELOPMENT OF ENERGY RESOURCES, RENEWABLE -v- NON-RENEWABLE

Norco can both decrease its dependence on outside energy sources and decrease the consumption of nonrenewable resources by developing renewable energy resources within the city. The City of Norco is located in climate ten (10), which has medium to warm weather. The location, climate, and lifestyle of Norco lends itself well to the potential development and use of renewable energy such as solar, biomass, and wind resources.

3.2.5 POTENTIAL NEW ENERGY SOURCES

There are emerging technologies that could provide alternate sources for electricity that are not widely used in Norco. One potential source could come from the use of windmill technology. The California Energy Commission has mapped the areas of the state that are considered good wind resource areas. These areas are so designated because of the high number of days per year when wind levels are high enough to move the machines and provide a fairly continual resource. The City of Norco does not lie within such an area since winds here are only seasonal. The best opportunity for Norco to take advantage of this resource would be on an individual user basis as a supplemental energy supply.

Solar energy is another resource, and is one that has broader applications than windmill technology. Commercial development of processed solar energy is restricted because of the large amounts of open areas that are currently required for photovoltaic module array fields. Photovoltaic technology, however, has applications that make it usable for individual customers to augment their own energy supply. Also, the State has programs that encourage the use of solar technology to make it more cost affective to individual customers.

In addition to wind and solar generated energy, other new technologies that may be applicable to individual users include the use of small turbine engines that are powered by natural gas, or the use of fuel cell technology. Both of these are relatively new and may be too expensive for wide-spread application at this point.

The City needs to continually review new and emerging technologies with regards to the generation and conservation of energy resources. With current technologies the viability of any alternative energy resource is directly related to the commodity price of fossil fuels. When fuel costs are high, the use of alternative fuel sources becomes more attractive. Conversely when fuel costs are relatively low, there is little interest in making investments into alternative fuel equipment without government subsidy.

An alternative energy source that the City needs to continue investigating until funding and/or technology make it feasible is the conversion of manure into energy resources.



3.3 SOIL AND MINERAL RESOURCES

Pursuant to Government Code Section 65302 (d) a city's Conservation Element should include discussion of the conservation, development, and utilization of soil and mineral resources. Specifically, cities should discuss each, as they are relevant to their jurisdiction.

3.3.1 SOIL RESOURCES

Soil resources become important in areas of high agricultural production, or areas that have the potential for agricultural production. Classification of soils are important in determining irrigation, planting, and farming of various crops; and also for determining appropriate areas for wildlife habitat, and land use planning. However, the main function of soil data is for agricultural purposes. Due to the fact that Norco is primarily built out, and is not a community based on large agri-businesses, general soils data is provided, but no general plan goals or policies have been included for the conservation of soils as they relate to the maintenance and development of large-scale agriculture. Goals and policies as they pertain to the control of soil erosion have been included.

The State Department of Conservation through the Farmland Mapping and Monitoring Program (FMMP) publishes an "Important Farmland Map" for each county that categorizes farmland for its significance, or potential significance, to the State's agricultural industry. The FMMP is not a regulatory program but is used by the state and counties to monitor the loss of farmland acreage. There are four categories, in descending importance, into which farmland is categorized. The four categories are Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance.

The City of Norco has two small areas that are designated on the Riverside County Important Farmland Map. The first is designated as "Locally Important" and is located on the northeast side of River Road at Bluff Street. The second which is designated Unique Farmland is located in the City's Sphere of Influence northerly of Arlington Avenue on the east side of Pedley Substation Road (Exhibit 3.6, Soil Classifications).

Locally Important Farmland is determined by the County Board of Supervisors based on input from a local advisory committee and maps are updated after every two year field study. The property at Bluff Street and River Road was historically used for dairy farming which was the reason for the "Locally Important" designation. The dairy farm has ceased operation so it is unlikely that the property will maintain that designation in future field studies because of surrounding development. However, the zoning of the property will still allow small-plot agriculture consistent with the Land Use Element and consistent with Goals of the Conservation Element for a more sustainable community in the future.



Unique Farmland is farmland of lesser quality soils that is used for the production of the state's leading agricultural crops. To have this designation the land must have been cropped some time during the two update cycles prior to the mapping date which for Riverside County is 2010. The property has historically and is currently being used for a nursery operation.

In addition the U.S. Department of Agriculture (USDA) is mapping the entire nation showing the suitability of soils for the purpose of agricultural production. The mapping for the Norco area was completed in 1917 but the current status is "Update Needed." The USDA has identified over 40 different soil types within the City of Norco alone. A listing of all the different soil types is not included here but can be found in the documents from the USDA's office (Soil Survey of Western Riverside Area, California, Nov. 1971). The USDA's report also groups the different soil types according to similar qualities and characteristics. Exhibit 3.2 shows how the soils in Norco are grouped and how suitable they are for agricultural purposes.

3.3.2 CONSERVATION OF SOIL RESOURCES

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

Historically the most immediate threat to community safety was the threat of erosion along the Santa Ana River bluff areas. The main cause of the erosion was due to scouring on the undersides of the bluffs when the Santa Ana River became engorged with winter storm run-off. The first phase of a bluff stabilization program has been implemented by the U.S. Army Corp of Engineers that resolved the problem where the threat was greatest.

Erosion escalates downstream soil deposition behind Prado Dam reducing the effectiveness of that facility. The Orange County Water District is in the initial stages of developing a Prado Basin Sediment Management Plan that will remove sediments deposited behind the dam to re-entrain them into the river channel below the dam to allow restoration of habitats and beaches downstream.

3.3.3 MINERAL RESOURCES

The California Department of Conservation also has a classification system for soils based on the suitability of the soils for mining and extraction of resources (Exhibit 3.7, Mineral Resource Zones). The objective of classification and designation processes is to ensure, through local jurisdictions, that mineral deposits of statewide or of regional significance are available when needed.

Rapid urban expansion in areas with mineral resources can cause these areas to be committed to irreversible land uses prior to the resources being extracted,



thereby precluding any future extraction when marketability of the resources is more favorable.

The Department of Conservation has established a hierarchy of mineral resource zones as follows:

- MRZ-1 Areas where geologic information indicates no significant mineral deposits are present.
- MRZ-2 Areas that contain identified mineral resources.
- MRZ-2a Areas underlain by mineral deposits where geologic data show that significant measured or indicated resources are present.
- MRZ-2b Areas underlain by mineral deposits where geologic information indicates that significant inferred resources are present.
- MRZ-3 Areas of undetermined resource significance.
- MRZ-3a Areas containing known mineral deposits that may qualify as mineral resources.
- MRZ-3b Areas containing inferred mineral deposits that may qualify as mineral resources.
- MRZ-4 Areas where geologic information does not rule either the presence or absence of mineral resources (no known mineral resources).

The City of Norco only has two mineral resource zoning designations within the city limits and most of it is in the MRZ-3a Zone. The zoning designations are from surveys done for State Report 165 “Mineral Land Classification of the Temescal Valley Area” that also covered the Norco area. As indicated above, the MRZ-3a Zone is an area that has known deposits that may qualify as a “mineral resource”. The resource in this case is crushed rock for construction-related purposes and is primarily associated with Norco Hills and the hills and slopes around Lake Norconian, including Beacon Hill.

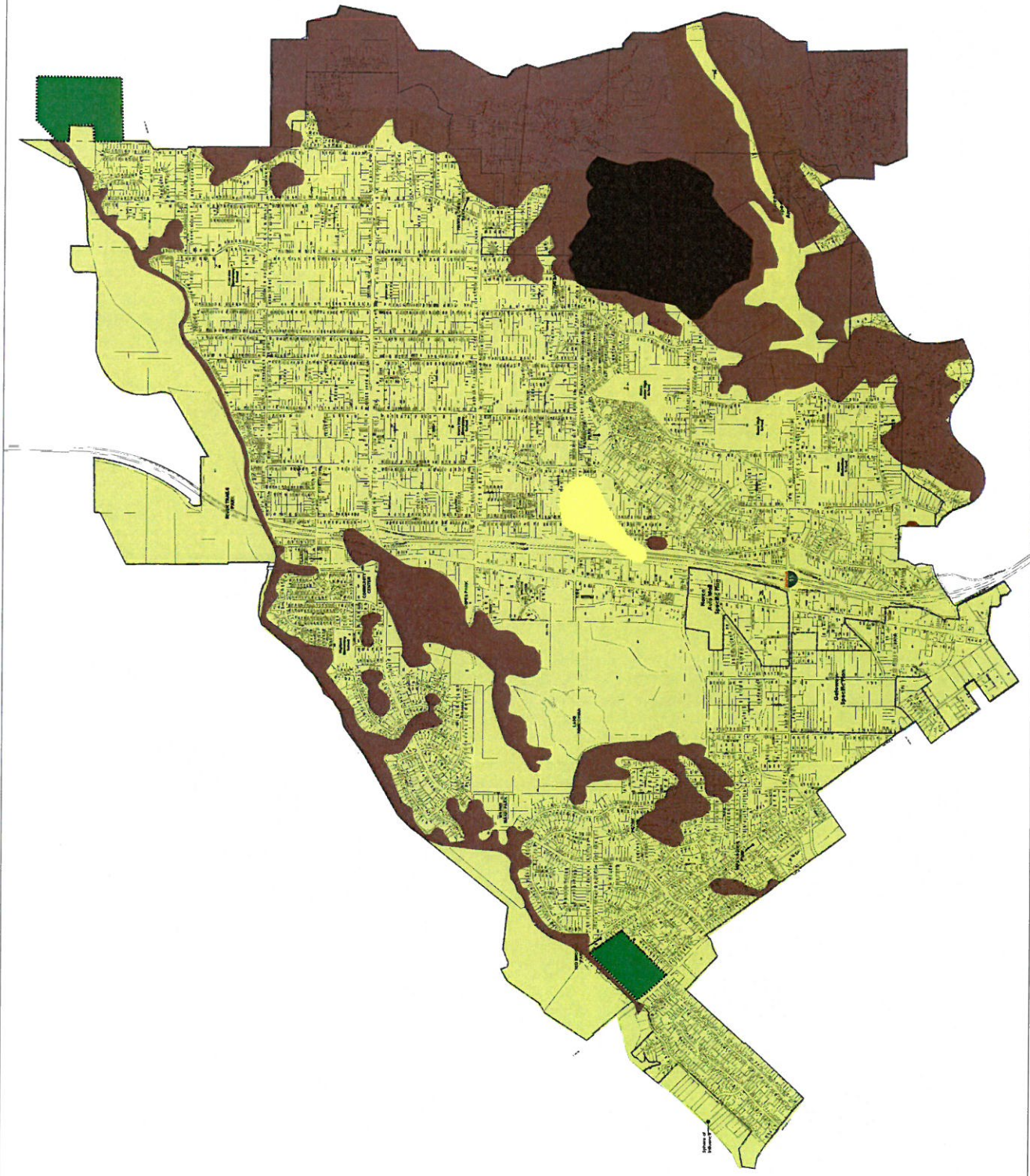
With residential development already approved for many of the hillsides, most of the area in question will not be available for any type of future extraction. The hillside areas not designated for residential development are more valuable to the City as an open space resource than as a potential mineral resource. In terms of importance to the state, it is the City’s opinion that there are more suitable areas (i.e. Temescal Canyon) where there is more construction material available en masse, and where it is more accessible and marketable for long-term extraction. Like the classifications for agriculture suitability, the classifications for mineral resources serve as an information source to local jurisdictions to help in determining long-range land use decisions. The State does not require or recommend any implementation measures.

The only other resource zone within City limits is an MRZ-2b Zone located at the very edge of the City near the intersection of Hamner Avenue and Parkridge Street. This is just the edge of a much larger zone that extends into the City of Corona along the Temescal Wash. The primary resource in this zone is “sand and gravel”, again for construction purposes. The small portion that is within the City of Norco has some development already over it, and the remaining portion



does not constitute enough feasible land area to warrant any type of preservation for future mineral extraction. Based on the above assessment information, no goals or policies are included that encourage or preserve opportunities for mineral extraction. This is consistent with the City's adopted Land use Plan.





LEGEND

CLASS I
Soils have few limitations that restrict their use.

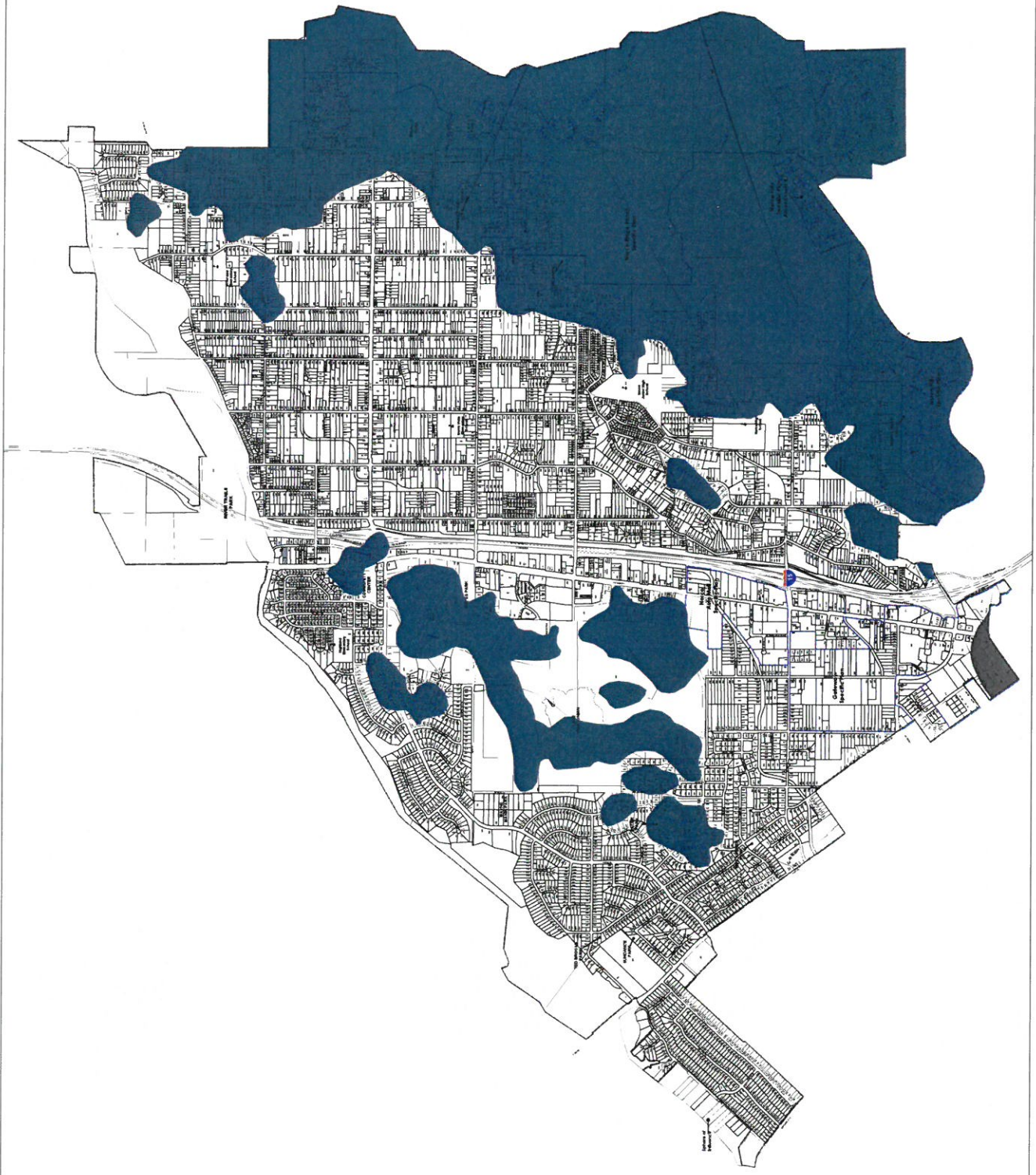
CLASS II, III, & IV
Soils have moderate to severe limitations that restrict their use for agriculture, silviculture, or pasture.

CLASS VI & VII
Soils have severe to very severe limitations that restrict their use for cultivation.




CLASS VIII
Soils have limitations that restrict their use to water supply, recreation, wildlife, or aesthetic purposes.

LOCALLY IMPORTANT FARMLAND

EXHIBIT 3.6
SOIL CLASSIFICATIONS



LEGEND

| | |
|---|--------------------------|
|  | MRZ-3a Zone |
|  | MRZ-2b Zone |
|  | No Zoning Classification |

**EXHIBIT 3.7
MINERAL RESOURCE ZONES**

3.4 WILDLIFE RESOURCES

The General Plan is premised on the recognition that plant and wildlife resources are important natural resources that should be conserved and protected. Plant and wildlife resources are important to preserve species diversity, the vitality of the particular ecosystems in which they live, and the maintenance of the ecological balance in the City and regional natural areas. The wildlife resources goals and policies support other goals and policies of the General Plan, such as preventing degradation of the natural environment, preserving prime plant and wildlife habitat, and protecting rare and endangered species. Exhibit 3.8 illustrates the City's most important wildlife and open area resources.

3.4.1 EXISTING SETTING FOR RESOURCES

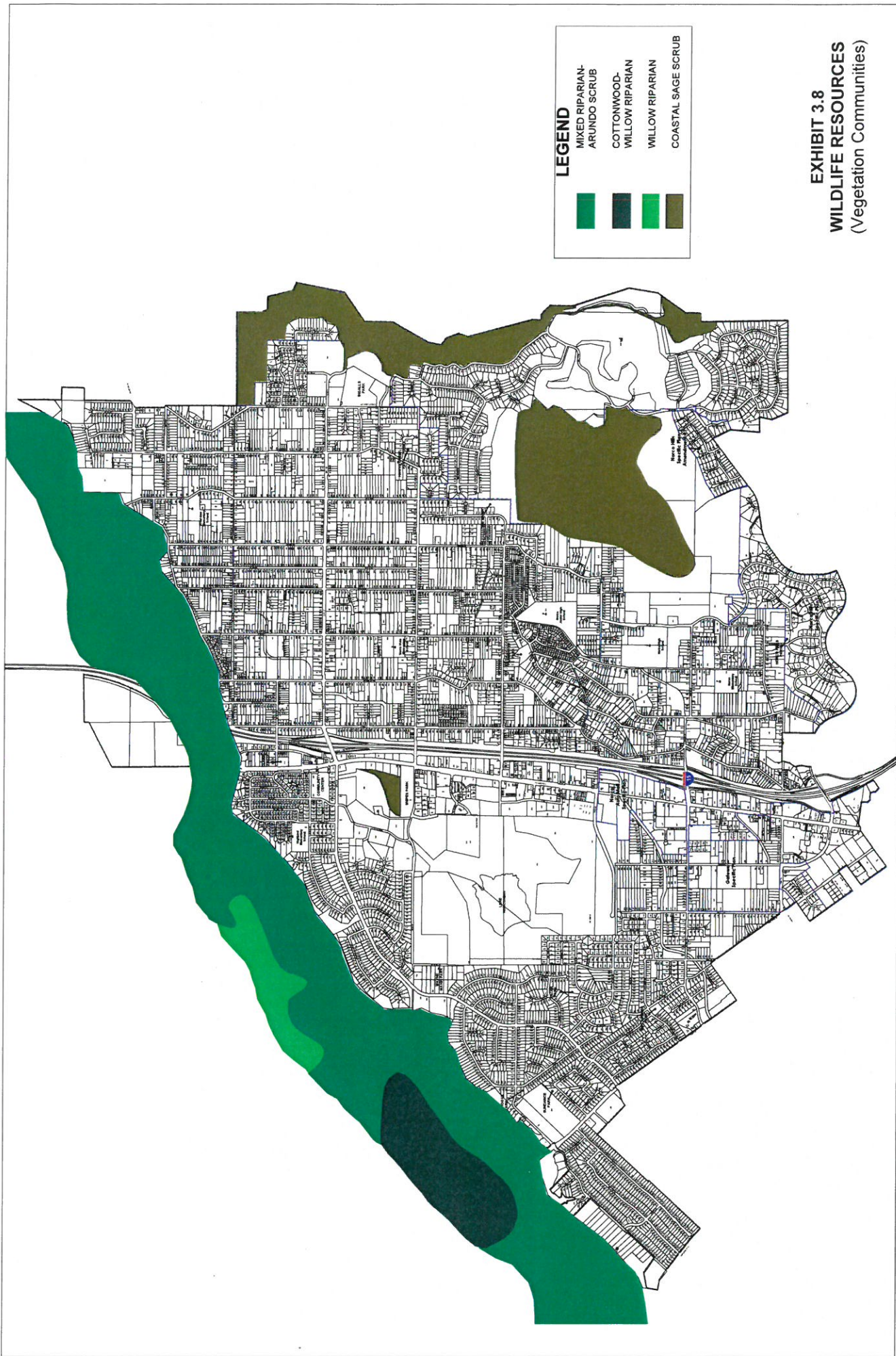
The City is a mixture of small plot agriculture, commercial and industrial development, along with several natural areas containing biological habitats. The primary habitats exist among the hillside areas along the east City boundary and in the Santa Ana River forming the northern boundary of the community. Other biological habitats are isolated and would consist of Lake Norconian, and small separate riparian areas within the hillsides. Biological information for the community has been obtained primarily from environmental assessments that have been prepared for the community.

3.4.2 SPECIAL STATUS SPECIES (rare, threatened, or endangered)

Plant and wildlife resources within the City include native vegetation such as the inland sage scrub and riparian areas, as well as rare, threatened or endangered plant and animal species. The Federal Government lists the Stephen's Kangaroo Rat (*Dipodomys stephensi*) as an Endangered Species. Originally the Stephen's Kangaroo Rat was not felt to have habitat within the City; however, the species was discovered with a biological assessment required by the City with recent development that has occurred and been proposed in the eastern hillside area of the community.

Tables 3.3 through 3.7 list sensitive species that may exist within the community. Preservation of these species depends on the preservation of natural habitats, including any viable inland sage scrub, wetlands and riparian areas. Both the size of individual habitat areas and the connectivity between these areas can directly affect the ability of these habitats to support viable populations of sensitive species. In order to mitigate the impacts caused by new development in the City and throughout the County, the City is cooperating with the Western Riverside Council of Governments in the development of a Multiple Species Habitat Conservation Program (MSHCP).





LEGEND

- MIXED RIPARIAN-ARUNDO SCRUB
- COTTONWOOD-WILLOW RIPARIAN
- WILLOW RIPARIAN
- COASTAL SAGE SCRUB

EXHIBIT 3.8
WILDLIFE RESOURCES
(Vegetation Communities)

The MSHCP is a coordinated planning effort involving western county cities and Riverside County to preserve and promote the viability and recovery of western Riverside County ecosystems and habitats. The program is intended to protect existing sensitive species and to further the goal of reducing the need to list additional species in the future. Critical to the preservation of Norco's unique lifestyle is a balance between the needs for species and habitat conservation and the needs for continuing recreational opportunities including equestrian, bicycling, and hiking.

3.4.3 HILLSIDE HABITAT RESOURCES

The City has approved low-density residential development for much of the hillside areas, however, approximately 425 acres of open space will also be dedicated to the City for permanent open space.

There have been biological surveys within the hillside areas of the community that together have covered an extensive botanical and wildlife inventory. The hillside areas are comprised of low rolling hills and a large central valley. The soils are comprised of a mixture of decomposed granite and large boulders. The surrounding area is characterized primarily by flat open space to the north and northwest, rolling hills to the south, and two larger hills: one to the west along the central portion of the site and one located to the southeast. The hillside area includes several dry drainage ravines created by erosion that lead to the Hidden Valley Golf Course and off-site. The different plant communities are as follows:

Plant Communities

The hillside areas are comprised of a combination of plant communities depending on topography and historical use of the land, including Riversidean sage scrub, non-native grassland, riparian vegetation in dry season drainage ravines, and bare disturbed ground.

Wildlife surveys in the hillside areas have focused on the Stephen's kangaroo rat, California gnatcatcher and the several wetland areas. Habitat for the quino checkerspot butterfly and the least Bell's vireo has not been found there even though wildlife has been observed in all parts of the hillsides, with the greatest activity in lowland areas. Wildlife is less common on the higher slopes. The following wildlife has been observed in the hillside areas:

Birds

Birds are the conspicuous wildlife observed and include species such as house finch, California quail, mourning dove, European starling, crow and red-tailed hawk.



TABLE 3.3
SPECIAL STATUS SPECIES-BIRDS

| SPECIES (common name) | STATUS Explanations at bottom | TYPE OF HABITAT PRESENT & SPECIES OCCURANCE (<i>Italics</i>) | |
|---|---|--|--------------------------|
| | | Explanations at bottom | |
| | | SANTA ANA RIVER/BLUFFS | NORCO HILLS |
| least Bell's vireo | FE, SE | breeding (<i>NP</i>) | no habitat (<i>NP</i>) |
| southwestern willow flycatcher | FE, SE | breeding (<i>NP</i>) | no habitat (<i>NP</i>) |
| southern bald eagle | former FT | marginal (<i>NP</i>) | no habitat (<i>NP</i>) |
| Peregrine falcon | former FE | foraging (<i>OP</i>) | no habitat (<i>NP</i>) |
| coastal California gnatcatcher | FT | no habitat (<i>NP</i>) | breeding (<i>NP</i>) |
| golden eagle | no status | no habitat (<i>NP</i>) | foraging (<i>NP</i>) |
| western burrowing owl | SSC | no habitat (<i>E?</i>) | foraging (<i>NP</i>) |
| western yellow-billed cuckoo | SE | no habitat (<i>NP</i>) | no habitat (<i>NP</i>) |
| Swainson's hawk | SE | foraging (<i>NP</i>) | no habitat (<i>NP</i>) |
| double-crested cormorant | SSC | no habitat (<i>NP</i>) | no habitat (<i>NP</i>) |
| western least bittern | SSC | no habitat (<i>NP</i>) | no habitat (<i>NP</i>) |
| white-faced ibis | SSC | no habitat (<i>NP</i>) | no habitat (<i>NP</i>) |
| osprey | SSC | foraging (<i>OP</i>) | no habitat (<i>NP</i>) |
| sharp-shinned hawk | SSC | foraging (<i>OP</i>) | no habitat (<i>NP</i>) |
| Cooper's hawk | SSC | breeding (<i>OP</i>) | no habitat (<i>NP</i>) |
| ferruginous hawk | SSC | foraging (<i>OP</i>) | no habitat (<i>NP</i>) |
| merlin | SSC | foraging (<i>OP</i>) | no habitat (<i>NP</i>) |
| prairie falcon | SSC | foraging (<i>OP</i>) | no habitat (<i>NP</i>) |
| long-billed curlew | SSC | no habitat (<i>NP</i>) | no habitat (<i>NP</i>) |
| long-eared owl | SSC | breeding (<i>PP</i>) | no habitat (<i>NP</i>) |
| loggerhead shrike | SSC | breeding (<i>P</i>) | no habitat (<i>NP</i>) |
| California horned lark | SSC | foraging (<i>OP</i>) | no habitat (<i>NP</i>) |
| cactus wren | SSC | no habitat (<i>NP</i>) | no habitat (<i>NP</i>) |
| yellow warbler | SSC | breeding (<i>P</i>) | no habitat (<i>NP</i>) |
| yellow-breasted chat | SSC | breeding (<i>P</i>) | no habitat (<i>NP</i>) |
| So. Calif. rufous-crowned sparrow | SSC | no habitat (<i>NP</i>) | no habitat (<i>NP</i>) |
| tricolored blackbird | SSC | foraging (<i>OP</i>) | no habitat (<i>NP</i>) |
| white-tailed kite | FP | breeding (<i>P</i>) | no habitat (<i>NP</i>) |
| TERMS AND ABBREVIATIONS USED IN THE TABLE | | | |
| STATUS | FE- Fed. Endangered; FT-Fed. Threatened; SE-State Endangered; SSC-California Species of Special Concern; FP-California Fully Protected | | |
| TYPES OF HABITATS | Breeding – habitat suitable for breeding of a certain species; Foraging – habitat suitable for foraging of a certain species; No habitat – no habitat that is suitable for the species. | | |
| SPECIES OCCURANCE | <i>P</i> -Present in the area; <i>OP</i> -Occasionally Present; <i>PP</i> -Potentially Present but not Documented; <i>NP</i> -Not Present; <i>E</i> -Extirpated from the Area | | |



TABLE 3.4
SPECIAL STATUS SPECIES-MAMMALS

| SPECIES (common name) | STATUS Explanations at bottom | TYPE OF HABITAT PRESENT & SPECIES OCCURANCE (<i>Italics</i>) Explanations at bottom | |
|--|---|--|--------------------------|
| | | SANTA ANA RIVER/BLUFFS | NORCO HILLS |
| California mastiff bat | SSC | foraging (<i>PP</i>) | foraging (<i>PP</i>) |
| pallid bat | SSC | foraging (<i>PP</i>) | no habitat (<i>NP</i>) |
| pale big-eared bat | SSC | foraging (<i>PP</i>) | no habitat (<i>NP</i>) |
| San Diego black-tailed jackrabbit | SSC | breeding (<i>P</i>) | no habitat (<i>NP</i>) |
| nw. San Diego pocket mouse | SSC | no habitat (<i>NP</i>) | no habitat (<i>NP</i>) |
| southern grasshopper mouse | SSC | breeding? (<i>PP</i>) | no habitat (<i>NP</i>) |
| San Diego desert woodrat | SSC | no habitat (<i>NP</i>) | no habitat (<i>NP</i>) |
| Stephen's kangaroo rat | FE | no habitat (<i>NP</i>) | breeding (<i>P</i>) |
| TERMS AND ABBREVIATIONS USED IN THE TABLE | | | |
| STATUS | FE- Fed. Endangered; FT-Fed. Threatened; SE-State Endangered; SSC-California Species of Special Concern; FP-California Fully Protected | | |
| TYPES OF HABITAT | Breeding – habitat suitable for breeding of a certain species; Foraging – habitat suitable for foraging of certain species; No habitat – no habitat that is suitable for the species. | | |
| SPECIES OCCURANCE | <i>P</i> -Present in the area; <i>OP</i> -Occasionally Present; <i>PP</i> -Potentially Present but not Documented; <i>NP</i> -Not Present; <i>E</i> -Extirpated from the Area | | |

TABLE 3.5
SPECIAL STATUS SPECIES-REPTILES

| SPECIES (common name) | STATUS Explanations at bottom | TYPE OF HABITAT PRESENT & SPECIES OCCURANCE (<i>Italics</i>) Explanations at bottom | |
|--|---|--|--------------------------|
| | | SANTA ANA RIVER/BLUFFS | NORCO HILLS |
| southwestern pond turtle | SSC | no habitat (<i>NP</i>) | no habitat (<i>NP</i>) |
| San Diego horned lizard | SSC | marginal (<i>PP</i>) | breeding (<i>PP</i>) |
| orange-throated whiptail | SSC | no habitat (<i>NP</i>) | breeding (<i>PP</i>) |
| silvery legless lizard | SSC | breeding (<i>PP</i>) | no habitat (<i>NP</i>) |
| coast patch-nosed snake | SSC | no habitat (<i>NP</i>) | no habitat (<i>NP</i>) |
| Two-striped garter snake | SSC | marginal (<i>PP</i>) | no habitat (<i>NP</i>) |
| northern red diamond rattlesnake | SSC | no habitat (<i>NP</i>) | breeding (<i>P</i>) |
| TERMS AND ABBREVIATIONS USED IN THE TABLE | | | |
| STATUS | FE- Fed. Endangered; FT-Fed. Threatened; SE-State Endangered; SSC-California Species of Special Concern; FP-California Fully Protected | | |
| TYPES OF HABITAT | Breeding – habitat suitable for breeding of a certain species; Foraging – habitat suitable for foraging of certain species; No habitat – no habitat that is suitable for the species. | | |
| SPECIES OCCURANCE | <i>P</i> -Present in the area; <i>OP</i> -Occasionally Present; <i>PP</i> -Potentially Present but not Documented; <i>NP</i> -Not Present; <i>E</i> -Extirpated from the Area | | |



TABLE 3.6
SPECIAL STATUS SPECIES-FISH AND AMPHIBIANS

| SPECIES (common name) | STATUS Explanations at bottom | TYPE OF HABITAT PRESENT & SPECIES OCCURANCE (<i>Italics</i>) Explanations at bottom | |
|--|---|--|--------------------------|
| | | SANTA ANA RIVER/BLUFFS | NORCO HILLS |
| arroyo southwestern toad | FE | no habitat (<i>NP</i>) | no habitat (<i>NP</i>) |
| California red-legged frog | FT | no habitat (<i>NP</i>) | no habitat (<i>NP</i>) |
| Santa Ana sucker | FT | nursery (<i>NP</i>) | no habitat (<i>NP</i>) |
| arroyo chub | SSC | spawning (<i>P</i>) | no habitat (<i>NP</i>) |
| western spadefoot toad | SSC | breeding (<i>E?</i>) | no habitat (<i>NP</i>) |
| Santa Ana River woollystar | FE | no habitat (<i>NP</i>) | no habitat (<i>NP</i>) |
| TERMS AND ABBREVIATIONS USED IN THE TABLE | | | |
| STATUS | FE- Fed. Endangered; FT-Fed. Threatened; SE-State Endangered; SSC-California Species of Special Concern; FP-California Fully Protected | | |
| TYPES OF HABITAT | Breeding – habitat suitable for breeding of a certain species; Foraging – habitat suitable for foraging of certain species; No habitat – no habitat that is suitable for the species. | | |
| SPECIES OCCURANCE | <i>P</i> -Present in the area; <i>OP</i> -Occasionally Present; <i>PP</i> -Potentially Present but not Documented; <i>NP</i> -Not Present; <i>E</i> -Extirpated from the Area | | |

TABLE 3.7
SPECIAL STATUS SPECIES-PLANTS

| SPECIES (common name) | STATUS Explanations at bottom | TYPE OF HABITAT PRESENT & SPECIES OCCURANCE (<i>Italics</i>) Explanations at bottom | |
|--|---|--|--------------------------|
| | | SANTA ANA RIVER/BLUFFS | NORCO HILLS |
| many-stemmed dudleya | 1b | no habitat (<i>NP</i>) | potential (<i>NP</i>) |
| Munz's onion | FE | no habitat (<i>NP</i>) | potential (<i>NP</i>) |
| Plummer's mariposa lily | no status | no habitat (<i>NP</i>) | potential (<i>NP</i>) |
| intermediate mariposa lily | no status | no habitat (<i>NP</i>) | potential (<i>NP</i>) |
| Payson's jewel-flower | no status | no habitat (<i>NP</i>) | potential (<i>NP</i>) |
| Parry's spineflower | no status | no habitat (<i>NP</i>) | no habitat (<i>NP</i>) |
| Palmer's grapplinghook | no status | no habitat (<i>NP</i>) | potential (<i>NP</i>) |
| Braunton's milk-vetch | FE | no habitat (<i>NP</i>) | no habitat (<i>NP</i>) |
| long-spined spineflower | no status | no habitat (<i>NP</i>) | no habitat (<i>NP</i>) |
| Coulter's goldfields | no status | no habitat (<i>NP</i>) | no habitat (<i>NP</i>) |
| TERMS AND ABBREVIATIONS USED IN THE TABLE | | | |
| STATUS | FE- Fed. Endangered; FT-Fed. Threatened; SE-State Endangered; SSC-California Species of Special Concern; FP-Calif. Fully Protected; 1b-Calif. Nat. Pl. Soc. Endangered | | |
| TYPES OF HABITAT | Breeding – habitat suitable for breeding of a certain species; Foraging – habitat suitable for foraging of certain species; No habitat – no habitat that is suitable for the species. | | |
| SPECIES OCCURANCE | <i>P</i> -Present in the area; <i>OP</i> -Occasionally Present; <i>PP</i> -Potentially Present but not Documented; <i>NP</i> -Not Present; <i>E</i> -Extirpated from the Area | | |



Mammals

Mammal species that have been observed include coyote, black-tailed jackrabbit, pocket gopher, Pacific kangaroo rat, Stephen's Kangaroo rat, and California ground squirrel.

Reptiles

Reptiles found include the side-blotched lizard, western fence lizard, granite spiny lizard, coachwhip snake, western whiptail, western diamondback rattlesnake, and red-diamondback rattlesnake.

Amphibians

The only amphibian observed in the hillside area is the pacific tree frog.

Fish

No hillside riparian areas are large enough to support any fish species.

No sensitive plants, birds, reptiles have been found or observed in the hillside areas, although potential habitat for several sensitive species is present. The only mammal found within the hillside areas is the Stephen's kangaroo rat; a federal endangered species and a state threatened species. A large amount of Riversidean sage scrub is present on the hillside areas, which normally would support a variety of sensitive species. However, the quality of the Riversidean sage scrub is poor, or is either dying or already dead.

Several drainages are present in the hillside areas and fall under the regulatory authority of the U.S. Army Corps of Engineers. These drainages are considered "Waters of the U.S." and are located in several small canyons where seasonal drainage occurs during the wet season. Within these drainages there is a small amount of wetlands. Some riparian habitat occurs within these areas, which is under the authority of the California Department of Fish and Game (Exhibit 3, Wildlife Resources).

3.4.4 LAKE NORCONIAN HABITAT AREA

As indicated in the Water Resources section of the element, Lake Norconian is a man-made lake that was developed for recreational purposes with the Norconian Hotel in the 1920's. The lake is located on property owned by the Federal Government developed and used by the Naval Surface Warfare Center (NSWC).

The lake has become an important riparian habitat for birds and has historically been a depository for stocked fish. Fish species consist of bass and catfish that are a result of prior years of stocking. The NSWC, as indicated, promotes a policy of catch and release, as re-stocking of the lake does not occur any longer.

As Lake Norconian is a restricted access area on Federal property, a full assessment of the habitat resources has not been made. Each year the Audubon Society counts the number and species that are found at the lake. This



usually occurs in the winter months, when migratory and land birds use the lake. The limitation of the observation and counting to a single day makes it difficult to determine whether the lake is a significant habitat for any specific species of bird.

3.4.5 SANTA ANA RIVER HABITAT AREA

The Santa Ana River, in natural condition, is heavily vegetated with a willow-cottonwood riparian habitat. Much of the river is dominated, or becoming dominated by arundo, an invasive non-native giant reed that recovers quickly from disturbance. As such it can overtake native riparian willow and cottonwood habitat areas that do not recover as quickly. While there are remaining dense stands of riparian willows and cottonwoods, many areas that were also once considered densely populated by these species are now completely populated by arundo. The river is fed by the year-round flow from a watershed that extends to the San Gabriel and San Bernardino Mountains.

Because the arundo plant re-seeds and regenerates even after having been removed from an area, it is necessary that the plant be eliminated completely from the entire length of the river. If any healthy arundo plants exist upstream from a cleared area, the seeds will travel down and re-establish new plants before any of the native plants have a chance to get re-established. A consortium of agencies along the length of the Santa Ana River have started a "Team Arundo" that is run through the Santa Ana Watershed Project Authority (SAWPA) for the purpose of doing a systematic eradication starting at the highest headwaters where the plant is found. In addition, both Riverside and San Bernardino Counties and the Nature Conservancy continue localized eradication that has successfully eliminated many acres of arundo within headwater and tributary streams.

The Santa Ana River is habitat for a diverse base of plant and wildlife. Several of these plants and wildlife are listed as sensitive, and portions of the river are categorized as "critical habitat" for the least Bell's vireo. Listed below is a brief summary of the diverse plant and wildlife found (or with the potential to be found) in the portion of the Santa Ana River adjoining the City.

Plant Communities:

The floodplain of the Santa Ana River is dominated by lush cottonwood-willow riparian vegetation interspersed with small to very extensive areas of invasive Arundo scrub. The Santa Ana River along the Norco reach is characterized by the following eight plant communities: cottonwood-willow riparian forest, cottonwood-willow riparian forest with significant Arundo scrub, Arundo scrub, sand bar and sandy wash, marsh, arrow weed scrub, ornamental and ruderal vegetation, and open water. The Arundo is an invasive species that is increasingly displacing native riparian vegetation in the Santa Ana floodplain. Large expanses of the floodplain along the Norco reach are occupied by Arundo scrub.



The federal government has noted the potential occurrence of two sensitive plant species in the Prado Basin. These are the Santa Ana River woollystar (federally listed as endangered), and the many-stemmed dudleya (listed as sensitive). However, neither of these specimens has been found in the area. The following is a listing of the wildlife observed along the Norco stretch of the Santa Ana River including the Prado Basin:

Birds

A total of 208 species of birds have been recorded within the Prado Basin, including six species federally- or state-listed as endangered or threatened, and four others regarded as sensitive. Of particular interest is the least Bell's vireo. This portion of the Santa Ana River lies within the boundaries of "critical habitat" for the least Bell's vireo as defined by the federal Endangered Species Act of 1973.

Mammals

Four species of mammals, regarded as sensitive, are present in the Prado Basin and could be found in the Santa Ana River adjacent to the City. The species are the San Diego black-tailed jackrabbit, the San Diego desert wood rat, Los Angeles little pocket mouse, and the grasshopper mouse.

Amphibians

Seven amphibians have been confirmed by the federal government as being present in the Prado Basin, and would likely be found to have habitat in the Norco portion of the Santa Ana River. All of these amphibians have been listed as sensitive. No amphibians have been found in any of the recent studies for the Norco stretch of the Santa Ana River, however, the Pacific tree frog and the non-native bullfrog are common along the river and should occur somewhere along the Norco stretch of the river.

Reptiles

Several species of reptiles have been documented in the Prado Basin. Important species would include the southwestern pond turtle (a candidate for federal listing); the coastal western whiptail and the San Diego horned lizard (both regarded as sensitive species).

Fish

Eleven species of fish have been documented in the Prado Basin, eight of which have been introduced. There are three native fish, the Santa Ana sucker, speckled dace, and arroyo chub (all listed as sensitive), known to be present in the Santa Ana River north and south of the Norco reach. As a result there is the potential for all fish to be in the Norco reach of the Santa Ana River.



3.5 CLIMATE ACTION PLAN/SUSTAINABLE COMMUNITY PLAN

The Climate Action Plan provides the guidelines for the City of Norco and its citizens to work with other jurisdictions in the state and all citizens of California to reduce greenhouse gas emissions by the year 2020. The accumulation of greenhouse gases in the atmosphere is seen by many to be a precursor to climate change with the potential for significant environmental impact in the next decades. Human technological advances over the last decades have led to this steady increase in greenhouse gases with the potential for future long-term impact.

The Climate Action Plan is the local response to a potential global threat that combined with the Climate Action Plans from throughout the state should produce measurable reductions in the level of greenhouse gases statewide and keep California in the forefront of environmental innovation. The primary purpose is to reduce the environmental footprint of a community by: using local resources more effectively; reduce the demand for resources from outside the region, reduce the reliance on energy from non-renewable resources, reduce the amount of waste not being recycled, and increase local production of food and other resources as feasible. In the Conservation Element, the goals of the Climate Action Plan are combined with goals of a Sustainable Community Strategy which has the same overriding goal of reducing greenhouse gas emissions, but with the focus on coordinated transportation and land use planning.

3.5.1 JURISDICTIONAL SETTINGS FOR ACTIONS

The reduction of greenhouse gases will be achieved through a combination of measures to be accomplished by all levels of government. Federal and state programs will mostly be accomplished through emission reduction regulations of industries. These will be achieved independent of local action measures. Some state and federal programs will require local implementation such as the California Green Building Code and Urban Water Management Plans. Regional plans will be developed and monitored by regional agencies that operate below state levels but above local levels.

The Southern California Association of Governments (SCAG), of which Norco is a member agency, adopted the 2012-2035 Regional Transportation Plan/Sustainable Communities Strategies (RTP/SCS) in 2012. It addresses regional transportation goals and improvements to reduce greenhouse gases. For its part the City is recommended to implement the local measures from that Plan so that the region as a whole meets the reduction deadlines.

The Western Riverside Council of Governments (WRCOG) is a sub-regional government organization that represents the interests of cities in western Riverside County to regional agencies including SCAG which is the federally designated Metropolitan Planning Organization for this area. WRCOG has developed the Climate Action Plan for western Riverside County cities which the



City can adopt on its own at a future date. The goals and policies in Section 2.9 of the Conservation Element are the goals that would be included in a Climate Action Plan and are similar to those contained in the WRCOG CAP.

3.5.2 LEGISLATIVE MANDATES

Assembly Bill (AB) 32 also known as the Global Warming Solutions Act of 2006 was signed into law by the Governor in September 2006. AB 32 establishes a comprehensive statewide program to reduce greenhouse gas emissions from all sources throughout the state. The California Air Resources Board (CARB) was charged with developing the Climate Change Scoping Plan to reduce greenhouse gas emissions to 1990 levels by the year 2020 representing a 15% reduction from the levels that would exist under a “business as usual” scenario (Exhibit 3.10).

The target reduction in greenhouse gas levels to achieve by 2020 is 427 million metric tons statewide. The Scoping Plan recognized that local governments were best equipped to address the issues and implement policy changes to achieve reductions. While there is no specific mandate that a City have a Climate Action Plan, lawsuits filed against agencies for not adequately addressing climate change in their General Plans and environmental review processes are increasing.

In 2008 the Governor signed Senate Bill (SB) 375 otherwise known as the Sustainable Communities and Climate Protection Act of 2008. SB 375 specifically targets a reduction of greenhouse gases from motorized vehicles since they account for roughly 30% of total greenhouse gas emissions. SB 375 was introduced as a measure to meet the reduction target deadlines established with AB 32. CARB was directed to set regional emissions reduction targets region by region and then oversee the preparation of a RTP/SCS by each of the 18 MPO's in the state. Local development of the SCS would mean local implementation measures best suited for that region to meet its reduction targets from vehicles. The SCS integrates transportation, land use, and housing policies to reduce overall vehicle miles being traveled.

3.5.3 ANTICIPATED CLIMATE IMPACTS

The anticipated effects of climate change would vary region to region but overall global effects are anticipated to be higher maximum temperatures with more hot days, higher minimum temperatures with fewer cold days, and precipitation events with greater intensity. Secondary effects especially in California are anticipated to be longer and more severe droughts, more forest fires, loss of snow pack, rising sea levels, and more flooding at lower elevations.

3.5.4 GREENHOUSE GAS EMISSIONS INVENTORY

Atmospheric gases trap infrared radiation that is reflecting off the earth's surface to keep the blanket of air around the planet at temperatures that can sustain life. The process is known as the greenhouse effect. The increase in level of certain



types of these greenhouse gases from human activity is thought to be a factor causing more radiation to be trapped thereby increasing the surface temperature.

The biggest contributing atmospheric gas is carbon dioxide (CO₂) created primarily from burning fossil fuels which represents about 84% of greenhouse gas emissions in the U.S. The burning of fossil fuels also produces methane (CH₄) and nitrous oxide (N₂O) which, combined with CO₂ represent about 98% of the human-caused increase of greenhouse gases. The other greenhouse gases that are increasing due to human activity are hydroflourocarbons (HFCs), perflourocarbons (PFCs), and sulfur hexaflouride (SF₆).

**TABLE 3.8
HUMAN ACTIVITY AND GREENHOUSE GASES**

| HUMAN ACTIVITY | GREENHOUSE GASES PRODUCED |
|----------------------------------|---|
| Fossil fuel combustion | CO ₂ , N ₂ O, CH ₄ |
| Agriculture | N ₂ O, CH ₄ |
| Composting and landfill gases | CH ₄ |
| Refrigeration/cooling | HFCs |
| Manufacturing (various products) | PFCs, SF ₆ , CO ₂ |

These are the six greenhouse gases targeted for regulation and reduction under AB 32.

The Subregional CAP prepared by WRCOG establishes the baseline greenhouse gas inventories for each participating jurisdiction based on community and government operations for that jurisdiction. The emissions inventory was developed using the Local Government Operations Protocol and the U.S. Community Protocol for Accounting and Reporting of GHG Emissions.

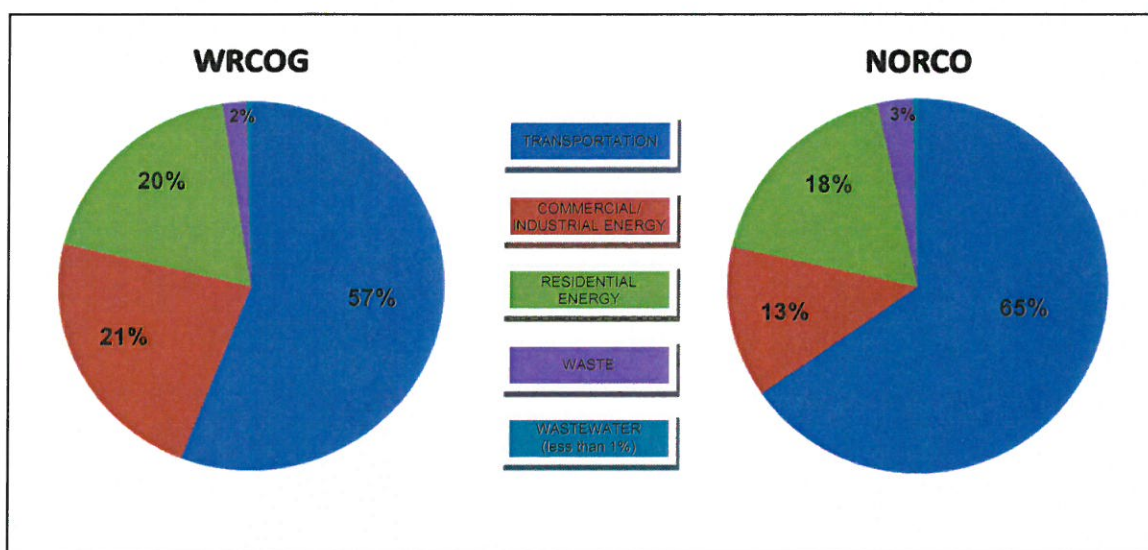
2010 is the baseline year for the WRCOG CAP. The 12 participating cities, including Norco, emitted approximately 5,834,400 metric tons of greenhouse gas emissions in that year from the following sources: transportation 57%, commercial/industrial energy 21%, residential energy 20%, waste 2%, and wastewater less than 1%. The emissions per category resulted from motor vehicles, consumption of electricity and natural gas, waste generated, water consumed, and wastewater treated.

For the City of Norco, the emissions breakdown per category is: transportation 65%, residential energy 18%, commercial/industrial energy 13%, waste 3%, and



wastewater less than 1%. The primary differences from the rest of the WRCOG region can be attributed to the greater need of Norco residents to have to travel farther for services and goods that are more readily available in higher density areas and the higher amount of trash per capita because of the number of residences that require manure removal. It is appropriate that reduction measures for Norco reflect the greater amount of greenhouse gas emissions from these two categories over other jurisdictions in the WRCOG region.

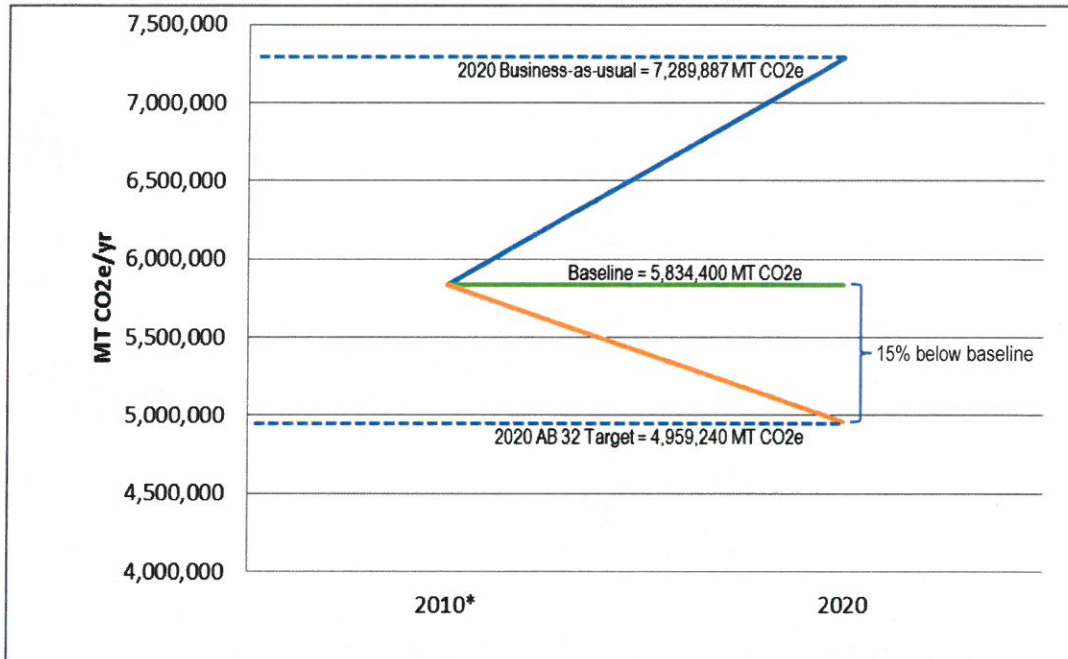
**EXHIBIT 3.9
COMPONENTS OF GREENHOUSE GAS EMISSIONS**



By 2020 the amount of emissions from the WRCOG region will be 7,289,887 metric tons under a business-as-usual scenario. To be compliant with AB 32 the amount of emissions will need to be reduced to 4,959,240 metric tons for the 12 participating cities.



EXHIBIT 3.10
WRCOG EMISSIONS REDUCTION TARGET PLAN 2020



4.0 IMPLEMENTATION MEASURES

4.1 RECLAIMED WATER PROGRAM

The City is in the process of providing backbone infrastructure to bring reclaimed water from the Archibald Treatment Plant for use in public landscaped areas. As funding permits, infrastructure lines will be extended providing for the opportunity to use reclaimed water to irrigate public landscaping in additional areas of the City.

4.2 XERISCAPE LANDSCAPING

The City Municipal Code encourages the use of xeriscape landscaping on all new development to reduce the overall amount of water that is ultimately directed toward the watering of landscaping.

4.3 WATER QUALITY REPORTS

The City Public Works Department publishes annual reports concerning the quality of the City’s water supply and identifies any trends in the local supply that need to be corrected before overall quality is impacted.

4.4 WATER QUALITY MANAGEMENT

For all new development and grading over one-half acre the is required to have an approved water quality management plan that will outline the best



management practices to be implemented with project development to prevent contaminated run-off from entering the city's storm drain system.

4.5 PUBLIC WATER INFORMATION PROGRAMS

The City provides public information describing methods of water conservation and the protection of the City's and the region's water quality.

4.6 MANURE TO ENERGY CONVERSION

The City commissioned a feasibility study by Chevron Energy Solutions that was completed in December of 2011. The study concluded that a manure-to-energy conversion plant could be feasible in or near Norco. The feasibility study site was the Western Riverside County Regional Wastewater Authority Archibald Treatment and Reclamation Plant located at 14634 River Road in the City of Eastvale, but other sites were identified as alternatives also.

A Draft Environmental Impact Report (DEIR) was prepared based on the feasibility concept and which was a requirement of the grant money that was used to fund the feasibility study. Because there were no project specifics the DEIR was not certified. A "Leads on Manure to Energy Issues Committee" has been set up to investigate ways to go forward with the plant concept as potential funding sources or assistance may become available to construct a project.

4.7 MULTI-SPECIES HABITAT PROTECTION PROGRAM

The Western Riverside Council of Governments along with the cities of western Riverside County and the County of Riverside adopted the Western Riverside (WR) County Multi-Species Habitat Conservation Plan which is now managed by the WR Regional Conservation Authority (RCA). Upon Plan adoption the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) (formerly the Department of Fish and Game) issued "take" permits to the County and the 14 member cities including Norco, in accordance with the Endangered Species Act and the California Natural Community Conservation Planning Act respectively. The take permits allow the planning for, and the management of, endangered species and conservation land use to be done at the local level as opposed to state and federal levels. The RCA monitors compliance with the Plan for the County, the 14 cities, and other member agencies on behalf of USFWS and CDFW.

4.8 OPEN SPACE CONSERVATION

In addition to the MSHCP, the City has established permanent open space areas to protect significant wildlife elements of the community.

4.9 CLIMATE ACTION PLAN/SUSTAINABLE COMMUNITY STRATEGY

The primary goals of a climate action plan along with those of a strategic community strategy have been incorporated into this Element of the General Plan. The Western Riverside Council of Governments will be adopting the Climate Action Plan for the western county cities and that plan will then be



available for adoption by the City of Norco if it so chooses. The City is already part of the 2012-2015 Sustainable Communities Strategy (SCS) adopted by the Southern California Association of Governments from which there are measures for local implementation that mirror the goals contained in this Element. The focus of the SCS is regional transportation-related reduction measures.

5.0 GLOSSARY OF TERMS

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| AB 32 | Assembly Bill 32, otherwise known as the California Global Warming Solutions Act of 2006, requires California to reduce its greenhouse gas emissions to 1990 levels by the year 2020. The Western Riverside County Organization of Governments (WRCOG) is preparing the Climate Action Plan (CAP) for western Riverside County cities. Goals and policies included in the Conservation Element are similar in scope and nature to those contained in the WRCOG CAP. |
| Acre Feet: | Unit used to calculate water volume capacity. One Acre Foot is the equivalent of one acre covered with one foot of water, and is equal to 325,829 gallons of water. |
| Aquifer: | A subterranean water-bearing geologic formation generally covering a large region. |
| Basin (groundwater): | Subterranean water bodies within a larger aquifer region defined and separated by geologic substructures such as uplifted bedrock, or as may be defined by adjudicated boundaries. |
| Basin (watershed): | All of the area defined by geology that drains to a particular outlet to the ocean (in this case the Santa Ana River drainage). |
| Biomass: | Landfill gas, agricultural wastes, and other waste fuels that are used to generate electricity. This includes the by-products of small plot agriculture, animal keeping, and landscaping that can be used in conversion processes to generate electricity. |
| Conservation: | The management of natural resources to prevent destruction, waste, and neglect. |



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| Critical Habitat | The minimum amount of suitable breeding and foraging habitat occupied or potentially occupied by Threatened or Endangered Species that is deemed necessary to maintain present populations and to recover populations of the species to the point at which the species is no longer Threatened or Endangered. |
| Desalter: | A plant where reverse osmosis is used to make groundwater potable, a process that removes or reduces excessive amounts of minerals from the water. |
| Direct Energy Use | Activities that directly involve the expenditures of energy resources (i.e. lighting, transportation, power equipment, etc.). |
| Endangered Species | Any species that is in danger of extinction throughout all or a significant portion of its range. |
| Groundwater: | (See basin- groundwater) |
| Geothermal | The generation of electricity from stores of superheated subterranean water. |
| Greenhouse Effect: | The atmospheric phenomenon where gases trap infrared radiation that is reflecting off the earth's surface to keep the blanket of air around the planet at temperatures that can sustain life. |
| Greenhouse Gases: | The certain gases in the atmosphere that absorb and emit radiation which is the cause of the greenhouse effect. The primary greenhouse gases are water vapor, carbon dioxide, methane, nitrous oxide, and ozone. |
| Indirect Energy Use | The use of products for which energy resources are expended in the production process. |
| MCL | Maximum contaminant level |
| PHG | Public health goal. |
| Photovoltaic | Units to convert sunlight into electrical power. |



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| Reclaimed Water: | The by-product from sewage treatment (or water treatment) that is available for non-potable re-use. |
| SB 375 | The Sustainable Communities and Climate Protection Act of 2008 supports the state's climate action goals to reduce greenhouse gases (AB 32) through coordinated transportation and land use planning. Under SB 375 the state's metropolitan planning organizations were to prepare sustainable communities strategies. The Southern California Association of Governments (SCAG) adopted the 2012-2035 Regional Transportation Plan/Sustainable Communities Strategy in April 2012. |
| Species of Special Concern | An informal designation used by the State for declining wildlife species that are not officially listed as Endangered, Threatened, or Rare. There is no legal protection for these species, although they are recognized as being sensitive. |
| Threatened Species | Any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. |

