



## CHAPTER 10

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### CONSERVATION ELEMENT

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### 10.1 INTRODUCTION

The purpose of the Conservation Element is to provide direction regarding the conservation, development, and utilization of natural, historical, and cultural resources. It serves as a guide for the City of Garden Grove, its residents, and businesses to understand what natural or other resources exist in the City, how development impacts these resources and the methods to maintain, preserve or conserve these resources. The Conservation Element will look at the following resources: water, energy, solid waste, biological, green building, and cultural/historical. The topic of the City's water system is discussed in more detail in Chapter 6, Infrastructure Element. Background and existing information for the Element can be found in the General Plan EIR.



### 10.2 AUTHORITY FOR THE ELEMENT

The State of California Government Code Section 65302 (d) requires *“that a General Plan include a conservation element for the conservation, development, and utilization of natural resources including water and its hydraulic force, forests, soils, rivers and other waters, harbors, fisheries, wildlife, minerals and other natural resources.”*

### 10.3 KEY THEMES AND VISION FOR GENERAL PLAN

Conservation and sustainability go hand in hand, and both strive to use existing natural resources in a way that ensures future generations may also meet their needs and retain a high quality of life. Conservation and sustainable practices also allow a city to become self-sufficient and reduce long-term costs associated with the purchase of water, energy, and waste disposal. These practices also improve the condition of the natural environment and reduce environmental health hazards, which both contribute to a high quality of life for residents and visitors. Key themes found to be present in the City and that were identified by the community include:

- How can the City manage and protect the quantity and quality of local groundwater supplies?



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- How can sustainable building methods and smart growth techniques be incorporated and utilized city-wide?
  - How can the City preserve historic resources and also utilize them to enhance community character and sense of place?

## **WATER RESOURCES**

Water is a precious resource in Southern California, a region that would return to its natural semi-arid condition without the importation, careful management, storage, and reuse of its water supply. Haster/West Haven are County basins designed to prevent flooding in the City.

Currently, over half of the City's water supply comes from local groundwater wells accessing the Santa Ana River groundwater basin, and the remaining is imported. Water conservation through reduced use, efficiency, reclaimed water, and the control and treatment of runoff pollution is critically important not only for Garden Grove, but the entire region. Reduced water consumption lessens reliance on potentially unreliable foreign water supplies and, locally, leaves more water in natural systems to benefit the local environment. Maintaining and improving water quality is essential to protect public health, wildlife, and the local watershed. Water conservation and pollution prevention can be dramatically improved through proactive efforts of residents and through City policies. Additional information on water quality requirements, including the National Pollutant Discharge Elimination System (NPDES) can be found in the General Plan EIR.

## **SOLID WASTE**

Garden Grove achieved requirements set forth by Assembly Bill 939 by diverting over 50 percent of its waste stream from landfills by 2000. Efforts to continue to divert solid waste from landfills by reduction reuse, and recycling programs remains a priority in the City.

The Garden Grove Sanitary District's Recycle Garden Grove combines automated trash collection with a broad recycling and yard waste collection operation available to residences and businesses. In a joint effort by the Sanitary District and Garden Grove Disposal, Recycle Garden Grove is designed to reduce the volume of waste dumped in local landfills and to conserve natural resources. In 2005, approximately 199,737 tons of waste produced by the City was disposed in a landfill while 64 tons were burned at a waste-to-energy facility. Of this, household disposal consisted of 52 percent of waste disposal while business disposal consisted of 48 percent.

Efforts by local residents and businesses afford a great opportunity in waste reduction to lessen demands on natural resources and insure adequate landfill space is available for future generations.

## **ENERGY RESOURCES**

Energy resources determine a City's ability to support future development within the Community. Conservation of energy resources through community design and innovative building systems that capture efficient technologies such as cogeneration, solar heating, use of photovoltaic, daylight, energy management and control systems, and thermal energy storage all have the potential to reduce dependency on traditional energy resources that are currently used in the City. Given the area's warm climate, the most important alternative and renewable energy resource in Garden Grove is solar energy, which has considerable potential to be developed to substitute for oil, gas, and other energy suppliers. Southern California Edison (SCE)



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is the primary supplier of electricity and natural gas for the City of Garden Grove. SCE has a total service area of 50,000 square-miles throughout central, coastal, and southern California. Garden Grove represents a small share of the total energy market.

## **GREEN BUILDING**

Buildings fundamentally impact people's lives and the health of the planet through their design, construction, and long-term operation. By encouraging buildings that are environmentally responsible, profitable, and healthy places to live and work, Garden Grove is inherently reducing air pollution, water pollution, solid waste, the depletion of finite resources, and the destruction of natural areas, habitats and biodiversity. Green buildings and High Performance Buildings create healthier and safer indoor and outdoor environments for users and provide optimal building performance and efficiency that lowers long-term operation costs.

The construction (materials, waste, transportation) and lifecycle (energy, water) of buildings are one of the largest sources of waste and long-term energy consumption within a city. As Garden Grove looks to the future, the creation of a green building incentive program is one potential method that would achieve significant water and energy conservation while reducing the amount of waste placed in landfills.

## **BIOLOGICAL RESOURCES**

Biological resources in Garden Grove are almost non-existent due to the urban nature of the City and surrounding area. However, incorporation of natural and altered biotic habitats, as well as associated flora and fauna, is important in providing a high quality of life for residents. Parks, vegetated streetscapes, large trees, and neighborhoods support plant life and are home to small animals and birds.



*Stone Pines located on the south side of Chapman, west of Harbor Boulevard are a valued biological asset to the community.*

## **CULTURAL AND HISTORICAL RESOURCES**

Cultural and historic resources, sites, and districts have a valuable physical component to the community's heritage. One prehistoric site has been identified within Garden Grove's municipal boundaries, and an additional twelve historic archaeological sites dating from the early 1900s have been found. The prehistoric site is located under a residential development and consists of shellfish remains from food debris, stone tools and stone flakes from manufacturing stone tools.<sup>1</sup> Archaeological sites are primarily locations of historic trash in association with residences and commercial structure dating from the 1900s.<sup>2</sup>

A 1986 historic and architectural inventory documented 132 buildings as locally-significant resources. Three structures, the Stanley or Ware House within Heritage Park, the Harry A. Lake House, and the Reyburn House are candidates for nomination to the *National Register of Historic Places*. The Stanley House is designated as Orange County Historical Site No. 13. The preservation of these locally significant resources will be considered as the City continues to urbanize and as the past traditions merge with future growth. Refer to the General Plan EIR for additional information and listings.

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<sup>1</sup> Site CA-ORA-392

<sup>2</sup> Sites CA-ORA-1260H through -1270H and CA-ORA-1307.



*Locally-significant historic homes in Garden Grove*

## 10.4 GOALS, POLICIES, AND IMPLEMENTATION PROGRAMS

This Element is organized into goals, policies, and implementation programs. A description of each is provided in Chapter 1, Introduction. It is important to note that the implementation programs are specific actions to carry out all of the preceding goals and policies.

### WATER RESOURCES

**Goal CON-1** Garden Grove’s water resources shall be conserved to ensure equitable amounts of clean water for all users.

- Policy CON-1.1 Continue to work with Federal, State, and regional governments and agencies to ensure that adequate quantity of regional supplies and local groundwater resources remain available to the City.
- Policy CON-1.2 Reduce the waste of potable water through efficient technologies, conservation efforts, and design and management practices, and by better matching the source and quality of water to the user’s needs.
- Policy CON-1.3 Promote water conservation in new development or redevelopment project design, construction, and operations.
- Policy CON-1.4 Continue to implement a Water Conservation Program.
- Policy CON-1.5 Develop model water demand management programs using best management practices.
- Policy CON-1.6 Continue to educate citizens in water conservation and encourage its practice.



CON-IMP-1A	Assist the efforts of the water districts to reduce waste and increase reuse of water and wastewater through integrated planning of programs and complementary land use and building regulations.
CON-IMP-1B	Require on-site infiltration whenever feasible for new development or redevelopment projects.
CON-IMP-1C	Promote site appropriate, low-water-use, and drought tolerant native plants city-wide.
CON-IMP-1D	Restore and promote native plant use at the Civic Center and the development of similar landscaping for all public facilities.
CON-IMP-1E	Develop a landscape palette for use by developers, homeowners, etc., that specifies drought tolerant planting and water saving irrigation systems.
CON-IMP-1F	Promote cost-saving conservation measures such as low-flow fixtures, waterless urinals, and other techniques that extend scarce supplies for all homes and businesses.
CON-IMP-1G	Assess and remove barriers to integrated water planning and sustainable water technologies for new development or redevelopment projects.
CON-IMP-1H	Provide incentives to new development or redevelopment projects that incorporate water efficient design and technologies.
CON-IMP-1I	Explore available funding opportunities for existing homeowners and business owners who would like to upgrade to water efficient technologies.
CON-IMP-1J	Encourage water conservation for new development or redevelopment projects through business rebates, or plumbing maintenance programs.
CON-IMP-1K	Encourage water agencies to conduct irrigation training workshops for homeowners and professionals.

**Goal CON-2 Protect and improve water quality.**

Policy CON-2.1	Enhance water infiltration throughout watersheds by decreasing accelerated runoff rates and enhancing groundwater recharge. Whenever possible, maintain or increase a site's pre-development infiltration to reduce downstream erosion and flooding.
Policy CON-2.2	Encourage practices that enable water to percolate into the surrounding soil, instead of letting sediment, metals, pesticides and chemicals runoff directly into the storm drain system, creeks, or regional flood control facilities.
Policy CON-2.3	Educate the public about water quality and engage the public and agencies to improve water quality.
Policy CON-2.4	Continue to comply with Federal, State, and regional governments and agencies to protect and improve the quality of local and regional groundwater resources available to the City.



- Policy CON-2.5 Utilize available resources to monitor land uses draining into water sources and water recharge areas, to prevent potential contamination from hazardous or toxic substances such as pesticides from homes, and golf courses, cleaning agents, swimming pool chemicals, and road oil.
- Policy CON-2.6 Design, construct, and maintain City buildings, landscaped areas, roads, bridges, drainages, and other facilities to minimize the volume of toxics, nutrients, sediment, and other pollutants in stormwater flows, and continue to improve road maintenance methods to reduce erosion and sedimentation potential.
- CON-IMP-2A Support programs to maintain pathogen and nutrient levels at or below target levels set by the Regional Water Quality Control Board, including the efforts of agencies, and community groups to address pathogen, sediment, and nutrient management in the urban watershed.
- CON-IMP-2B Utilize Integrated Pest Management (IPM) practices for City facilities. Develop a maintenance program for all City facilities that specifies least toxic methods. Minimize the need for toxic materials by designing and constructing facilities and landscaping to be durable, easily maintained, and pest resistant.
- CON-IMP-2C Research the potential to expand the use of alternative waste disposal methods such as gray water systems, composting toilets, waterless urinals, and other techniques — and community systems to help reduce the potential for contaminants to pollute water bodies and create human health hazards.
- CON-IMP-2D Minimize impervious services for new development, and incorporate technologies such as pervious paving, landscaped roofs, planter boxes, and rainwater capture and reuse.
- CON-IMP-2E Support local storm water and community watershed group efforts to inform the public about practices and programs to minimize water pollution.
- CON-IMP-2F Provide programs that encourage public participation, education, and appropriately designed development to curb water pollution in the City.

**SOLID WASTE**

**Goal CON-3 Reduce total waste diverted to treatment or disposal at the waste source and through re-use and recycling.**

- Policy CON-3.1 Update as appropriate and continue to implement the Source Reduction and Recycling Element (SRRE) for the City.
- Policy CON-3.2 Investigate a Citywide recycling program and hazardous waste drop-offs to provide optimal recycling opportunities for homeowners and businesses.
- Policy CON-3.3 Encourage business material reuse through waste exchange.
- Policy CON-3.4 Encourage the use of materials with minimal impacts to the environment for new development or redevelopment projects in the City.



- Policy CON-3.5 Continue to maintain and enhance the public education program developed by Garden Grove Sanitation District that addresses waste management and proper household waste sorting and handling.
- CON-IMP-3A Establish targets for materials reduction.
- CON-IMP-3B Encourage materials recycling during renovation or demolition of old buildings.
- CON-IMP-3C Encourage participation in the CalMAX program, which is a free service offered by the Integrated Waste Management Board. The program conserves energy, resources, and landfill space by helping businesses and organizations find alternatives to the disposal of valuable materials or wastes through waste exchange.
- CON-IMP-3D Encourage the use of recycled or rapidly renewable materials, and building reuse and renovation over new construction, where feasible.
- CON-IMP-3E Research funding opportunities for new development or redevelopment projects that incorporate building reuse and use of recycled materials.

**ENERGY**

**Goal CON-4 Reduce per-capita non-renewable energy waste and city-wide peak electricity demand through energy efficiency and conservation.**

- Policy CON-4.1 Integrate energy efficiency and conservation requirements that exceed State standards into the development review and building permit processes.
- Policy CON-4.2 Create incentives such as expedited permit processing, technical assistance, and other methods that will encourage energy efficiency technology and practices.
- Policy CON-4.3 Integrate energy efficiency and conservation technologies and practices into new City facilities and, where feasible, existing buildings as well as City functions.
- Policy CON-4.4 Provide public information, marketing, and education to support energy efficiency and energy conservation.
- CON-IMP-4A Adopt Energy Efficiency Standards for new and remodeled buildings that exceed Title 24 building standards.
- CON-IMP-4B Create a tree-planting program that provides for the planting of appropriate, water efficient trees in residential, commercial, and civic areas that will reduce city-wide energy needs the heat-island effect through natural cooling.

**Goal CON-5 Reduce dependency on non-renewable energy resources through the use of local and imported alternative energy sources.**





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- Policy CON-5.1 Integrate technically and financially feasible renewable energy resources requirements into development and building standards through adopted Renewable Energy Building Standards.
  - Policy CON-5.2 Promote renewable energy use through regulations, incentives, and available funding opportunities.
  - Policy CON-5.3 Create opportunities for the purchase and development of local renewable energy resources.
  - CON-IMP-5A Work with local electric providers to allow purchase and sale of renewable energy.
  - CON-IMP-5B Continue to identify and remove regulatory or procedural barriers to producing renewable energy in building and development codes, design guidelines, and zoning ordinances.
  - CON-IMP-5C Work with related agencies such as fire, water, and health that may impact the use of alternative technologies.
  - CON-IMP-5D Develop protocols for alternative energy storage such as biodiesel, hydrogen, and/or compressed air.
  - CON-IMP-5E Continue to allow passive or active solar design elements and systems and protection from shading by neighboring structures and trees.
  - CON-IMP-5F Ensure all new and remodeled City facilities incorporate Renewable Energy building Standards into the facilities.
  - CON-IMP-5G Encourage renewable technologies through streamlined planning and development rules, codes, and processes.
  - CON-IMP-5H Provide incentives such as expedited processing for facilities that use renewable sources for energy production.
  - CON-IMP-5I Work with State and federal agencies to inform the public of, and possibly secure tax exemptions, tax rebates, or other financial incentives for new facilities.
  - CON-IMP-5J Develop and utilize renewable energy and clean generation technologies such as solar, wind, biogas, tidal, cogeneration, and fuel cells to power City facilities using tax-free low-interest loans and other available financial options.

## **GREEN BUILDING**

**Goal CON-6 Green Building programs achieve water and energy efficiency, minimize raw resource consumption, and reduce the amount of waste placed in landfills while improving human health and quality of life in the City.**

- Policy CON-6.1 The City shall promote improvement in the health and productivity of new buildings, by understanding and training building personnel in new



- construction practices and the use of alternative or recycled building materials.
- Policy CON-6.2 Provide information, marketing, training, and education to the public to support green building activities.
- CON-IMP-6A Seek out educational or other training opportunities for planning and building personnel to learn new construction practices, including the use of alternative building materials.
- CON-IMP-6B Develop educational materials that can be made available to the public regarding green building activities, new construction practices, and/or alternative building materials.

## CULTURAL AND HISTORICAL RESOURCES

**Goal CON-7 Significant historical, architectural, archeological, and cultural value resources shall be preserved and protected.**

- Policy CON-7.1 Preserve and protect Garden Grove's significant historical, archaeological and cultural value resources.
- Policy CON-7.2 Preserve Garden Grove's significant historic resources to promote community identity, stability, and aesthetic character.
- Policy CON-7.3 Encourage private and public preservation activities for the education and enjoyment of present and future generations.
- CON-IMP-7A Preserve significant archeological sites in conformance with Public Resources Code Section 21083.2 or Section 21084.1, as applicable.
- CON-IMP-7B Determine appropriate zoning and land development guidelines in order to protect historic resources from incompatible development.
- CON-IMP-7C Develop a process for the preservation of historic buildings with clear data by property regarding its historic significance. Look for innovative ways to preserve these buildings by possibly creating an historic area in which to relocate the buildings.
- CON-IMP-7D Review proposals for the development of properties abutting historic resources to ensure that land use or new construction does not detract from the architectural characteristics and environmental setting of the historic resource.
- CON-IMP-7E Encourage the restoration of historic properties through financial incentives and public and private loan and grant funding programs.
- CON-IMP-7F Encourage new commercial development or renovations to existing commercial structures in historic areas to be compatible with existing historic architectural character.
- CON-IMP-7G Design public facilities to minimize adverse impacts on historic resources.

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CON-IMP-7H

Preserve significant trees such as the Stone Pines that were saved as part of the hotel development on the south side of Chapman, west of Harbor Boulevard.

