



*Casa de Lopez. Photo courtesy of Library of Congress, Prints & Photographs Division, HABS CAL,37-OLTO,3--3.*

## 9

# CONSERVATION

- 9.1 SUSTAINABLE DEVELOPMENT
- 9.2 URBAN RUNOFF MANAGEMENT
- 9.3 AIR QUALITY

## 9. Conservation

### GOALS

- Private and public development and improvements that help to reduce per capita greenhouse gas emissions, support active transportation and transit use, and support the local economy
- Sustainable development, building practices, and landscapes that are consistent with Old Town's historical character and that reduce dependence on non-renewable energy sources and natural resources
- Implementation of sustainable storm water management techniques to support the surrounding landscape and reduce impacts on urban infrastructure and the downstream environment

### INTRODUCTION

The concepts of conservation and sustainability address the relationship of the built environment to the natural environment with the objective of achieving environmental benefits through energy and resource conservation and sustainable development. The General Plan's Conservation Element identifies two citywide goals: for San Diego to become an international model of sustainable development; and to provide for the long-term conservation and sustainable management of the natural resources which define the City's identity, contribute to its economy, and improve its quality of life. Building on the General Plan, the City adopted a Climate Action Plan (CAP) to achieve the State of California's mandates for Greenhouse Gas (GHG) emission reductions through local action and to the benefit of San Diego's environment and economy. The CAP calls for eliminating half of all greenhouse gas emissions within the City by 2035.

Sustainable development in Old Town will incorporate building features and streetscape design that reduce energy and water consumption, improve water and air quality, reduce waste, and facilitate and encourage alternatives to travel by single-occupant vehicles. Old Town benefits from the location of the Old Town Transit Center within the community. Residential, commercial, and visitor-oriented uses in the community can take advantage of the easy access to regional transit services that the Transit Center provides and reduce transportation-related GHG emissions.

As the birthplace of California, the conservation of Old Town San Diego's historic buildings and sites is essential to preserving its historic character and cultural heritage. The Historic Preservation Element addresses the conservation of historical and cultural resources in Old Town. In new development, renovation, and reuse projects, sustainable features can be designed to maintain Old Town's community's character as well as conserve natural resources. In order to convey the importance of resource conservation and sustainable building and site design, conservation policies have also been incorporated into the Urban Design Element in the Building Design: Sustainability, Site Design, Urban Forestry and Landscaping, Streetscape, and Street Corridors and Gateways sections.



*Incorporating sustainable development and landscaping practices as well as Low Impact Development principles in a manner that is consistent with Old Town's pre-1871 character will help reduce greenhouse gas emissions and maintain Old Town's unique character.*

## 9.1 Sustainable Development

Sustainable development is important due to the visible effects of global climate change resulting from greenhouse gas emissions, as well as State and local legislation. The effects of a changing climate – higher seasonal temperatures, diminished water supplies, disruption of agricultural cycles – have consequences for the built and natural environment, and for the Old Town community’s health and economic vitality.

The General Plan’s goals and policies regarding climate change and natural resources aim for a balance between natural resources and economic prosperity while protecting the public health, safety, and welfare of residents by making our built environment more resilient and healthy. The CAP provides policies along with steps the City can take to achieve the 2035 GHG emissions reductions targets and address climate change. The CAP supports implementation of the General Plan through support for continued incremental changes to the urban land use and urban form, providing a greater variety of transportation choices, and transforming how the city produces and uses energy and water. The CAP complements the General Plan policies to reduce greenhouse gas emissions.

The CAP policies and actions are organized around the following five strategies:

1. Energy & water efficient buildings
2. Clean & renewable energy
3. Bicycle, walking, transit & land use
4. Zero waste
5. Climate resilience

The CAP’s mobility and land use strategy aims to expand bicycling, walking, and transit use as alternatives to automobile trips, particularly for work commute trips. The strategy’s land use component would advance the General Plan’s “City of Villages” concept of walkable and pedestrian-friendly neighborhoods with a mix of uses.



*The majority of the Old Town community is within a ten minute (half-mile) walk from the Old Town Transit Center.*

Old Town is well-positioned to reduce dependence on the private automobile due to the community’s central location in the region, walkable size and generally walkable street grid, and access to the transit center. A majority of the community is within a half-mile walking distance to the transit center, which makes public transit a viable transportation option. These areas are also within a Transit Priority Area (TPA) where existing and future transit investments are to be coordinated with land use. The land use plan (Figure 3-1) implements the CAP’s land use and mobility strategy by designing areas for higher density housing within the TPA in a manner that is compatible with the historical resources and historical character of the community.

The Old Town Community Plan identifies bicycle and pedestrian facility improvements that complement the land use strategy to provide housing growth opportunities within TPAs. The community plan takes a multi-modal approach to improving circulation and access through and within the community. The plan envisions a more balanced mobility network that facilitates shifting trips to transit, walking, and bicycling, while also accommodating vehicle traffic and minimizing conflicts between travel modes. The pedestrian and bicycle improvements include intersection, sidewalk, and street improvements to increase accessibility and improve bicycle and pedestrian access. The planned infrastructure improvements as well as the interconnectedness of the transit, bicycle, and pedestrian network will support Old Town’s residential and employment capacity with less increase in per capita vehicle emissions.



Sustainable development practices will implement the other CAP strategies and help meet the CAP's GHG emissions reduction goals. With careful design, the incorporation of sustainable features and materials into the retrofitting of existing buildings and the design of new buildings will be compatible with the community's historical character. Historical structures in Old Town were constructed with features such as thick adobe walls, porches, arcades, awnings, and deeply inset windows that maximized natural cooling to create comfortable homes in an environment with little natural shade. Modern sustainable building features can include alternative building materials, energy and water conservation systems, and alternative sources of energy. The use of architectural treatments or screening mechanisms can shield exterior placement of modern sustainable building features such as rainwater and greywater collection systems to support the historical character of Old Town.



*Thick building walls, tile roofs, and shade-providing porticos are pre-1871 building elements that reduce solar heat gain and energy use.*



*Locating housing and employment uses within Transit Priority Areas supports transit use and helps to meet Climate Action Plan goals.*

## POLICIES

- CE-1.1** Reduce greenhouse gas emissions through a wide range of actions consistent with the General Plan and Climate Action Plan.
- Implement pedestrian and bicycle infrastructure improvements in Transit Priority Areas to increase commuter walking and bicycling opportunities.
  - Support higher density/intensity housing and employment development in Transit Priority Areas to increase transit ridership.
  - Provide additional bicycle and pedestrian improvements in coordination with street resurfacing as feasible.
  - Coordinate with San Diego Association of Governments to identify transit right-of-way and priority measures to support existing and planned transit routes, prioritizing for implementation the highest priority bicycle and pedestrian improvements.
  - Support regional improvements that promote alternative modes of transportation, such as mobility hubs.
  - Provide bicycle- and car-sharing programs and their facilities such as bike-sharing stations and car-sharing vehicle access points.
  - Re-time traffic signals and installing roundabouts where needed to reduce vehicle fuel consumption.
  - Apply the CAP consistency checklist as a part of the development permit review process, as applicable.
  - Support and implementing improvements to enhance transit accessibility and operations, as feasible.
  - Monitor the mode share within the community's TPAs to support the CAP Annual Monitoring Report Program.
- CE-1.2** Implement mobility measures that reduce dependence on single-occupant vehicle use, increase fuel efficiency and promote the use of alternative more sustainable energy sources.

- CE-1.3 Promote car and bicycle sharing programs as cost-effective alternatives to car ownership for residents and employees.
- CE-1.4 Encourage community organizations and businesses to educate residents, employees and visitors about the accessibility of transit, community destinations, and regional recreational resources via walking and bicycling (see also Mobility Element).
- CE-1.5 Promote the continued use or adaptive reuse of existing buildings in conjunction with any needed renovations to increase their energy efficiency as part of a comprehensive energy use reduction strategy.
  - a. Preserve existing buildings with important architectural or historical character as valued community assets.
  - b. Preserve structures that meet the Historical Resources criteria for designation and adaptively reuse if necessary to maintain their economic viability.
- CE-1.6 Ensure that development is consistent with General Plan and Community Plan sustainability policies and supports implementation of the Climate Action Plan.
  - a. Reduce development project-level greenhouse gas emissions to acceptable levels by incorporating sustainable building and development practices (refer to Urban Design Element, Building Design: Sustainability section), applying site-specific mitigation measures, and adhering to specific strategies and actions outlined in the Climate Action Plan.
  - b. Encourage the adherence to LEED standards for construction to achieve environmental benefits through new development and redevelopment projects.
- CE-1.7 Improve energy and water conservation in the operation and design of existing and new public facilities and public landscaping areas.



*Encouraging visitors, employees, and residents to utilize walking, bicycling, and transit will help reduce automobile trips and support a vibrant community character.*

- CE-1.8 Encourage the implementation of energy- and water-efficient measures for commercial uses that exceed California Code, such as energy-efficient and water-efficient machinery for laundry operations; energy-efficient and water-efficient kitchens in restaurants; and storefront shading.
- CE-1.9 Encourage new development and building retrofits to incorporate as many water-wise practices as possible.
  - a. Encourage the replacement of existing ornamental lawns with native and drought-tolerant landscaping (see also Urban Design Element, Urban Forestry & Landscaping section).
  - b. Encourage use of recycled and/or landscape irrigation systems.
  - c. Ensure that any community greening or community garden projects utilize water-efficient landscape and irrigation design.
- CE-1.10 Encourage residential, commercial, and institutional development to implement composting for landscaping waste and compatible food waste.
- CE-1.11 Encourage restaurant uses to participate in commercial food waste recycling programs and utilize eco-friendly take-out containers and reusable drink containers.



- CE-1.12 Increase the community's overall tree canopy within the public right-of-way and development sites to provide air quality benefits and urban runoff management.
- CE-1.13 Design and construct development to retain significant, mature and healthy trees located within required landscape setbacks, and within other portions of the site as feasible (also refer to Urban Design Element, Urban Forestry & Landscaping section).
- CE-1.14 Plant street trees as part of a development where adequate right-of-way exists.
- CE-1.15 Plant or replace street trees to fill existing gaps and provide continuous, regularly spaced tree canopies.



*Incorporating trees, existing and new, into site design will help maintain and expand Old Town's urban forest, reduce energy use, and increase climate resiliency.*



*Landscaping areas provide opportunities to attenuate urban runoff impacts by capturing and filtering water contaminated by oils, chemicals, and bacteria that can run off from parking lots or other sources.*

## 9.2 Urban Runoff Management

Urbanization and development alter and inhibit the natural hydrologic process of surface water infiltration, percolation to groundwater, evapotranspiration, and transpiration. Urban runoff is surface water runoff generated from developed or disturbed land, and storm water is one significant type of urban runoff. Increases in impervious surfaces lead to fewer opportunities for water runoff to infiltrate into the ground. This increases the magnitude and duration of storm water flows, contributing to urban flooding, and results in sediment and pollutants entering watersheds and downstream water bodies. Urban runoff is the largest pollution source of San Diego's coastal beaches and near shore waters.

Old Town San Diego is located at the terminus of three watersheds (the San Diego River watershed, the Peñasquitos watershed, and the Pueblo watershed), which discharge into San Diego Bay and the Pacific Ocean. Because of the community's topography, which includes hillsides sloping downward from the Uptown Community to the San Diego River, storms can result in significant storm water flows along Juan Street and flooding at the base of the hills along Taylor Street and Pacific Highway. Improvements in the management of storm water runoff can help address flooding in the community during wet weather and assist regional efforts to protect water quality within streams, bays, and the ocean. Low Impact Development (LID) techniques are approaches to storm water and urban runoff management that increase the ability of water to infiltrate into the ground. LID techniques that can be implemented through development projects include reduction of impermeable surfaces and installation of bio-infiltration and bio-retention areas, green roofs, and permeable pavement.

Incorporation of storm water management facilities in the public right-of-way will further improve storm water management in Old Town. Storm drains have been installed along Juan Street to manage storm water flowing downhill from Uptown, and the Street Corridors and Gateways section of the Urban Design Element

recommends that storm water management features be implemented along Pacific Highway and Taylor Street to reduce flooding. These streets can incorporate LID features such as medians or parkways with bio-infiltration areas, permeable sidewalk pavement, and tree wells with filters that allow water to percolate into the ground instead of flowing directly into a storm drain.

## POLICIES

- CE-2.1** Incorporate Low Impact Development practices into building design and site plans that work with the natural hydrology of a site to reduce urban runoff, including the design or retrofit of existing landscaped or impervious areas to better capture storm water runoff.
- CE-2.2** Incorporate and maintain storm water best management practices in public infrastructure and private development projects, including streetscape improvements to limit water pollution, erosion, and sedimentation.
- CE-2.3** Prioritize Low Impact Development practices that encourage water infiltration to minimize reliance on storm drains that could be impaired by sea level rise.



*Site design that incorporates storm water bio-retention or filtration features that manage storm water runoff should be designed to be compatible with Old Town's historic character.*



*Healthy air quality is important to maintaining a sustainable living environment in Old Town.*

## 9.3 Air Quality

Interstates 5 and 8 are primary source of air pollution that affects Old Town. Old Town's residential uses existed before the freeways were constructed, and the Community Plan recognizes the importance of Old Town as a residential community. Air pollution diminishes as distance from the freeway increases. For residential and other sensitive-receptor land uses within 500 feet of a freeway, building design features can minimize the effect of air pollution. Building features that can attenuate air pollution include individual dwelling ventilation systems with HEPA filters, careful location of HVAC intake vents away from pollution sources, and/or fixed windows facing the freeway.

## POLICIES

- CE-3.1** Incorporate building features into new residential buildings located within 500 feet of the outside freeway travel lane to reduce the effects of air pollution.
- CE-3.2** Encourage Caltrans to plant trees in the landscaped areas in Caltrans right-of-way adjacent to I-5 and I-8 where feasible to assist in air pollution mitigation and noise mitigation.



*Casa de Carrillo, 1913. Photo courtesy of the San Diego History Center.*