

BEACON

SPOTLIGHT  
AWARD

WINNER

BEST PRACTICE  
ACTIVITIES



# City of Carlsbad

Sustainability Best Practice Activities



**ILG** INSTITUTE FOR  
LOCAL GOVERNMENT<sup>SM</sup>  
*Promoting Good Government at the Local Level*



# City of Carlsbad

California communities are leading the fight against climate change. From small projects to large-scale programs, cities and counties are making great strides to create healthy, sustainable and economically prosperous communities. Participants in ILG's Beacon Program serve as leaders in this effort, making measureable contributions to reducing energy and greenhouse gas emissions, and sharing their sustainability best practices.

This document represents a collection of activities your agency has completed in 10 areas of sustainability. While local governments have a wide range of choices available to address climate change, these activities represent the unique opportunities and values in your community. These voluntary actions are essential to achieving California's goals to save energy, reduce greenhouse gas (GHG) emissions and create more sustainable communities.

## SPOTLIGHT AWARD

SPOTLIGHT AWARD		SILVER LEVEL	GOLD LEVEL	PLATINUM LEVEL
Areas of Accomplishment				
	Agency GHG Reductions			
	Community GHG Reductions			
	Agency Energy Savings			
	Natural Gas Savings			
	Sustainability Best Practice Activities			2017
	Beacon Award			

Cities and counties throughout the Golden State should be proud of the accomplishments made through the hard work, innovation and collective community action. The Institute for Local Government applauds your achievements and thanks you for your continued participation in the Beacon Program.

The Beacon Program is sponsored by the Institute for Local Government and the Statewide Energy Efficiency Collaborative (SEEC). SEEC is an alliance between three statewide non-profit organizations and California's four Investor-Owned Utilities. The Beacon Program is funded by California utility ratepayers and administered by Pacific Gas and Electric Company, San Diego Gas and Electric Company, Southern California Edison and Southern California Gas Company under the auspices of the California Public Utilities Commission.





# Energy Efficiency and Conservation Activities

## Silver

1. Adoption of a 2006 policy that declares new facilities will be designed to be at least 25% more energy efficient than required by Title 24 Regulations. The policy calls for new city facilities to strive for LEED "Silver" certification or its equivalent and to generate a minimum of 10% of its energy demand onsite, whenever practicable and within a reasonable cost/benefit ratio.

## Gold

2. Development and adoption of City of Carlsbad Energy Roadmap (2014) that encompassed an in-depth energy audit and identified four distinct opportunities for the city to lead by example: saving energy in city facilities, greening the city fleet, developing employee knowledge of energy efficiency, and promoting commuter benefits to city employees.
3. Adoption of City of Carlsbad's Environmental Guiding Principles (2007) for the city to support efforts to reduce energy and greenhouse gas emissions and find new and more energy efficient methods for delivering services.

## Platinum

4. Development and adoption of City of Carlsbad Energy Roadmap (2014), which identifies opportunities to lead the community with innovative programs for energy efficiency and sustainability: leveraging planning and development authority; providing clean and efficient transportation options; marketing energy programs to residents, schools, and local businesses; and supporting green jobs and workforce training.
5. Adopted several Property Assessed Clean Energy (PACE) programs for both business and residential projects. For example, as of 05/16/17 California HERO has approved 782 projects, saving 56.5M kWh, 16.3K tons GHG, and 68.9M gallons of water.
6. Adoption of City of Carlsbad's Environmental Guiding Principles (2007) for enabling the community to design energy saving features such as solar energy systems into public and private projects.





# Water & Wastewater Systems Activities

## Silver

1. Water conservation efforts in city parks: recycled water is used at half of all of the city's community parks, including the five largest; dozens of "smart controllers" and water efficient irrigation systems are used and upgrades are ongoing in other irrigation controllers/systems; the city has seven artificial turf athletic fields and one artificial turf event area (2005 to present).

## Gold

2. Adoption of water efficient landscape ordinance that establishes requirements for planning, design, installation and maintenance of water efficient landscapes in new construction.
3. Adoption of Plant Policy that encourages incorporation of native and drought tolerant plant materials whenever possible.

## Platinum

4. Adoption of Water Conservation Policy that requires irrigation systems for all projects to be designed to use non-potable, treated recycled water, unless otherwise approved by the city. Graywater systems are encouraged to assist in on-site landscape irrigation.
5. Adoption of Urban Water Management Plan in June 2016 including potential impacts of climate change and demand management measures.
6. Participation in WaterSmart Checkup program in partnership with San Diego County Water Authority (SDCWA) to provide residential water conservation audits (2009 to present).





# Green Building Activities

## Silver

1. City Landscape Manual requires building projects in the city to create opportunities for installation of solar energy or optimize use of passive solar design features such as shade trees.

## Gold

2. In 2015, adopted Green Building policies in the Sustainability Element of the General Plan: promote energy conservation and retrofitting of existing buildings, adopt a construction and demolition waste recycling ordinance that requires all projects of specified criteria to divert from landfills, decrease the need for artificial climate control, promote outdoor lifestyles, and mitigate urban heat island effect.
3. Participation in the Sustainable Region Program (2009) with SANDAG, California Center for Sustainable Energy, and San Diego Gas & Electric to develop energy management plans and implement cost-saving energy measures for municipal facilities.

## Platinum

4. Water conservation efforts in city fixtures: about ¾ of city facilities have low flow toilets with plans to increase; waterless urinals have been installed in restrooms; most of the faucets are water saving models (2012 to present).
5. Adoption of Energy Conservation regulations stating that all new residential units shall include provisions specifically designed to allow the later installation of any system which utilizes solar energy as an alternative energy source.
6. Adoption of Green Building Code mandatory measures for non-residential and residential construction.





# Waste Reduction and Recycling Activities

## Silver

1. Recycling activities promoted: single-stream recycling bins at each desk and in agency facilities, double-sided printing, reusable water bottles, “mini bin” program - 5.5”x5.5” bins in all agency facilities reduce trash waste, use of scanners to distribute electronic copies, uploading of bid documents using online resources.

## Gold

2. Environmental Management Recycling and Trash division staff hosted the city’s annual household hazardous waste collection event at the farmer’s building parking lot. Approximately 1,000 Carlsbad residents participated and brought to the event products such as paints, cleaners, oils, batteries, needles, medication and pesticides. This year’s (2017) event is part of the city’s celebration of Earth Month, designed to raise awareness of more sustainable practices in Carlsbad.
3. Every year since 2008, the Recycling and Trash program has been awarded grant funds for used oil and used oil filter collection/recycling. Cal Recycle administers the Used Oil Payment Program (OPP) to provide opportunities for local governments to receive grant funds for used oil and used oil filter collection and recycling programs. Carlsbad will use these funds to increase public education and awareness, provide an annual collection event for residents, purchase and distribute free used oil recycling kits to “do-it yourselfers” and encourage certified collection centers in the city to accept used oil free of charge from residents.

## Platinum

4. The quarterly Recycling Champion program, a partnership between the City of Carlsbad and Waste Management, recognizes Carlsbad businesses for their exemplary recycling and waste reduction activities.
5. Trash & Recycling Guide available on the city website to provide residents with important information on waste and recycling services, and other recycling and diversion programs available in Carlsbad.
6. Waste Management residential services: on-call bulky items pick up, curbside cellphone and household battery collection, no-charge e-waste drop off at Waste Management’s recycling centers or on-call pick up of up to five e-waste items three times annually.







# Climate-friendly Purchasing Activities

## Silver

1. Purchasing policy requiring the use of products that incorporate recycled materials including but not limited to: paper products, construction supplies, automotive and road supplies, landscape materials and equipment, janitorial supplies, plastic materials and equipment, glass and rubber supplies. A 15% preference, not to exceed \$1,000 per contract, shall be given to recycled products.

## Gold

2. Adoption of policy to maximize energy conservation measures when purchasing equipment and products, e.g. "Energy Star" labeled products or equivalent.
3. Replacement of more than 7,000 high-pressure sodium street lights with energy-saving, high efficiency induction lamps. The lamps use 60% less energy and save city taxpayers an estimated \$300,000 a year in energy and maintenance costs.

## Platinum

4. Carlsbad doubled the size of its water recycling plant (2016)—Carlsbad has invested approximately \$55 million in recycled water projects to date, and infrastructure includes the water recycling plant, pipelines, four pumping stations and storage capacity totaling 35.5 million gallons. Because of this investment the city has more than doubled its recycled water consumption in the last 10 years. The Carlsbad Water Recycling Facility expansion also includes adding 18 miles of new pipe to the existing 79-mile recycled water distribution system and building a new 1.5 million gallon reservoir.
5. Replaced 15% of the city's fleet vehicles with hybrid models while reducing the overall size of the fleet.
6. Use of Propel Diesel HPR, made from 100% renewable inputs, in all fleet diesel vehicles—reduces fleet's GHG emissions by up to 80%.





# Renewable Energy and Low-Carbon Fuels Activities

## Silver

1. Installation of 720 solar panels at Alga Norte Community Park that generate 360,000 kWh per year and cut CO2 output by 6,838 tons over 25 years.

## Gold

2. Installation of 352 solar panels at the city's Safety Training Center—generate 195,000 kWh per year.
3. Installed electric vehicle charging stations at Stagecoach Park and Carlsbad Village.

## Platinum

4. Hydroelectric power system at the Maerke Reservoir—projected to generate ~2 million kWh of electricity per year (125% of CMWD's annual consumption).
5. Installation of bicycle racks/lockers and showers at City of Carlsbad facilities.
6. Participation in the development of the San Diego Regional Plug-in Electric Vehicle (PEV) Readiness Plan to support the growing market of PEVs in the San Diego region by enabling municipalities and others to address and resolve challenges of deploying charging infrastructure.





# Efficient Transportation Activities

## Silver

1. Participation in and promotion of Bike to Work Day 5/18/17. Hosting of seven pit stop locations within the city as well as a “Get Ready to Ride” event on May 17 featuring bike tune up services, demo bikes, and bike safety checks.

## Gold

2. During the month of October (2016), Traffic and Mobility Division staff made strides towards promoting smarter commuting by participating in the iCommuter Corporate Challenge in partnership with SANDAG. During the challenge, 36 employees logged 1,294 trips, burned 215,440 calories, reduced carbon emissions by 4.9 tons and saved \$6,143.42 on their commute.
3. Implementation of idling policy for city police vehicles to decrease GHG emissions.

## Platinum

4. Implementation of a state-of-the-practice traffic signal management system that integrates traffic signals in the city to a single access point, allowing city staff to monitor and update signal timings to improve safety, improve traffic flow and reduce idling.
5. Completion of Bicycle Master Plan in 2007, which includes the implementation of approximately 6.5 miles of new Class I Bike Paths, 2.8 miles of new Class II Bike Lanes, and 4.2 miles of new Class III Bike Routes. It also includes programs such as bicycle parking improvements, multi-modal (transit) support facilities, bicycle safety and education programs for cyclists and motorists, safe routes to schools programs, community and employer outreach programs, continued development of bikeway network maps, and bike-to-work and school day events, among others.
6. Completion of a Pedestrian Master Plan in 2008.





# Land Use and Community Design Activities

## Silver

1. Land Use Vision in city's General Plan: greater mix of uses in closer proximity, density linked by public transportation, create opportunities for vertical mixed-use development, and develop recreation facilities closer to/within existing neighborhoods.

## Gold

2. Open Space, Conservation and Recreation Element of the General Plan that guides enhancement of resource conservation, ensures adequate open space for conservation and recreation, and promotes accessibility to recreation areas.
3. Sustainability Element of the General Plan that sets goals for continued pursuit of sustainable energy sources and use of the CAP to implement energy conservation measures.

## Platinum

4. Mobility Element of the General Plan sets policies for designing facility improvements to promote biking, walking, safer street crossings, and attractive streetscapes; considering innovative design solutions such as traffic circles, roundabouts, separated bicycle lanes, and more; and working with adjacent cities and regional organizations to improve connectivity.
5. Adopted a Climate Action Plan that included a baseline GHG inventory, streamlines CEQA review, and details measures and actions to reduce GHG emissions through 2035.
6. Envision Carlsbad initiation engaged the community in envisioning and planning through citizens' committee (met 18 times over 3 years), community-wide surveys (7,167 responses), community workshops (six), stakeholder meetings (80 participating organizations), and a website.





# Open Space and Offsetting Carbon Emission Activities

## Silver

1. Annual Arbor Day volunteer planting event has allowed the City of Carlsbad to retain its Tree City USA distinction from the National Arbor Day Foundation for 13 consecutive years.

## Gold

2. Habitat Management Plan adopted in 2004 to preserve natural land for plant and animal species. As of the latest reporting cycle, nearly 6,000 acres have been gained in the preserve system.
3. Growth Management Plan approved by residents in 1986 that protects nearly 40% of the city as open space.

## Platinum

4. Parks and Recreation Department manages Carlsbad's parks, trees, and medians, which include more than 19,000 trees and 65 acres of landscaped medians. The Community Forest Management Plan sets guidelines that seek to provide maximum canopy cover and include rich species and age diversity.
5. Participation in the Carlsbad Community Gardens Collaborative to support a network of community gardens throughout the City of Carlsbad, including two offered by the Parks and Recreation Department.
6. Sustainability Element of the General Plan that sets policies to seek ways to partner with community supported agriculture programs, support home gardening and small-scale urban farming, incorporate additional community gardens, and implement a healthy food purchasing policy for city facilities.





# Promoting Community and Individual Action Activities

## Silver

1. The Chamber of Commerce Sustainability Committee hosted an informational workshop on the City of Carlsbad's sustainability initiatives and the business case for going green. Mike Grim of Environmental Management detailed the measures in the Climate Action Plan and described the various incentives, rebates and programs available to assist businesses with engaging in energy efficiency, renewable energy, electric vehicles, and employee commuting activities. The workshop was attended by over 65 people, including Mayor Matt Hall and Council Member Cori Schumacher, as well as Chamber President Ted Owen and representatives from SDG&E, Sierra Club and Carlsbad Sustainability Coalition.

## Gold

2. Over 160 Carlsbad residents participated in the first Earth Day Festival (2017) at the Agua Hedionda Lagoon Foundation, sponsored by the city's Environmental Management Recycling and Trash program and the Ecology Center. Residents learned about compost and how to build and maintain healthy organic soil using kitchen food waste and yard waste. They also learned how to grow herbs and vegetables with limited space and children created take-home ecofriendly crafts. This year's event is part of the city's celebration of Earth Month, designed to raise awareness of more sustainable practices in Carlsbad.
3. On Saturday April 22<sup>nd</sup> 2017, Earth Day, the City of Carlsbad Watershed Protection Program hosted a site for the 15th Annual Creek to Bay Cleanup at Tamarack State Beach. The Creek to Bay Cleanup is organized by I Love a Clean San Diego, and encompasses over 100 cleanup sites. Over 90 volunteers at the city's Tamarack State Beach site cleaned about two miles of beach, removing almost 300 pounds of trash and 50 pounds of recyclables. Many volunteers also brought their own reusable work gloves and buckets, bringing the event closer to being zero waste.

## Platinum

4. Climate Action Plan sets actions for communications staff: Promote installation of photovoltaic systems, building cogeneration, energy retrofits, commissioning, and rainwater and greywater systems.





## Promoting Community and Individual Action Activities

### Platinum

5. Environmental management staff recently teamed up with the Climate Science Alliance and Batiquitos Lagoon Foundation to host a Climate Kids field trip at the Batiquitos Lagoon Nature Center. Climate Kids is a program of the Climate Science Alliance that teaches students about climate change through art, storytelling and science. The event was attended by over 65 6th graders from Carmel del Mar elementary school. It involved an exploratory nature walk, instructional talk about the lagoon's food web, demonstration of the Foundation's watershed model, and arts and crafts related to the birds, fish and plankton of Batiquitos Lagoon.
6. Participation in the Climate Science Alliance South Coast, a trans-border partnership to create and support a network of leaders, scientist, and natural resource managers focused on sharing ecosystem-based resiliency approaches to safeguard communities and natural resources from climate change risks. Since March 2016 the CSA has led or participated in 11 trainings, 24 community events (10 of which were in Mexico), and 12 conferences .





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