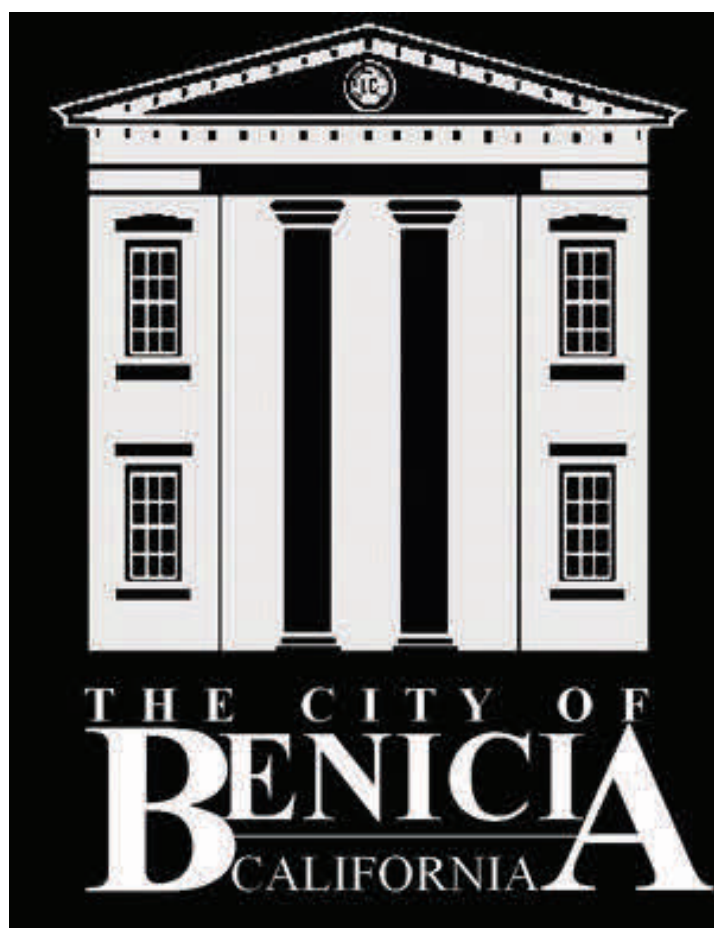




City of Benicia

Sustainability Best Practices Activities



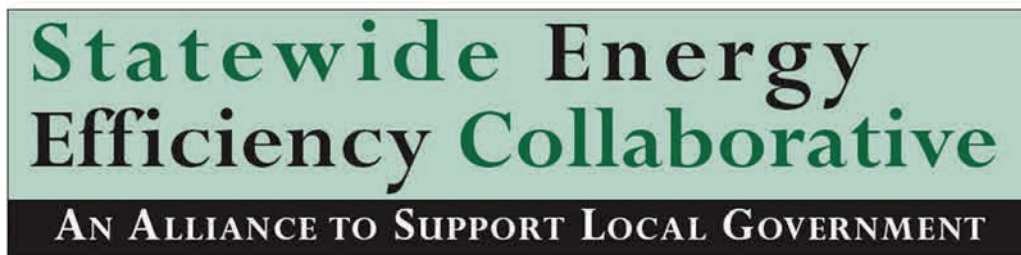
Platinum Level Award Winner



About This Document

This document tracks and shares local agency best practice activities completed and counted as part of a city or county's participation in the climate change and sustainability recognition program, the Beacon Award: Local Leadership toward Solving Climate Change. The Beacon Award is a statewide program recognizing cities and counties that are working to reduce greenhouse gas emissions, save energy and adopt policies and programs that promote sustainability.

The Beacon Award is sponsored by the Institute for Local Government and the Statewide Energy Efficiency Collaborative. The Statewide Energy Efficiency Collaborative (SEEC) provides support to cities and counties to help them reduce greenhouse gas emissions and save energy. SEEC is an alliance between three statewide non-profit organizations and California's four Investor-Owned Utilities. It builds upon the unique resources, expertise and local agency relationships of each partner.



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 Activity

Level	Energy Efficiency and Conservation Activity	Reported
Silver	1. Partnered with WattzOn to conduct residential energy and water assessments and distribute compact fluorescent light bulbs (CFLs). Over 200 homes participated in the program. WattzOn conducted assessments with the assistance of high school students participating in the Students for the Advancement of Global Entrepreneurship (SAGE) Program.	5-2014

Level	Energy Efficiency and Conservation Activities	Reported
Gold	1. Partnered with Strategic Energy Innovations and 6 other small cities to implement the Small Communities Climate Action Plan, a Pacific Gas & Electric Company (PG&E) Innovator Pilot Program. The city audited major agency buildings and facilities to work toward quantifying energy use and identifying opportunities for energy savings. 2. Retrofitting approximately 2,200 high-pressure sodium streetlights to LED and induction fixtures. A portion of these retrofits use Energy Efficiency Conservation Development Block Grant (EECBG) funding.	5-2014

Level	Energy Efficiency & Conservation Activities	Reported
Platinum	1. The City of Benicia made use of PortfolioManager and UtilityTrac energy management software to monitor real-time energy use in agency buildings, to identify energy usage patterns and abnormalities. Reports on the evaluation of energy conservation measures in city facilities are available as supporting materials.	5-2014



Level	Energy Efficiency & Conservation Activities	Reported
Platinum	2. Contracted with an energy services company that will install interior and exterior energy efficiency upgrades at eight city facilities. 3. Participated in the AirCare Plus Program and an audit of agency building heating, ventilation and air conditioning (HVAC) equipment to ensure they are operating as efficiently as possible. Implemented retrofits where feasible. 4. Adopted a Property Assessed Clean Energy (PACE) Resolution 09-126 and is currently assessing the potential for the creation of a financing district and implementation of a program.	5-2014





Water & Wastewater Systems Activity

Level	Water & Wastewater Systems Activity	Reported
Silver	1. Distributed low-flow showerheads and low-flow hose nozzles at various community events, including Earth Day celebrations in 2009-2011.	5-2014

Level	Water & Wastewater Systems Activities	Reported
Gold	1. Implemented methane capture for energy production at the wastewater treatment plant. The energy produced powers the odor scrubber at the facility. 2. Installed an Evapotranspiration System at eight city locations, five of which are online and functioning. The system measures wind, ground moisture and air temperature and then determines if irrigation water should be dispersed.	5-2014

Level	Water and Wastewater Systems Activities	Reported
Platinum	1. Updated Emergency Water Conservation Plan to manage water use during times of shortage. 2. City installed solar systems at three pump stations and at the water treatment plant to offset energy use. 3. Began implementing the Benicia Residential Plumbing Fixture Upgrade Program to encourage installation of water conservation measures in homes including: toilets, clothes washers, laundry to landscape graywater systems, and thermostatic shut off, low-flow shower heads. View application, guidelines and additional program information at SustainableBenicia.org by clicking on "Residents" or visit BeniciaSavesWater.org. The climate action plan coordinator is working with the city's Public Works Department to ensure that all messaging and branding is consistent and that residents understand all available resources to help them conserve water. 4. The city provides on-going funding for a portion of the county administered water rebate and lawn buy-back program, the city covers 25% of all rebates and marketing costs. City staff is currently seeking to increase funding for the county administered lawn buy-back program for residents who convert sod or grass to drought-tolerant landscaping. Supporting information on this program is available here: http://www.solanosaveswater.org/rebates/.	5-2014



Level	Water and Wastewater Systems Activities	Reported
Platinum	5. Recently upgraded the city park irrigation systems to incorporate smart irrigation technology systems that save water and energy. 6. Continued to use compost and mulch in agency landscaping as a water conservation measure.	5-2014





Green Building Activity

Level	Green Building Activity	Reported
Silver	1. Renovated the community center and achieved LEED Gold Certification.	5-2014

Level	Green Building Activities	Reported
Gold	1. City granted \$30,000 to a non-profit organization, GRID Alternatives, to complete five solar installations on low-income qualifying homes. 2. The city worked with a student intern to create the Benicia chapter of the Bay Area Green Business Program. All sector checklists have been created and auditors (PG&E, city, waste company and the county) have been identified. The student intern was recently hired to complete a pilot phase of the program at three businesses in the city.	5-2014

Level	Green Building Activities	Reported
Platinum	1. As part of the city's Residential Solar Incentive Program; participants were required to complete a home energy and water assessment provided by a third party company at no cost to the resident. The city is also offering no cost laundry to landscape gray water kits and requires that participants complete an energy and water assessment provided in partnership with Rising Sun Energy and funded by PG&E. 2. The city's Business Resource Incentive Program (BRIP) provides \$10,000 grants and no and low interest loans to business owners in the industrial park to make efficiency upgrades, install renewable energy technologies, conserve water, reduce waste, and transition to alternative fuel vehicles. This program also offers technical assistance to business owners in the form of no cost sustainability assessments. 3. The city opted in to two Property Assessed Clean Energy (PACE) financing districts: CaliforniaFIRST and HERO. CaliforniaFIRST is currently available and HERO will likely launch in November 2014; they are currently going through the legal validation process.	5-2014





Waste Reduction and Recycling Activity

Level	Waste Reduction Activity	Reported
Silver	1. The city renegotiated its waste contract to include additional recycling pick-up days for residential and commercial customers.	5-2014

Level	Waste Reduction Activities	Reported
Gold	- Partners with the waste hauler to promote free home compost workshops four times per year to educate customers about how to compost, benefits of composting, and uses of compost. - Promotes the waste hauler's free compost give-away for residents two times a year to collect three cubic feet of material that can be used in their gardens. The waste hauler also provides participants with a 50% discount for one home compost bin.	5-2014

Level	Waste Reduction Activities	Reported
Platinum	- Promotes waste haulers two Reuse Days when material is collected and recycled in accordance with the following hierarchy: reuse as is (where energy efficiency is not compromised); disassembly for reuse or recycling; recycle; disposal. - The city recycles old pavement when completing street resurfacing projects. - City hall employees currently compost all food scraps and soiled paper goods in the employee kitchen/break room.	5-2014





Climate-friendly Purchasing Activity

Level	Climate-Friendly Activity	Reported
Silver	1. The City adopted an Environmentally Preferable Purchasing (EPP) Policy specific to source reduction, recycled content products, energy and water savings, green building, landscaping, toxics and pollution, forest conservation and agricultural bio-based products.	5-2014

Level	Climate-Friendly Activities	Reported
Gold	1. The EPP requires the purchase of remanufactured products such as laser toner cartridges, tires, furniture, equipment and automotive parts whenever practicable, but without reducing safety, quality or effectiveness. 2. Requires all products purchased by the city and for which the U.S. EPA Energy Star certification is available meets Energy Star certification when practicable.	5-2014

Level	Climate-Friendly Activities	Reported
Platinum	1. The EPP requires the city to request that vendors eliminate packaging or use the minimum amount necessary for product protection, to the greatest extent practicable. 2. The EPP requires that paper products purchased contain the highest postconsumer content practicable, but no less than the minimum content standards established by the U.S. EPA guidelines. 3. The city and its Community Sustainability Commission created a five part educational workshop series that educate the public about climate-friendly procurement opportunities. As of May 2012, thee series have been completed. 4. Benicia has an existing fleet vehicle procurement policy that establishes standards for purchasing low-emission vehicles whenever possible. 5. Benicia Parks and Recreation Department plants only low-water species at city parks in accordance with the city's Environmental Preferable Purchasing Policy.	5-2014





Renewable Energy and Low-Carbon Fuels Activity

Level	Renewable Energy and Low Carbon Fuels Activity	Reported
Silver	1. Hired a Renewable Energy Project Manager.	5-2014

Level	Renewable Energy and Low Carbon Fuels Activity	Reported
Gold	1. The city replaced walking signals with solar power signals. 2. Converted six gasoline-powered vehicles in its fleet to hybrid vehicles. Two additional plug-in hybrid vehicles were donated to the city.	5-2014

Level	Renewable Energy and Low Carbon Fuels Activity	Reported
Platinum	1. Participates in the Solano Transportation Authority (STA) Alternative Fuel Vehicle Technical Working Group with the mission to assist STA in developing a comprehensive alternative vehicles plan for the county. 2. Purchased a compressed natural gas (CNG) bus to be used for the city public transit system. The city recently joined with SolTrans and no longer implements its own transit system. Therefore, the bus was given to SolTrans for future use. 3. The city developed and successfully implemented a residential solar incentive program. It partnered with five local solar companies to provide matching per watt rebates. The issued flat incentives so long as systems were 1.5kw or greater. Thirty-four systems were installed as a result of the program. Additional information is available on SustainableBenicia.org . 4. City installed 1.67MW solar project covering ten sites. All installations were complete as of October 2012. More information on this project is available here: http://live.deckmonitoring.com/?id=city_of_benicia . 5. The city installed a dual-connector compatible electric vehicle fast charger powered by a 76KW solar system (1 of the 10 sites described above) that is also connected to a 40kWh battery tower. An innovative software platform analyzes energy use, time of day and energy rates and sends a signal to the charger indicating whether it should charge from solar, grid or the battery tower. Eventually, the city hopes to integrate the battery storage on the building side and use it to power essential building functions during emergencies. A ribbon cutting event happened on June 18, 2014 and the station is open to the public.	5-2014





Efficient Transportation Activity

Level	Efficient Transportation Activity	Reported
Silver	1. Completed a number of bike and pedestrian improvement projects that include: bulb-outs, high visibility cross walks and bike lanes. Most notably, the city completed a Class I bike over-crossing that transverses I-780 and connects bicyclists to the state recreation area and nearby Vallejo.	5-2014

Level	Efficient Transportation Activities	Reported
Gold	1. Currently designing Express Bus Route Support projects that will include: high visibility crosswalks; tree-lined median; new trees and landscaping; improved bus stop environment; new pavement overlay; bicycle lockers; new bicycle lane; and curb extensions. 2. Purchased 12 bike racks to be installed at six locations in the city including city hall.	5-2014

Level	Efficient Transportation Activities	Reported
Platinum	1. The city collaborates with other local agencies to coordinate planning goals and take advantage of opportunities to fund projects that help the city implement Climate Action Plan strategies. For example, the city collaborated with Solano Transportation Authority to identify funding for a Smart Growth, intersection improvement project that included the addition of Class II bike lanes near an elementary school. The project was also nominated as an approved project in the 2012 Safe Routes to School Plan update. 2. The Community Sustainability Commission helped create online resource for bike and safe routes to school maps for community members. For more information visit, http://sustainablebenicia.org . 3. Participated in the Solano/Napa Commuter Challenge, which challenged city employees to use a commute alternative (carpool, vanpool, bus, train, ferry, bicycle, walk) at least 30 times from April 1 through June 30. 4. Promoted Bike to Work Day by hanging posters and distributing brochures and posters to local businesses and schools. City offered financial incentives to the employee who biked the farthest distance and biked the most days to work in May. Other participants were also recognized.	5-2014





Land Use and Community Design Activity

Level	Land Use and Community Activity	Reported
Silver	1. Adopted a resolution approving a grant agreement between the city and the Coastal Conservancy for the development of the Benicia Urban Waterfront Restoration Plan. This plan will address many issues including potential effects of sea level rise on the parkland.	5-2014

Level	Land Use and Community Activities	Reported
Gold	1. The Consulting Climate Action Plan Coordinator is currently developing a project tracker that will measure reductions of greenhouse gas emissions, energy savings, and cost savings associated with completed, pending, and future city and community projects. 2. The city council approved a mitigated negative declaration for the new Benicia Industrial Park Bus Hub. The project concept/design has undergone CEQA review. This Hub will provide a much needed regional transit hub that will better serve the Benicia Industrial Park and provide enhanced park and ride, public transportation and electric vehicle charging opportunities (two stations, funded by a California Energy Commission grant) for the greater Solano County region. Specifically, the bus hub will accommodate more ridership of a bus route that travels along Interstate 680 from Fairfield to the Pleasant Hill Bay Area Rapid Transit station. This project is expected to break ground in Spring 2015	5-2014

Level	Land Use and Community Activities	Reported
Platinum	1. City is currently implementing two PACE programs (HERO and California FIRST) that offer financing for installation of photovoltaic and/or solar hot water systems on new or existing residential and commercial buildings and energy efficiency retrofits on existing buildings. Staff memo/ recommendation and resolutions relating to PACE programs is available as supporting documentation. 2. The city received a \$25,000 Transportation for Clean Air Grant allowing it to strip two additional miles of Class II and Class III bike lanes connecting existing bike lanes on Rose Drive, a busy street that connects the east and west side of the city and runs directly in front of Matthew Turner Elementary School. This project was completed in 2013.	5-2014



Level	Land Use and Community Activities	Reported
Platinum	3. The recently created Benicia Bicycle Club received a \$20,000 grant to increase ridership and bicycle safety in the city. This group will identify safe routes, post additional route signs, host bicycle repair clinics and conduct various educational events. The Club also conducted a "How Bikeable is Benicia" survey to assess the needs of the community. Finally, the group will create a marked route where bikers can view various sustainability projects in the city, i.e. the city's solar sites.	5-2014





Open Space and Offsetting Carbon Emission Activity

Level	Open Space Offsetting Carbon Emission Activities	Reported
Silver	1. Helped establish the Benicia Tree Foundation. The Foundation formed a partnership with Benicia Unified School District and worked to identify best practices for planting and maintaining urban trees. The Foundation also created a special program to support tree planting and community building efforts.	5-2014

Level	Open Space Offsetting Carbon Emission Activities	Reported
Gold	1. Designated as a Tree City USA in 2009—facilitated by a partnership between the city and the Rotary Club of Benicia. 2. Supports the Benicia Farmer's Market and the purchase of local and organic produce. The Community Sustainability Commission Education + Outreach workgroup also promotes the Farmer's Market.	5-2014

Level	Open Space Offsetting Carbon Emission Activities	Reported
Platinum	1. Received grant funding to conduct the Urban Waterfront Enhancement Master Plan which, if implemented, would create a more sustainable park and waterfront by water-efficient landscaping and water efficient technology. 2. Assisted efforts by community groups and non-profit organizations, including Benicia Community Gardens, a local non-profit, to create community gardens. Staff time is spent in a supportive role of the gardens. beniciacommunitygardens.org/ 3. Participates in and funds regional tree planting efforts and outreach campaigns to mobilize and encourage the community to plant trees. In 2013, the Community Sustainability Commission (city council appointed commission) funded the Benicia Tree Foundation. Supporting information is available at beniciatrees.org . 4. The city was recently awarded a California Coastal Conservancy Climate Ready Grant (\$150,000) to conduct a vulnerability assessment and develop an adaptation plan. This project will assess climate change related risks to community assets including open space, state recreation areas and habitat. The plan will include strategies to mitigate risks to those areas and preserve public assets.	5-2014





Promoting Community and Individual Action Activity

Level	Promoting Community and Individual Action Activities	Reported
Silver	1. Surveyed businesses to understand attitudes related to climate change when developing the Sustainable Business Management Program.	5-2014

Level	Promoting Community and Individual Action Activities	Reported
Gold	1. Working with WattzOn and Carbon Lighthouse to develop and implement the Benicia Commercial Building Pilot Program. This program will educate business owners about the benefits of energy efficiencies and retrofits and on-site energy production. Forty businesses will receive no-cost energy assessments and recommendations for retrofits along with financing mechanism assistance. Two businesses will receive assistance to complete the recommended retrofits. 2. The city and the Consulting Climate Action Plan Coordinator are currently developing a list of Climate Action Plan strategy priorities that are ranked based on multiple benefits including: sector addressed greenhouse gas emission reduction potential, financial feasibility, timeliness, consistency with city approvals and Community Sustainability Commission input.	5-2014

Level	Promoting Community and Individual Action Activities	Reported
Platinum	1. Created the Community Sustainability Commission (CSC) that is charged with implementing the Climate Action Plan. The CSC created an Education + Outreach workgroup that enlists participation from schools, service groups and business organizations as well as other community partners. The workgroup partnered with Dominican University to host a five educational workshops, purchase sustainability-focused educational books and DVDs for the Benicia Public Library and help organize Earth Day events. 2. Currently developing a Sustainable Benicia website that will provide an opportunity for interested residents to stay engaged in the sustainability projects and programs, educate residents and business owners about actions they can take to address climate change and reduce operating costs, various sustainable-focused events and various other resources. 3. Host sustainability related informational displays at City Hall that educate residents about energy and water conservation practices and green building practices. These boards rotate depending on the time of year.	5-2014



Level	Promoting Community and Individual Action Activities	Reported
Platinum	4. Developed and began implementing the Benicia Green Business Program, the local chapter of the Bay Area Green Business Program. The Program assists local business in adopting sustainable practices by applying to be certified and then filling out a sustainability questionnaire. The city is working with PG&E, city staff, Republic Services and others to assess businesses who wish to be certified. This process has also been rolled into the city's existing Business Resource Incentive Program (a revolving loan sustainability program) so that participants can receive deserved recognition for their efforts. 5. Launched SustainableBenicia.org to educate and inform Benicia residents about a variety of sustainability initiatives. This is a one-stop-shop for all things related to the City's Climate Action Plan and other sustainability projects.	5-2014





BENICIA CLIMATE ACTION PLAN

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BASELINE EMISSIONS INVENTORY

The purpose of an emissions inventory is to identify and categorize the major sources and quantities of greenhouse gas (GHG) emissions produced by the City's residents, businesses, and municipal operations. City staff completed Benicia's baseline inventory for year 2000 in September 2008.

The inventory served as the basis for developing the Climate Action Plan and for setting GHG reduction goals for 2010 and 2020. Future

COMMUNITY-WIDE EMISSIONS

Community emissions are organized into the following sectors: Residential, Commercial/Industrial, Transportation, Off-Road Equipment, Waste, and Water Supply, Treatment, and Delivery. Local Government Operations are included as a subset of community emissions, but are also measured separately to allow the City to effectively plan and implement reduction programs that address emissions it has the most control over.

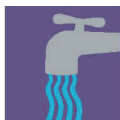
LOCAL GOVERNMENT EMISSIONS

Local Government Operations emissions are organized into the following sectors: Buildings, Streetlights and Traffic Signals, Vehicle Fleet and Off-road Equipment, Employee Commute, Water Treatment, Water Delivery, Waste, and Other (paint shop, generators, and other small emissions sources).

In 2000, the City's total emissions were

CLIMATE ACTION PLAN OVERVIEW

The City utilized the data collected in the Community-wide and Local Government Operations inventories to identify and categorize the major sources and quantities of GHG emissions. The data provides a framework on which to base objectives and strategies that specifically address Benicia's emissions sources. The Climate Action Plan (CAP) organizes these objectives and strategies into the following focus areas:





INSTITUTE FOR LOCAL GOVERNMENTSM

Promoting Good Government at the Local Level

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