BEACON SPOTLIGHT AWARD WINNER
BEST PRACTICE ACTIVITIES

City of Arcata

Sustainability Best Practice Activities

INSTITUTE FOR LOCAL GOVERNMENT℠
Promoting Good Government at the Local Level

City of Arcata

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 Areas of Accomplishment	**SILVER LEVEL**	**GOLD LEVEL**	**PLATINUM LEVEL**
Agency GHG Reductions			
Community GHG Reductions			
Agency Energy Savings		2013 (12%)	
Natural Gas Savings	2015 (8%)		
Sustainability Best Practice Activities	2013		2015
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.

INSTITUTE FOR LOCAL GOVERNMENT℠
Promoting Good Government at the Local Level

Statewide Energy Efficiency Collaborative
Supporting California local governments

Energy Efficiency and Conservation Activities

Silver
1. The city upgraded lighting in its facilities, including switching to T-8 and low ballast factor lighting, converting exit signs to LED and converting exterior lighting to high-pressure sodium bulbs.

Gold
2. The city worked with Redwood Coast Energy Authority to audit all city facility exterior lights for future upgrades to dark sky friendly LED lighting. Work for the corporation yard exterior lights was completed in 2014-15.
3. The city completed a streetlight LED retrofit in January 2015. The estimated KWH savings are 200,189 a year.

Platinum
4. The city converted Arcata Marsh Interpretive Center interior lights to LED in 2015. The estimated savings are 150 KWH/yr.
5. In November 2012, citizens in the City of Arcata passed Measure I, electing to levy a tax of 45% on excessive electricity use in residential households. The goal of the tax is to assist the city in meeting its adopted greenhouse gas emission reduction goals, to align the City of Arcata with emerging California energy policy and to create a disincentive for excessive or as PG&E describes it “egregious” use. Since the implementation of the tax, overall electric use in Arcata has declined—houses charged the tax monthly usage has declined from a high of 366,972 KWH the first month the tax was levied (November 2013) to under 250,000KWH in 2015. Total KWH usage has declined from a high of 8,353,096 KWH in December 2013 to close to 7,000,000 in 2015.
6. The city adopted the goals of the national “Energy Star Program” (or its successor programs) for all city construction projects and all construction projects assisted by grants for which the city is an applicant. These goals include achieving a minimum of 15% greater energy efficiency than would a building designed with existing Title 24 standards.
7. Using the ECBG program, the city upgraded the city hall energy management system (EMS) and the D Street community center HVAC system. Estimated energy savings for the EMS upgrade is 62,511 kWh/yr. Estimated energy savings from the D Street HVAC upgrade is 540 kWh/yr.

Water & Wastewater Systems Activities

Silver
1. The city has been working to implement energy saving features in its facilities and operations. These measures include installation of premium efficiency motors with variable frequency drives where applicable when the existing motors wear out or require rewinding.

Gold
2. In 2011, the city installed a dissolved oxygen probe and relay in oxidation pond 1 to control the aerators. Instead of relying on a person to arbitrarily turn the aerators on and off based on current weather conditions, each bank of aerators is programmed to turn off when dissolved oxygen reaches a set concentration and to remain in the off position until a set low level dissolved oxygen concentration is reached. The dissolved oxygen controlled aerator system ensures that the city is not mechanically aerating the oxidation pond during periods when photosynthesis and wind are contributing ample dissolved oxygen for treatment needs.
3. In 2011, the city installed variable frequency drive pumps in treatment marshes five and six to assist the city in naturally treating the community's water.

Platinum
4. In 2012, the city successfully negotiated a new national pollutant discharge system permit which allows for the wastewater treatment plant to operate in split basin mode without chemical disinfection of the wastewater upstream of the treatment wetlands. There is a considerable reduction in chemical usage in split basin mode. Since, 2013, the wastewater treatment plant has been operated in split basin mode for a portion of the year. In split basin operation there is a reduction in pumping because the wastewater travels through a single-pass of the treatment plant prior to discharge. Under the normal, combined-basin mode a portion of the wastewater is re-circulated through the treatment wetlands and pumped back to the chlorine contact basin.
5. In 2012, the city replaced a 150,000 gallon distribution storage tank with a 175,000 gallon tank. The increased capacity allows the city to increasingly avoid peak demand pumping of potable water in the distribution system.

Water & Wastewater Systems Activities

Platinum
6. The City of Eureka and the McKinleyville Community Services District provides redundancy in the region-wide potable water system to help ensure resiliency after an emergency and offer additional flexibility for daily operations. The project increases the reliability of pressure throughout the Aldergrove Industrial area. In the event of an earthquake or other emergency, these connections help ensure that the regional water system remains in service. They will also help to ensure that clean, potable water can be provided to the regional population during routine maintenance and repair projects. Adding the three valves at this connection prevents water loss in an emergency if breaks occur upstream or downstream from the connection to Humboldt Bay Municipal Water District's line.
7. In 2014, the city partnered with the Redwood Coast Energy Authority (RCEA) to directly install water saving measures in homes and businesses served by the City of Arcata Water Department. As part of the *Energy Watch Program*, RCEA visits local homes and businesses, provides a no-cost consultation, and directly installs energy saving measures. The City of Arcata water department provided funding which was used to encourage residents of the city to install water saving measures. This funding was used to enhance the offerings of the Energy Watch program to install hot water saving faucet aerators and low flow showerheads for customers served by the City of Arcata Water Department.
8. Construction is complete for the *Samoa Sewage Lift Station Rehabilitation Project* at 1721 Samoa Boulevard. The new sewage lift station with energy efficient pumps and motors started successfully on December 10, 2010 and is now fully operational. The previous, aging sewage lift station that was installed in 1968 has been taken offline and decommissioned. *The Samoa Sewage Lift Station* pumps approximately 60% of Arcata's wastewater flow.

Green Building Activities

Silver
1. In an effort to lead by example, the city has installed two solar electric systems on city facilities. These include a 12.1 kilowatt grid-tied, rooftop solar photovoltaic system installed at city hall and a 2.3 kW grid-tied, rooftop solar PV system at the Arcata Marsh Interpretive Center.

Gold
2. The city is working in partnership with Humboldt State University and Arcata High School to retrofit five conventional parking lots with low impact stormwater designs to infiltrate, retain and treat stormwater runoff to improve water quality and stream hydrology (volume and velocity) in Arcata's most developed watersheds that provide habitat for native fish. The project's education and outreach components include: a demonstration parking lot in downtown Arcata with interpretative signage to educate the greater community by showcasing low income development benefits, Humboldt State University and Arcata High School student and faculty participation in pre and post project monitoring and reporting.
3. Retrofit of drainage for the portions of Arcata High School's parking lot runoff and for the 16th Street neighborhood to provide infiltration and treatment on city owned right of way at the end of M Street and along Alliance prior to the water flowing to Jolly Giant Creek. The approximate treatment area will be approximately 1000-1500 ft.

Platinum
4. Arcata funded projects must meet a 15% higher than Title 24 Building Code Energy Efficiency requirements.
5. The city generates Class A biosolids compost and uses that in city restoration and park projects to enhance the soil and reduce fertilizer and water use.
6. The construction of a new roadway from Alliance to Foster Ave. will provide more direct connectivity between Highway 101 and Arcata's northwest neighborhoods. This project includes a bicycle/pedestrian path and low impact development features parallel to the road's entire length.
7. Provide education and training for city staff, commissioners, committee members, and developers in green building standards by working with regional partners to develop trainings on smart growth, complete streets, transit-oriented design and low impact development.
8. The city funded projects must meet a 15% higher than Title 24 building code energy efficiency requirement.

Waste Reduction and Recycling Activities

Silver
1. The City of Arcata adopted several waste diversion programs waste diversion programs within the city include mandatory universal curbside solid waste and recycling, brush waste drop off program and deeply discounted back yard composting bins. There is ongoing education for all of the above options and the above mentioned programs.

Gold
2. The City of Arcata requires that all construction and demolition projects include a waste diversion plan to reduce, reuse and recycle waste materials. A waste management plan including analysis of waste, landfill options, alternatives to disposal, materials handling procedures and transportation is required and a final report must be submitted.
3. The City of Arcata has developed a voluntary green waste pick-up service that offers curbside collection of green waste on a bi-weekly basis for all customers within the franchise area that have signed up for the service. Customers must sign up for a minimum of 12 months at a rate of $4 per month. Green waste means: grass clippings, leaves, vegetation, brush and tree clippings, Christmas trees, unpainted wood, lumber, wooden shingles and pallets (broken down).

Platinum
4. The city continues to support waste reduction through the Reusable Bag Ordinance. The ordinance discourages the use of single use paper bags and bans use of single use plastic bags. It went into effect February 2014 and additional requirements went into effect August 2014.
5. The city instituted a ban on sale/use of expanded polystyrene in the city. City council unanimously voted to ban expanded polystyrene in May 2015. The ordinance requires local food establishments and retail sellers to stop using expanded polystyrene by Oct 1, 2015.
6. The city requires all special events to provide recycling and waste diversion as well as grey water collection stations.
7. In 2010, the city began the “Don’t Dump and Run Campaign.” The city actively works with Humboldt State University and area landlords to encourage students to resell or donate unwanted usable items and recycle appropriate materials instead of throwing them away.

Climate-friendly Purchasing Activities

Silver
1. Joining efforts with Humboldt State University, Arcata has vowed to limit and eventually cease supporting industries that are environmentally concerning through disinvestment.

Gold
2. The city purchased two new Gillig 35 foot transit buses that meet California Air Quality Board (CARB) standards and replaced older buses that fulfilled their mandatory 12 year use cycle.
3. The City of Arcata Police Department and Environmental Services Department purchased one smart car each in 2014 and 2015, respectively.

Platinum
4. The city added flex vehicles to the police fleet to replace other unleaded vehicles. One 2011 Cargo Van Ford E -150; Four Flex Crown Victoria Police sedans in 2011; One Ford F150 4x4 Flex.
5. The City of Arcata actively encourages reuse of office supplies, furniture and building materials including reuse of asphalt grindings.
6. In 2011, the city purchased an electric barge to be used for maintenance at the wastewater treatment plant oxidation ponds and treatment wetlands, it is able to operate on either a battery powered electric trolling motor or gas powered engine.

Renewable Energy and Low-Carbon Fuels Activities

Silver
1. The city installed a 0.422 KW PV system on the Bayside pump station to help offset GHG and electric costs. After operation of this system, annual energy consumption dropped from 1390KWh in 2012 to 7878 KWh in 2014.

Gold
2. The city installed a free electric charging station for cars and also gives out free city parking passes to residents who own an all-electric vehicle. 3. The City of Arcata installed a second electric vehicle charging station in the spring of 2014 located at its 8th and F Street parking lot. It is operated by Chargepoint and costs $1/hour to use.

Platinum
4. The city council approved the City of Arcata's participation in Property Assessed Clean Energy or "PACE" programs (also referred to as AB 811 - style programs) in May 2015. The programs provide another means of financing energy efficiency upgrades or renewable energy installations for commercial and/or residential buildings. This program allows "clean energy" (energy efficiency & alternative energy) project financing – in the form of property assessments - to eligible property owners within their jurisdiction. 5. Arcata is a member of and assists Redwood Coast Energy Authority with their residential and business outreach programs that include energy audits and implementation of energy efficiency retrofits. 6. The city's wastewater treatment system utilizes the methane generated by the biosolids digester to provide supplemental fuel for the boiler/heat exchanger that heats the digester reducing reliance on natural gas from PG&E.

Efficient Transportation Activities

Silver
1. The Arcata Bike Boulevard promotes bicycle use as a more viable transportation alternative and increases awareness of bicycle use through placement and creation of specialized signage, striping and minor landscape bulb outs. The project increases awareness, safety and connectivity for bicycle commuters and the public. The project design was completed in July 2014 and construction began in September 2014. The Arcata Bicycle Boulevard is mostly on residential streets. Some sections pass through commercial areas.

Gold
2. In annual observance of May as National Bike Month and Humboldt Bike Month, the city sponsors the annual Kids' Bike Rodeo on the Plaza and Arcata Bike to Work Day. The city encourages everyone to participate in Bike Month activities, to install bicycle parking and other facilities at businesses to support Arcata's growing number of bicyclists, and to use bicycles as transportation this and every month.
3. The University's Jack Pass program encourages mass transit and reduced fuel consumption by enabling students, faculty, and staff to travel on Humboldt County bus systems. This saves car and parking expenses, and helps protect the environment at the same time. All HSU students have unlimited free ride access on the Redwood Transit System buses, as long as they have paid their tuition fees. Currently registered students simply slide their HSU student identification card through the bus fare box and receive a free ride. Staff, faculty, and extended education participants are also granted the same level of access for $60 semester.

Platinum
4. The city constructed a new rail with trail. This one mile of Class I, ADA accessible, non-motorized, multi-use, paved trail runs from north Arcata (Larson Park), through the city to just north of US Hwy. 255. The trail will allow the community to eliminate an estimated 60,000 motorized vehicle trips by connecting key Arcata neighborhoods with local destinations, such as the downtown, high school, parks, and business districts. The trail is constructed within rail and city ROW.

Efficient Transportation Activities

Platinum
5. The city is an active member of Humboldt County Association of Government (HCAOG) the designated Regional Transportation Planning Agency (RTPA) as well as the Service Authority for Freeway Emergencies (SAFE). The agency is largely responsible for programming State highway, local street and road improvements, public transportation resources, and the roadside call box program. HCAOG also bears responsibility for preparing and implementing the Regional Transportation Plan (RTP).
6. In 2015, the city installed equipment at the corporation yard which allows it to host webinars for all employees stationed at the corp yard. This small addition allows for staff members to attend trainings on-site rather than traveling out of the area for training.
7. The city switched the meter technician to a tablet based dispatch system which minimized the number trips to and from city hall for paper copies of work orders.

Land Use and Community Design Activities

Silver
1. The city constructed a wetlands area which is a cost effective alternative to a wastewater treatment facility. This area is now thriving with wildlife and brings in thousands of tourists every year.

Gold
2. The city constructed a new roadway from Alliance to Foster Ave. that will provide more direct connectivity between Highway 101 and Arcata's northwest neighborhoods. The project includes a bicycle/pedestrian path and low impact development features parallel to the road's entire length.
3. The city's existing neighborhood centers of Westwood, Valley West, Sunny Brae, Uniontown and Greenview are designated as multiple-use sites where additional retail establishments, personal and business service, and other neighborhood-oriented commercial services are encouraged to be developed. Substantial additions to these existing centers shall include residential units on upper floors where feasible or in separate buildings. Upgrading these centers shall include additional landscaping, improvement of parking lot designs, and provision of transit access, such as bus turnouts. Appropriate lands near these centers are designated for higher density residential uses in order to encourage walking and bicycling to neighborhood services.

Platinum
4. Arcata's municipal code chapters 9.56 Solar Siting and Solar Access, 9.54 Resource Conservation, and 9.59 Environmentally Sensitive Habitat Areas Protection and Preservation sections promote sustainable land use and community design within the city.
5. The Mad River Parkway Business Center Planned Development includes dedicated Wetland & Creek Protection Zone riparian setbacks, trail system, open space and parks on a 22 acre property located between the Mad River and Giuntoli Lane in Arcata's Valley East neighborhood.
6. The pedestrian and bicycle master plan outlines how the city will achieve its vision of making Arcata a place where walking and bicycling are the preferred modes of travel, where half the trips within the city are by walking or bicycling.

Land Use and Community Design Activities

Platinum
7. The operation of the community forest is tied to the approved forest management plans and a 1979 voter approved initiative to manage the forests using —ecological principles with a portion of the net revenue to be used for parkland acquisition. No tax revenues are used for the forest management activity. Several parks and open space areas have been purchased with timber harvest revenue, including the city's main community park. The city pays a timber yield tax to the state on timber harvested even though it does not pay property tax. The forest is being managed to maximize habitat diversity with an emphasis to move the forest towards an old-growth condition. Management priorities include watershed, wildlife habitat, recreation, carbon sequestration and timber harvest revenue. Approximately 35% of the land base is in reserves. The maximum allowable annual harvest is ½ of the annual growth increment on the—working landscapell portion (excluding the reserves). Therefore, the forests are accruing volume and age over time.
8. The purpose of the Arcata Creeks Management Plan is to provide guidance for management of creeks that flow through Arcata to provide the fullest realization of the creeks' beneficial uses. The beneficial uses of Arcata's creeks are as follows: flood control, fresh water habitat, riparian habitat, scenic enjoyment, water quality, education, public safety, fish habitat (fish spawning, fish migration), open space, recreation, marine habitat, and ground water recharge.

Open Space and Offsetting Carbon Emission Activities

Silver
1. Arcata hosts several farmers markets for residents where hundreds of local farmers come to sell their non-gmo, affordable and environmentally responsibly grown foods.

Gold
2. The city of Arcata joined an international effort to reduce greenhouse gas emissions and committed to decrease locally generated greenhouse gas emissions by 20% below year 2000 levels by the year 2010. To meet this goal, the city developed a community greenhouse gas reduction plan that focuses on six action areas: energy efficiency, renewable energy, sustainable transportation, waste and consumption reduction, carbon sequestration and other methods and cross-cutting approaches. 3. The city sought and secured funding to 1) Investigate and design fringe salt marsh or “living shorelines” to protect vulnerable city facilities including the wastewater treatment plant, Klopp Lake and coastal access at the Arcata Marsh and Wildlife Sanctuary; 2) Quantify carbon sequestration potential of the proposed protective salt marsh; 3) Investigate the utility of “rolling easements” on private land adjacent to city owned resources lands that are available for wetland migration as sea level rise impacts Arcata Bay and lands within the City of Arcata. Rolling easements do not restrict development but prevent landowners from holding back the sea (no shore hardening allowed) so help maintain shoreline processes.

Platinum
4. The city has available from the Arcata Community Forest (CAR 935 and 575) Climate Reserve Tonnes (CRT’s) verified forest carbon offsets. This provides the city the opportunity to offer for sale to the general public voluntary carbon offsets at $10/metric ton. These carbon offsets are certificates that represent a reduction of greenhouse gases in the atmosphere. One carbon offset is equivalent to saving of one metric ton of carbon dioxide. 5. The city planted 1537 trees and shrubs in 2011/12 and 672 in 2013 as part of various riparian re-vegetation projects located on Janes, Jolly Giant, Beith, Jacoby, Campbell, Fickle Hill and Grotzman Creeks.

Open Space and Offsetting Carbon Emission Activities

Platinum
6. With the assistance of Trust for Public Land and funding from the Wildlife Conservation Board, the city added 22 acres to the forest with an acquisition from George and Mary Schmidbauer and received an approximate one acre forest conservation easement from Diane DeFord. The area is located adjacent to the Arcata Community Forest trail # 9.
7. Completed in 2013, the McDaniel Slough is a joint project between the City of Arcata and the California Department of Fish and Wildlife. The project was designed to restore natural hydrologic process, be self-sustaining and accommodate sea level rise. It involved removal of tidegates, deepening of historic slough channels and removal of failing or obsolete levees to restore over 200 acres of former tidelands and 24.5 acres of freshwater wetlands. A variety of resident and migratory bird species benefit from the project, as will the federally listed Coho and Chinook salmon, tidewater goby and steelhead, and state listed cutthroat trout. The project has improved the area's ability to route floodwaters by increasing the stream and slough's channel capacity after tide gate removal. The resulting tidal scour has helped move sediment and eliminated in-stream invasive vegetation. The McDaniel Slough Marsh Restoration Project is expected to sequester additional carbon on its over 200 acre site. This project is part of a case study that will be used to help develop sequestration protocols for salt marsh restoration activities.
8. To protect and restore coastal wetland habitats the Arcata Baylands Restoration and Enhancement Project included acquisition and protection of 217 acres along North Humboldt Bay. The city project restored and enhanced four freshwater seasonal wetlands and in-stream and riparian habitats on a portion of those acres. The project area sits adjacent to the Humboldt Bay National Wildlife Refuge lands, the Arcata Marsh and Wildlife Sanctuary, the Mad River Slough Wildlife Area and Jacoby Creek Land Trust holdings, making a continuous, protected habitat area of over 1,300 acres. As part of the Bay Lands project the Jacoby Creek estuary was expanded in November of 2011, exposing 16 acres of former tidal land to tidal inundation.

Promoting Community and Individual Action Activities

Silver
1. The Arcata Marsh Interpretative Center is a resource for all community members and visitors, which tries to educate individuals about the environment and how to support natural ecosystems.

Gold
2. Fifty-eight Arcata households took part in the five-month Cool California city challenge, striving to score points by reducing their use of household energy and gas and motor vehicle emissions while competing with individuals and families from across the state. Arcata ranked fourth out of ten participating cities on the scoreboard when it came to per capita energy conservation. Arcata's participation in the challenge earned the city $1,844.
3. City of Arcata partnered with CivicSpark to develop a better understanding of the status of current climate change education by Humboldt County K-12 schools.

Platinum
4. The city established a Go Green page on the city's website to provide the community with information on sustainable actions that everyone can take now.
5. The "Kids Bike Rodeo" is an annual event sponsored by the City of Arcata Recreation Division and Public Works. Kids ages 4-12 can participate in this fun and interactive event, while learning important safety lessons. This event is free and kids completing the course will receive great prizes.
6. The city sponsors 12 or more community workdays annually involving hundreds of volunteer hours helping the city remove invasive plants, build trails, plant native trees and shrubs in city natural areas and assist with litter cleanup.

INSTITUTE FOR LOCAL GOVERNMENT℠

Promoting Good Government at the Local Level

1400 K Street, Suite 205
Sacramento, CA 95814
916-658-8208
www.ca-ilg.org