

5 SUSTAINABLE COMMUNITY

Serve as an environmental steward, ensure that residents enjoy clean air and water, and that the community grows sustainably.

Residents would like the Redlands to grow sustainably, and for the City to serve as a steward of its environmental resources. The community would like to see the City promote greater energy and water efficiency in new construction; expand programs for enhanced energy efficiency to existing homes and businesses; and emphasize water conservation measures. Redlanders would like the City to demonstrate environmental leadership by installing solar panels on City facilities, extending the non-potable water system, and approving a “gray water” ordinance.

For principles and actions on adaptive reuse of historical resources, see Chapter 2; for sustainable transportation, see Chapter 6; and for sustainable food systems and agriculture, see Chapter 7.

5.1 ENERGY EFFICIENCY AND CONSERVATION

Principles

- 5-P.1 Promote energy efficiency and conservation technologies and practices that reduce the use of nonrenewable resources by both City government and the community. (Sustainability Plan)

The City has taken great steps in positioning Redlands as a strong environmental steward that recognizes energy, economics and the environment will be critical for future sustainability. Through partnership with Southern California Edison, the City now has the opportunity to promote energy efficiency and conservation citywide.

- 5-P.2 Support San Bernardino County in implementation of its energy-related policies. (General Plan)

County policies emphasize active participation in current and future energy provision and conservation.

- 5-P.3 Promote energy awareness community-wide by educating the community regarding energy audits and incentive programs (tax credits, rebates, exchanges, etc.) available for energy conservation. (Sustainability Plan)

Completing a comprehensive energy assessment of City facilities to determine the most beneficial areas to implement energy efficiency and conservations measures would be prudent. The City should also partner with key high energy users assisting them with reducing energy consumption (including securing funds). Consideration should be given to developing funding mechanisms that encourage energy efficiency and conservation investments broadly within the City.

- 5-P.4 Update city plans, resolutions and ordinances to promote greater energy efficiency in both existing and new construction in regards to architecture and landscape design. (Sustainability Plan)

The City has a real opportunity to revisit codes and ordinances reshaping them to encourage the efficient use of energy. Care should be taken to promote energy efficiency improvements with incentives and without burdening the property owner with excessive costs.

Actions

- 5-A.1 Coordinate with Southern California Edison Company and Southern California Gas Company to educate the public about the need to conserve scarce energy resources. (General Plan)

Residential, commercial, and industrial educational outreach programs can present consumers with options for energy conservation. Dissemination of information can have a significant impact in reducing consumption, as awareness by individuals and businesses leads to changes in behavior.

- 5-A.2 Minimize energy consumption attributable to transportation within the Planning Area. (General Plan)

Policies in Chapter 6: Connected City, commit the City to Transportation Systems Management (TSM). When implemented, TSM measures are expected to minimize trips, thus minimizing Planning Area energy consumption attributable to transportation.

- 5-A.3 Implement and enforce Title 24 building standards to improve energy efficiency in new or substantially remodeled construction. (General Plan)

- 5-A.4 Encourage the investigation and utilization of alternative energy sources to be integrated in individual project designs. (General Plan)

- 5-A.5 Further City efforts to be a model of energy conservation stewardship by: (Sustainability Plan)

- Continuing participation in SCE/SCG's Community Partnership program;
- Continuing with moving City electric load off-peak;
- Partnering directly with large consumers of energy and encourage and promote their energy efficiency activities; and
- Establishing Energy Efficiency and Conservation baselines.

- 5-A.6 Pursue early participation in the smart meter rollout with SCE and automated meter reading at SCG. (Sustainability Plan)
- 5-A.7 Explore participating in new high efficiency technology programs such as the LED City program and LED Street Lighting Conversion. (Sustainability Plan)
- 5-A.8 Complete a comprehensive energy assessment of all City facilities to identify energy efficiency and conservation opportunities (e.g., HVAC, lighting, weatherization, appliances). (Sustainability Plan)
- 5-A.9 Identify and obtain funding sources to implement energy conservation & efficiency programs adopted by the City. (Sustainability Plan)
- 5-A.10 Leverage and help drive community participation in utility company programs and financial incentives within the city (e.g., incentives, core programs, on bill financing etc.) (Sustainability Plan)
- 5-A.11 Encourage City employees to submit energy efficiency and conservation recommendations for City operations and follow-up on them. (Sustainability Plan)
- 5-A.12 Complete comprehensive review of City codes and standards for energy and water applicability for energy efficiency conservation measures and make changes to modify accordingly. (Sustainability Plan)
- 5-A.13 Set goals consistent with the State’s Long Term Strategic Plan: (Sustainability Plan)
 - All new residential construction in California will be zero net energy by 2020
 - All new commercial construction in California will be zero net energy by 2030.
 - The heating, ventilation, and air conditioning (HVAC) industry will be reshaped to ensure optimal equipment performance; and all eligible low-income homes will be energy-efficient by 2020.
- 5-A.14 Allocate savings realized from energy efficiency improvements to additional energy efficiency improvements. (Sustainability Plan)
- 5-A.15 Be an early adopter of model dark sky ordinance. (Sustainability Plan)

5.2 WATER CONSERVATION

Principles

- 5-P.5 Minimize dependence on imported water by increasing entitlement in local surface sources, using wise groundwater management practices, conservation measures, and the use of reclaimed wastewater and nonpotable water for irrigation of landscaping and agriculture, where feasible. (General Plan)

The availability of imported State Water Project water over the long-term depends in part on environmental and political variables which are not under the City of Redlands’ direct control. To ensure water service to all parts of the Planning Area, an emphasis must be placed on the use of local water supplies.

- 5-P.6 Clean up the Redlands portion of the Bunker Hill Groundwater Basin so that it can be used its full potential. (modified language from General Plan)

The City of Redlands overlies a portion of the Bunker Hill Groundwater Basin, which contains in excess of xxx million acre-feet of water. This requires the cooperation of all agencies within the Basin.

- 5-P.7 Promote Residential and Commercial Water Conservation Using Multiple Strategies (Sustainability Plan)

The City has a long history of promoting water conservation. It will be important for the City to not only continue its efforts but to expand them given the common occurrence of drought conditions in our region and the continued growing demand for water that accompanies population and economic growth.

- 5-P.8 Conserve the highest quality of water reasonably available for domestic use. (General Plan)

Effort by its water users to achieve water conservation and efficient use of water will produce a sustainable lifestyle consistent with Redlands' unique heritage and community goals.

Actions

- 5-A.16 Update the City of Redlands' Water Master Plan, including an assessment of regional demand and availability of water resources through buildout, and a comprehensive groundwater management program. (General Plan)

The City's last comprehensive water master plan was prepared in 1981 and updated in 1984. The Redlands Municipal Utilities & Engineering Department provides water to more than 75,000 residents, as well as businesses, in Redlands, Mentone, parts of Crafton Hills and San Timoteo Canyon. Sources of this water include a blend of local groundwater, local surface water, and imported water from the State Water Project. The Water Master Plan should reflect the General Plan buildout information, and a component which studies groundwater issues and implements a comprehensive groundwater management program.

- 5-A.17 Work with the Bear Valley Mutual Water Company, San Bernardino Valley Municipal Water District, and Western Heights Water Company to educate the public and implement water conservation measures as specified in Redlands' Water Conservation Plan, Ordinance No. 2151. (General Plan)

The availability of information and a sense of participation in a larger cooperative effort can lead to significant changes in individual behavior.

- 5-A.18 Encourage water conservation through the following strategies: (Sustainability Plan)

- Update water and wastewater rates, including review of tiered rates.
- Update the landscape irrigation ordinance to continue lowering use of potable water for landscape irrigation to CALGreen requirements.

- Establish incentives for use of water efficient fixtures and fittings.
 - Expand the current landscape parking lot tree (ordinance or resolution) for new development to include drought tolerant species.
- 5-A.19 Implement the following programs to increase the use of recycled water for irrigation: (Sustainability Plan)
- Conduct rainfall runoff and other system research and pilot study.
 - Develop irrigation BMP and other system guidebooks.
 - Update ordinances to allow for the use of recycled water for landscape irrigation.
 - Update ordinances to allow for use of various wastewater sources for landscape irrigation.
- 5-A.20 Seek funding sources to implement renewable energy sources determined to be feasible for water and wastewater operations (Sustainability Plan)
- 5-A.21 Reduce use of potable water in landscape irrigation and establish programs to increase use of rainwater collection and use for landscape irrigation (Sustainability Plan)
- Communities throughout California have adopted policies to encourage rainwater collection systems in new construction and in retrofitting existing buildings.*
- 5-A.22 Permit graywater use for irrigation, and adopt ordinance or other measures allowing for expanded use of graywater as permitted by the California Plumbing Code. (Staff recommendation)
- Under the current California code, washing machine systems can be constructed without a permit in single-family homes (1 or 2 units), so long as 12 guidelines are followed. Other types of systems require a permit.*
- 5-A.23 Reduce consumption of carbon-based fuels for conveyance and treatment of water and wastewater. (Sustainability Plan)
- The combination of recycled water usage, introduction of renewable energy sources, and effective water conservation measures will reduce use of fossil-fuel-based energy to run the City's water and wastewater operations. The Municipal Utilities and Engineering Department should be continuously vigilant to identify opportunities to accomplish this goal, including federal, state and local funding sources that can be used to supplant funds from local ratepayers.*

5.3 WASTE REDUCTION AND RECYCLING

Principles

- 5-P.9 Reduce the generation of solid waste, including household hazardous waste, and recycle those materials that are used, to slow the filling of local and regional landfills. (General Plan)

As of 2016, solid waste is hauled by the City to the California Street landfill. Planning Area residents also use the County's Solid Waste Disposal Facility (landfill) in San Timoteo Canyon.

Actions

5-A.24 Implement measures specified in the Source Reduction and Recycling Element and the Household Hazardous Waste Element. (General Plan)

5-A.25 Meet the state's policy goal that not less than 75 percent of solid waste generated be source reduced, recycled, or composted by the year 2020; reduce landfill disposal of household hazardous waste as much as feasibly possible. (General Plan; updated target date and percentage to reflect new State legislation)

This goal is contained in AB 341 (Chesbro, Chapter 476, Statutes of 2011)

5-A.26 Mitigate impacts associated with expansion of existing landfills or development of new landfills to include effects on streets and highways, drainage systems, groundwater, air quality, natural resources, aesthetics, and property maintenance. Issues of peak tonnage, number of trips and types and mix of vehicles accessing the site should be assessed when considering traffic impacts. Air quality issues should include those that pertain to dust and odors. Property maintenance issues include problems of illegal dumping and loose refuse. (General Plan)

5-A.27 Improve commercial recycling diversion rates (including for multi-unit housing) through education, including electronic and mailing campaigns, and partnerships with large employers, organizations, and institutions such as University of Redlands. (combination of goals and actions in Sustainability Plan)

Since less than 50% of multi-unit housing complexes have recycle bins and less than 50% of commercial accounts have recycle bins, Redlands should encourage use of existing programs offered by the City or establish additional programs to increase recycling by these accounts. Ordinance 2544 of the City, (Chapter 13.66 of the Municipal Code) partially addresses this issue by requiring recycling requirements for new development or when improvements are constructed.

5-A.28 Invest In New Infrastructure and Technology and partnerships that Contributes to Increased Waste Diversion. (Sustainability Plan)

Examples of this include public-private venture for biomass to energy program; dirty materials recovery facility (a dirty MRF accepts a mixed solid waste stream and then proceeds to separate out designated recyclable materials through a combination of manual and mechanical sorting); and grants for recycling collection devices in public places that minimize contamination and possible theft.

5.4 GREEN BUILDING AND LANDSCAPES

Principle

- 5-P.10 Promote sustainability by reducing the community’s greenhouse gas (GHG) emissions and fostering green development patterns—including buildings, sites, and landscapes. (Staff Recommendation)

Actions

- 5-A.29 Continue implementation and enforcement of the California Building and Energy codes to promote energy efficient building design and construction. (Staff recommendation)
- 5-A.30 Undertake preparation of a Climate Action Plan for systematic evaluation and design of strategies to reduce greenhouse gaseous emissions from buildings and landscapes. (Staff recommendation)

While Redlands has a Sustainable Communities Plan, the CAP would focus more directly on strategies to reduced GHG, and quantify the City’s actions and progress in meeting State-established targets.

- 5-A.31 Promote energy conservation and retrofitting of existing buildings. (Staff recommendation)

Measures the city should consider for improving energy performance of existing buildings include, but are not limited to:

- *Developing and implementing point-of-sale residential energy and water efficiency audits or upgrade requirements and/or incentives if necessary;*
- *Providing financial incentives and low-cost financing products and programs that encourage investment in energy efficiency and renewable energy within existing residential buildings; and*
- *Educating residents about the availability of free home energy audit programs and encourage implementation of audit findings.*

- 5-A.32 Adopt a construction and demolition waste recycling ordinance that requires, except in unusual circumstances, all construction, demolition and renovation projects meeting a certain size or dollar value, to divert from landfills 100 percent of all Portland cement concrete and asphalt concrete and an average of at least 50 percent of all remaining non-hazardous debris from construction, demolition, and renovation projects. (Staff recommendation)

- 5-A.33 Decrease the need for artificial cooling, heating and lighting, and promote outdoor lifestyles in Redlands moderate climate by: (Staff recommendation)
- Ensuring that the Zoning Ordinance provides for adequate private and common open spaces as part of multifamily developments.
 - Encouraging residential and office buildings to have windows that open to the outside in all habitable rooms, and maximize the use of daylight.

- 5-A.34 Prepare a Landscape Manual or enhance landscape standards in the Municipal Code to mitigate urban heat island effects through minimum tree canopy coverage and maximum asphalt and paving coverage, particularly for denser areas like downtown, transit villages, shopping centers, and industrial and other areas with expansive surface parking. (Staff recommendation)

While the Redlands Municipal Code has requirements on water efficient landscaping and tree spacing standards in parking lots more comprehensive standards and guidelines focused on creating shade and comfort and reducing urban heat island effect will be helpful.

5.5 GREENHOUSE GAS REDUCTION AND SUSTAINABLE ENERGY

Principles

- 5-P.11 Undertake initiatives to enhance sustainability by reducing the community’s greenhouse gas (GHG) emissions. (Staff recommendation)
- 5-P.12 Demonstrate leadership by decreasing use of energy and fossil fuel consumption in municipal operations, including transportation, waste reduction and recycling, and efficient building design and use. (adapted from Sustainability Plan)

Actions

- 5-A.35 Demonstrate City leadership through giving preference or incentives for climate friendly purchasing. (Sustainability Plan)

Examples of this include basing purchasing decisions on environmental factors along with price and performance, tracking changes in climate friendly marketplace and continually updating procurement policies.

- 5-A.36 Accelerate the adoption of solar power and/or other alternative energy usage in Redlands through actions such as: (Staff recommendation)

- Establishing incremental growth goals for solar power/alternative energy systems in Redlands
- Developing guidelines, recommendations, and examples together for cost-effective solar and/or other alternative energy based installation
- Installing solar/alternative energy technology on city available space

- 5-A.37 Continue pursuit of sustainable energy sources—such as hydroelectricity, geothermal, solar, and wind power—to meet the community’s needs. (Staff recommendation)

- 5-A.38 Use the city’s Climate Action Plan as the platform for delineating and implementing measures to improve energy conservation, and increase renewable energy use (such as solar) in existing and new development. (Staff recommendation)
- 5-A.39 Support a regional approach to study the feasibility of establishing Community Choice Aggregation (CCA) or another program that increases the renewable energy supply and maintains the reliability and sustainability of the electrical grid. (Staff recommendation)
- 5-A.40 As part of development of the Climate Action Plan, explore feasibility of requiring: (Staff recommendation)
- Electrical charging equipment onsite when the project is built, as this is less expensive compared to retrofitting an existing building.
 - Roof designs to easily accommodate photovoltaic panels in future.
 - Use of photovoltaic panels for large developments.
 - Lighting fixtures, including signage, to be state-of-the art and energy efficient, and require that new traffic signals have light-emitting diode (LED) bulbs and requiring that light fixtures be energy efficient compact fluorescent and/or LED light bulbs.
 - Light colored paving and roofing materials, and “cool roofs”.
- 5-A.41 Reduce GHG emissions warehouse and distribution developers through actions such as: (Staff recommendation)
- Accelerated phase-in for non-diesel powered trucks
 - Maximize use of solar energy including solar panels