

Natural Resources 6

Santa Cruz County has a rich history of environmental protection. Measure J, adopted by Santa Cruz County voters in 1978, established growth goals, an Urban/Rural Boundary to limit development in rural areas, and new agricultural preservation requirements. Under Measure J the County aims to accommodate growth in urban areas so that that open space and rural areas can remain undeveloped and protected.

The Sustainable Santa Cruz County Plan aims to build on this legacy by further promoting natural resource protection in urban areas. At community workshops, residents expressed a strong desire to increase residents' access to parks and open spaces in urban areas. Residents also envisioned a future of environmentally friendly development with green building practices and reduced consumption of resources such as water and energy. For many residents a sustainable community includes urban areas integrated into a larger sustainable system of food production with community gardens and urban agriculture.

The County can establish a clear vision for how private investment in urban areas can promote natural resource protection and increase access to parks and open space. This chapter provides an outline for this vision by focusing on four main goals:

- Access to public open space
- Water conservation
- Urban greening and urban agriculture
- Energy conservation and renewable energy

The sections below describe these goals and some of the specific strategies the County can use to help promote natural resource protection within urban areas.

INCREASE ACCESS TO PUBLIC OPEN SPACE

At public workshops, residents said that all neighborhoods should be adequately served with parks and open space and that all residents should enjoy safe and convenient access to these amenities. Workshop participants highlighted Live Oak as an area where many residents feel they do not enjoy adequate access to parks and open space within their neighborhood.

How might Santa Cruz County increase resident access to parks and open space in urban areas? Local governments typically provide additional public parks and open space in a number of ways. Often public park space and/or a financial contribution to future park space is required as part of a new residential subdivision to serve the need for additional parkland created by new residents. Governments may also purchase or otherwise acquire land to establish a new public park. Sometimes governments also re-purpose existing publicly owned land for use as a park or open space.

These traditional methods of providing additional public parks will be challenging in the Plan area. While the County does currently have a parks impact fee that is charged to new development on a per bedroom basis, it is likely that there will be few if any residential subdivisions large enough to justify the requirement for parkland dedication. Santa Cruz County also has limited funds to acquire land for new parks and to maintain the parks once they are open. Use of public lands for new parks also may be limited due to competing demands for the use of these lands.

Given these constraints, the County could possibly leverage contributions from new development in a way that provides new community open space as part of development projects. Other cities in California have increasingly employed this strategy to meet growing needs for public spaces in urban areas. For example, the recent Alma Street mixed-use project in Palo Alto included a publicly accessible pocket park as part of the redevelopment of a shopping center. This park is used by residents, shoppers, employees, as well as the general public, and provides a new neighborhood gathering place valued by the community.

The County could also continue with the approach applied to the Aptos Village Planned Unit Development, which was to require that public access be provided to a “village square” park that is part of the project and which will be maintained by the property owners association. Proper nexus between the project and the project condition to require public access must exist for this approach to be used.



Town Green provided as part of mixed-use development in Windsor

Small public parks are often incorporated into commercial and mixed-use redevelopment projects in urban areas. New Town Center development in Windsor, for example, incorporated a number of green spaces for the use of residents and visitors.

Multi-family development projects also can incorporate parks and open spaces that are open to the public. Particularly in Live Oak, this strategy could increase the number of small public spaces that serve local residents and create new community gathering places.

An example of the successful application of this strategy can be found in West Hollywood. The Formosa 1140 project dedicated a third of its privately owned building site for a publicly managed pocket park. This new park added much needed green space in a neighborhood underserved with community amenities. The concept has been so successful that it has been replicated in other locations throughout the city.



Small public park included in redevelopment of shopping center in Palo Alto



Public pocket park as part of a multi-family residential project in West Hollywood

Santa Cruz County might consider encouraging this type of development by modifying existing open space requirements for multi-family housing. The County could enable publicly accessible park or open space to substitute for private open space in certain locations. The County should also establish design standards to ensure that the open space is functional for the general public and contributes to a sense of community.

Public spaces provided as part of private development projects can incorporate a variety of uses. These spaces could include urban farms, community gardens, parks, plazas, courtyards, trails, natural areas, and places for art. The County could encourage these amenities with incentive-based zoning. Many local governments offer developers a community benefits option through which project applicants receive bonuses in exchange for project amenities that benefit the larger community.

WATER CONSERVATION

Santa Cruz County is facing serious water shortage due to over-drafted aquifers and ongoing drought. Currently, residents are subject to mandatory water restrictions. In the future drought conditions are likely to become more frequent and severe due to the effects of global climate change.

At community workshops for the Sustainable Santa Cruz County Plan, many residents wondered why the County would allow more housing and commercial development given scarce water resources.

As described in the introductory and “Next Steps” chapters of this Plan, the Plan sets out a vision for a more sustainable pattern of development. If policies and regulations to implement that pattern of development are approved, the County would be taking a pro-active approach toward sustainable land use regardless of when and to what extent



The County could encourage community gardens by offering developers a bonus for incorporating this amenity into proposed projects, under an “incentive zoning” approach

individual developments occur over time. Specifically regarding water resources, currently and in the future, new development cannot be approved in Santa Cruz County without demonstrated water supply to serve that development. The Soquel Creek Water District and City of Santa Cruz Water Department, suppliers in the Plan area, must issue letters indicating water supply is available before any project is approved.

In the meantime, the County can identify ways to increase water conservation and reduce per capita water use. As discussed below, this Plan describes three main ways that the County can do this:

- Require water efficient landscaping
- Promote compact development
- Encourage green stormwater systems

Require Water-Efficient Landscaping

In 2013, the County adopted a Water Efficient Landscaping Ordinance (County Code Chapter 13.13). This ordinance requires water-efficient landscaping for commercial development and larger residential projects. The County's Climate Action Strategy also calls for the County to consider expanding existing water conservation measures, adopting a water conservation impact fee, and promoting the use of residential greywater for irrigation.

The County could strengthen existing water-efficient landscaping regulations by requiring all residential and commercial development projects to comply with the Water Efficient Landscaping Ordinance. With this change, all new dwelling unit projects would be required to:

- Choose plants that are suitable for the climate of Santa Cruz County. Use native or other climatically appropriate and drought-resistant plants that can thrive with moderate irrigation once established.
- Further reduce the amount of turf in new landscaping and encourage turf alternatives. Turf lawns use significant amounts of water and have high maintenance demands that contribute to air pollution and greenhouse gas production. Consider not exempting "warm season" turf grass from turf limits.
- Limit the use of overhead irrigation spraying, requiring drip irrigation specifically directed to where water is needed.



Water efficient landscaping

Promote Compact Development

Recent studies have shown that higher-density compact development reduces per-capita rates of water consumption¹ primarily because smaller commercial and residential lots require less water for landscaping. Compact development also requires shorter pipes that over time lose less water through leakage than water systems that serve a more dispersed development pattern.

In addition to conserving water, compact development reduces the cost of providing water infrastructure for water customers and local governments. Compact development reduces transmission costs, reduces energy required to pump water, and allows upgrades to existing systems rather than the construction of entirely new systems.

The pattern of development described in this Plan will consume less water per capita than lower density development. New development also can incorporate modern green building features such as water-efficient appliances and fixtures, drought-tolerant landscaping, and green stormwater management techniques.

Encourage Green Stormwater Systems

In a typical urban storm sewer system, rainwater is transported off-site through a system of pipes that empty into creeks, rivers, and other water bodies. In contrast, green stormwater systems aim to capture, clean, and recycle stormwater on-site. Components of a green stormwater system often include:

¹ *Growing Toward More Efficient Water Use: Linking Development, Infrastructure, and Drinking Water Policies*. United States Environmental Protection Agency. January 2006.



Per capita water consumption for compact development (above) is considerably lower than for low-density development (below)

- Cisterns and rain barrels to capture, store, and reuse stormwater.
- Permeable paving materials for streets, sidewalks, parking lots, and driveways.



Parking lot with permeable paving and rain gardens

- On-site treatment of stormwater runoff from paved parking areas.
- Stormwater retention features to minimize runoff, including drainage swales, rain gardens, and retention basins.

Green stormwater systems help to conserve water by allowing for on-site recycling of water that can be used for landscape irrigation. They also help to recharge local aquifers by allowing more water to be absorbed into the soil. Green stormwater systems also help to protect water quality, reduce flooding hazards, preserve habitat, and reduce soil erosion. In addition to on-site recycling, it may be possible to identify areas appropriate for multi-site collection, detention, recharge, and recycling.

Santa Cruz County Code Chapter 7.79 (Runoff and Pollution Control) already requires new development to control the volume, runoff rate, and potential pollutant load of stormwater runoff. The County could strengthen these regulations to require the use of green stormwater systems in

more instances. The County could also codify recommendations in the Resource Conservation District's "Homeowner's Guide to Greening Stormwater Runoff" into required standards that conserve water and provide a variety of other environmental benefits.



Rain garden

URBAN GREENING

At community workshops for the Sustainable Santa Cruz County Plan many residents described increased access to nature as an important component of a sustainable community. One way to increase access to nature in urban areas is through “urban greening.” Urban greening is the practice of protecting and enhancing the quantity and quality of trees, vegetation, and habitat within urbanized areas.

Urban greening offers many benefits to the community. It provides social benefits by creating aesthetically pleasing and comfortable environments, which contribute to the character of a community. It provides economic benefits by enhancing the vitality of commercial areas and increasing property values. Urban greening also provides numerous environmental benefits, including decreasing energy usage by increasing shade, addressing climate change by sequestering carbon dioxide, and creating habitat for animals within urban environments.

The County can improve the contribution of existing and new development to urban greening. Specific methods include:

- Requiring street tree planting and maintenance as a condition of all development and renovation projects, including tree planting, staking, and irrigation.
- Preserving and integrating significant existing landscape elements into new development and landscape plans.
- Requiring the installation of larger, more mature plant materials.



Trees in parking lot



Urban trees

Green Roofs

Green roofs are an extremely effective stormwater management tool that provide multiple environmental benefits, including carbon sequestration; reduction in pollutants and stormwater surges from roof runoff; energy conservation; heat island reduction; and creation of wildlife habitat. While green roofs have higher installation costs than a standard roof, they also have lower lifecycle costs. When their long-term benefits are considered, including increased lifespan of the roof, greater insulating properties and reduced heating and cooling costs, the cost savings from a green roof can be considerable.

After a green roof has been installed and its plants are established, maintenance requirements are usually minimal. Typical maintenance of a green roof includes trimming and weeding of plants; monitoring the irrigation system; and inspecting the roof to check for blocked drainage channels and leaks in the waterproof membrane.

- Designing landscaped areas to reconnect fragmented vegetation and help establish networks to surrounding natural areas.
- Encouraging existing developments to transition unused and/or landscaped areas to food-producing gardens, drought-tolerant plantings, and other green spaces.

The County frequently requires greening improvements as part of new development projects. The County should be careful that these requirements do not discourage private investment in urban areas, particularly in neighborhoods where it is most needed. One way to address this issue is through adopting an incentive-based system to encourage urban greening to encourage developers to incorporate significant urban greening features into projects. This would help to encourage both the infill development and the urban greening that many residents desire.



Green roof at the California Academy of Sciences in San Francisco

URBAN AGRICULTURE

At community workshops participants also expressed a strong desire to see more urban agriculture in Santa Cruz County. Participants described a vision for sustainable communities with community gardens and urban farms that sell their produce at local markets. Participants saw this as part of a larger sustainable agricultural system with a greater diversity of local organic crops and increased food security.

As described by workshop participants, urban agriculture includes a range of food growing practices, including:

- Community gardens where individuals and families grow food primarily for personal consumption or donation.
- School gardens on school property used primarily by students, teachers, and others affiliated with the school.
- Urban farms where food is grown by an organization or private enterprise, which often include entrepreneurial opportunities such as growing food for sale.

The benefits of urban agriculture are numerous. Some key benefits include:

- Creating new community gathering places that foster resident interaction
- Improving community health by expanding residents' access to fresh, nutritious food and by decreasing hunger.
- Increasing food security.
- Reducing greenhouse gas emissions from transporting food over long distances.



Community garden

There are a number of vacant and underutilized properties in the Plan area where new community gardens and urban farms could be established as an interim use until permanent development is established. Another option is to encourage urban agriculture as part of multiple-unit residential projects. For example, the County could allow publicly accessible gardens to count towards required on-site open space.

Within the Plan area there is an opportunity to integrate new urban agriculture with the future rail trail. The property at the intersection of El Dorado and the rail line in Live Oak is one example. This property is currently vacant and may be recommended for moderate density residential development. As part of development on the site, a community garden or pocket park could be established next to the rail trail. This garden and park could become a new neighborhood activity center and provide a valued amenity for the neighborhood.

Figure 6-1 presents a conceptual plan for a community garden and pocket park along the rail trail. A multi-use trail runs along the west side of the block. Pedestrian paths connect the residential uses to the west with the multi-use path as well as the park and community garden areas. A narrow orchard creates a buffer between the residential uses and the park and garden.

Currently, existing County regulations could be interpreted to limit the establishment and expansion of urban agriculture. The County could adopt the following strategies to reduce these barriers:

- Establish new General Plan goals and policies to encourage urban agriculture.
- Ensure that General Plan land use designations and zoning districts allow a full range of urban agricultural activities in appropriate residential, commercial, public, and open space areas. Establish a streamlined permit and approval process for permitting urban agriculture uses on priority site, if any permits are determined to be needed.



Solar panels on structures covering surface parking lot

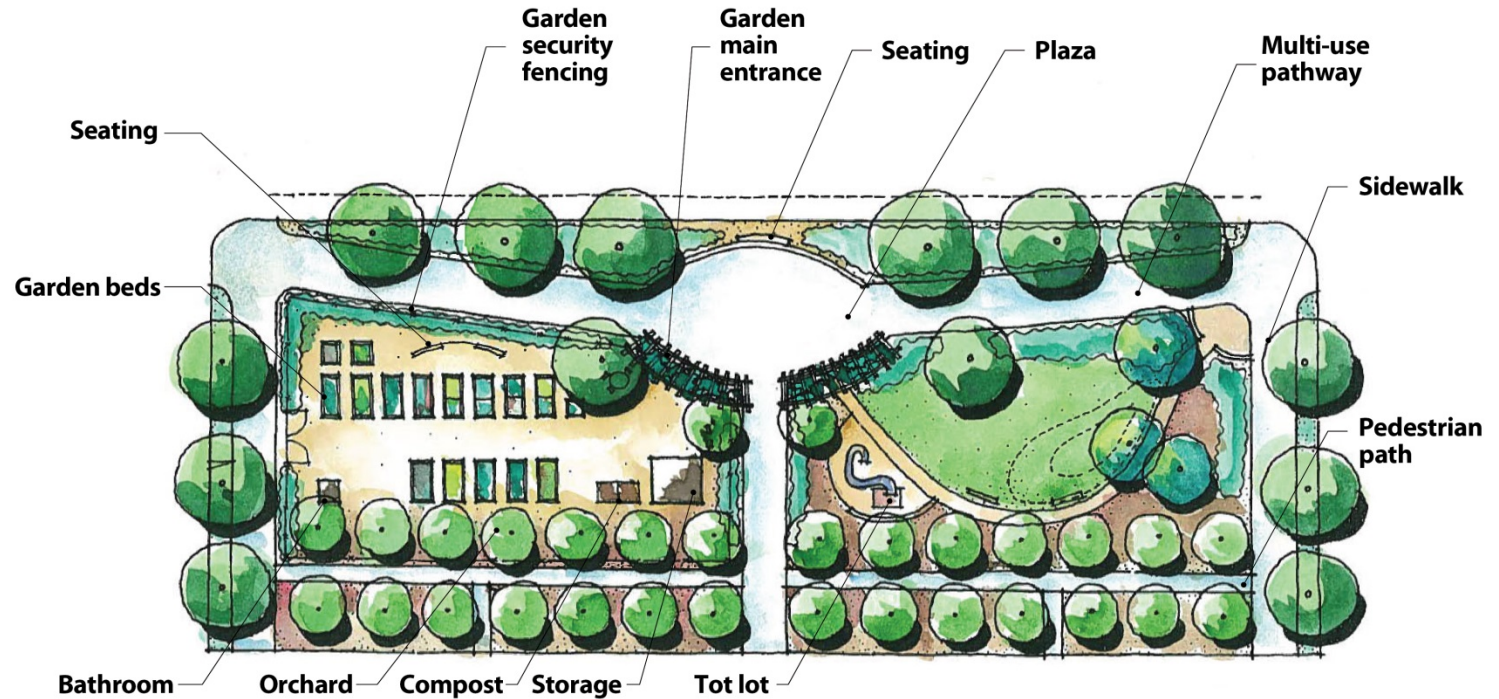
- Consider zoning regulations that allow agriculture as a temporary use on vacant urban parcels.
- Establish regulations and operating standards in the Zoning Code to regulate the safety and aesthetics of urban agriculture sites. This could include allowing on-site sale of fresh produce and allowing animal keeping in urban farms and gardens.
- Work with local farmers and gardeners to identify preferred management models for urban agriculture sites. Create a lease template that promotes public benefit from such activities.
- Develop a strategic action plan to promote establishment of urban agriculture at appropriate locations. Identify and prioritize available public sites for privately operated urban agriculture.

ENERGY CONSERVATION AND RENEWABLE ENERGY

Santa Cruz County already has strong policies and regulations relating to energy conservation and renewable energy:

- **General Plan** – establishes policies and programs to promote energy conservation and renewable energy.
- **Measure C** – establishes basic principles and policies related to environmental protection.
- **County Code Chapter 12.28 (Solar Access Protection)** –prohibits shading of solar energy system by vegetation and requires that new structures minimize obstruction of solar access to greatest extent possible.

FIGURE 6-1 URBAN GARDEN ILLUSTRATION



- **Chapter 12.24 (Wind Energy)** – establishes permit requirements and development standards for wind energy conversion systems (WECS).
- **Zoning Ordinance (multiple sections)** – allows exceptions to setback requirement to accommodate active and passive solar facilities.

The County's Draft Climate Action Strategy also contains a number of strategies to promote energy conservation and renewable energy sources. For example, the Climate Action Strategy calls for the County to remove barriers to the installation of renewable energy systems and to consider

incentives for new parking lots to be covered with structures that support solar production systems. The County will soon allow property assessed financing of energy efficiency systems, including solar energy systems.

Overall, the County has already taken important steps to minimize regulatory barriers to the installation of renewable energy systems in urban areas. The Zoning Code allows for flexibility in required structure height, setbacks, and required permits to accommodate these systems.

One additional step the County could take would be to clarify rules for small WECS in urban areas. The County also could

consider incentives for on-site generation of renewable energy. These incentives could dovetail nicely with the goal of establishing new neighborhood activity centers. Examples of local incentive for renewable energy include:

- Reducing permitting and impact fees.
- Expediting reviews and approvals.
- Offering bonuses for projects generating more than 50 percent of their energy used on site.
- Providing special staff assistance.
- Awarding points in green building recognition programs.
- Offering solar rebates and tax credits.

SUMMARY RECOMMENDATIONS

The sections above discuss a number of ways in which the County can promote natural resource conservation and access to open space in urban areas. As the County moves forward with the implementation of this Plan, the County can consider the following amendments to the General Plan and Zoning Code:

- Amend the General Plan and Zoning Code to encourage development projects to include publicly-accessible open space and community amenities into their project designs.
- Modify existing open space requirements for multi-family housing so that publicly-accessible parks or open space can substitute for private open space. Establish design standards to ensure that open space is functional for the general public and contributes to a sense of community

- Strengthen existing water-efficient landscaping regulations in the County Code by requiring all residential and commercial development projects to comply with the County's Water Efficient Landscaping Ordinance.
- Strengthen County Code Chapter 7.79 (Runoff and Pollution Control) to require the use of green stormwater systems for a broader range of development projects.
- Adopt an urban greening incentive program to encourage developers to incorporate significant urban greening features into projects.
- Encourage urban agriculture by allowing publicly accessible gardens to count towards required on-site open space for multi-family residential projects.
- Encourage urban agriculture in the County's General Plan and Zoning Code by allowing a full range of urban agricultural activities in appropriate residential, commercial, public, and open space areas. Amend the Zoning Code to allow urban agriculture as a temporary use on vacant urban commercial parcels.
- Adopt incentives for on-site generation of renewable energy.