



Redwood City General Plan Sustainability Indicators Report

This indicator report provides both a baseline measurement of sustainability in Redwood City and suggested sustainability policy directions for the City's forthcoming General Plan. Because the City has identified sustainability as a priority for its new General Plan, indicators in this report are intended to inform all pertinent elements of the General Plan in a cross-cutting way. In the future, additional sustainability indicator reports could be compared with this baseline report to track progress over time.

What is Sustainability?

Sustainability is the ability to meet the needs of today within without compromising the ability of future generations to meet their own needs. Sustainability encompasses a wide range of environmental, social and economic topics and has a direct impact on how people live their lives today and in the future.

Why Does Sustainability Matter?

As shown in Figure 1, humanity is using natural resources at an increasingly unsustainable rate, where annual demand for natural resources (measured by the Ecological Footprint¹) is outpacing the world's annual supply (measured by biocapacity²). This unsustainable level of resource use underlies today's major environmental issues: global climate change, the disappearance of species, soil depletion, compromised air and water quality, increasing production of waste, and shortages of food, fuel, minerals, and timber. At the same time, there is a growing awareness that resources are finite, and that they must be used at a sustainable rate if they are to continue to provide the necessary resources for life. There is also a growing awareness that environmental, social, and economic sustainability all relate and can be mutually reinforcing.

Cities may be the single entity best positioned to make society more socially and environmentally sustainable. Cities have regulatory control over land use, transportation, and the construction of buildings, which together are responsible for the majority of a given area's environmental impact. They provide public facilities and services that require natural resources. They often manage many of the natural resources – such as creeks, parks and open space – found within their borders. They can conduct their own operations in an environmentally sustainable

¹ The Ecological Footprint is a standardized measure of how much land and water area a human population requires to produce the resources it consumes and to absorb its waste, using prevailing technology.

² Biocapacity is an estimate of nature's capacity to produce resources in a given timeframe.

manner and invest in the human and social capital of their citizens. In this way, they can be a local solution to a global problem.

Report Overview and Summary

Unlike other technical reports prepared for the new General Plan, the indicators in this report are presented as a series of bullets and tables of data. This format was selected for a variety of reasons. First, it allows a reader to quickly and easily find specific indicator data and conclusions within each report section. Second, in terms of structure, level of detail, indicators used, the report often mirrors Sustainable San Mateo County's annual indicators report. This will allow easy comparison between the County and Redwood City for a number of sustainability indicators, and facilitate future collaborations between the City and Sustainable San Mateo County.³ Finally, the bullets and tables format will allow the City to easily update this report on a regular basis and compare the information in this report to reports prepared in future years.

Indicators for this report have been developed based on current best practices for sustainability, the particular features of Redwood City, and the availability of data. Indicators are organized into topic sections, each of which contains an overview of why the topic is important, a definition of sustainability for the topic, results for a series of related indicators, a summary of results, and a list of potential policy responses to these results. A list of each indicator within each topic area, as well as a detailed description of data sources and methodology by indicator and topic area, is found in Appendix I at the end of this report. A summary of conclusions for each topic area in this report is as follows:

- **Waste and Recycling.** Non-residential waste represents the vast majority of landfilled waste from the City, even though the majority of Redwood City's non-residential waste stream is currently diverted from landfill. This means that future reductions in non-residential waste, particularly by the city's largest non-residential waste producers, could have a large overall effect. The amount of residential waste landfilled has decreased in most years since 1998, due mostly to increased curbside composting and recycling and perhaps to backyard composting.
- **Water Use and Water Quality.** Currently, Redwood City annually exceeds its Supply Assurance from the San Francisco Public Utilities Commission, and has therefore been seeking ways to reduce its water use. The City's quickly expanding water recycling and conservation program is likely to eliminate the Supply Assurance deficit in the near future, and reductions in large landscape water use and in water used per water customer in the City are also contributing to reduced water use.
- **Air Quality and Air Pollution.** Measured ozone pollution levels in Redwood City for the past 10 years have been very low, and particulate matter pollution levels have been average, as compared to the rest of the Bay Area. The California Air Resources Board (CARB) recommends that residential areas and other sensitive receptors such as schools or health care facilities not be located near major pollution sources such as freeways, truck routes, or ports. Analysis shows that several current or proposed residential areas

³ Sustainable San Mateo County generously provided data, analysis, and policy suggestions for this report.

are closer to pollution sources than called for by CARB standards. These include several residential parcels within 500 feet of the 101 freeway and other truck routes, as well as some portions of the current Cargill salt site that are within 1,000 feet of the Port of Redwood City.

- **Contaminated Sites.** Redwood City has a high total number of contaminated sites relative to other San Mateo County cities, though it has fewer than it did in 1998. Current or former gas stations are the most common single type of contaminated site. Some contaminated sites offer opportunities for remediation and redevelopment.
- **Transportation.** In 2000, around $\frac{3}{4}$ of Redwood City residents drove alone to work, a slight decrease from 1990 levels. This slight decrease was due to more carpooling, bicycling, or bus and train riding, though fewer people were walking. There has been a general upward trend in use of the Redwood City Caltrain station over the past 10 years, and a strong upsurge in the past 3 years. At the same time, buses remain an important transit service in the City, and about twice as many people ride buses in Redwood City as ride trains. Cycling is also an important mode of travel, and around 8% of streets in Redwood City are classified as bicycle facilities.
- **Energy and Greenhouse Gas Emissions.** Transportation is responsible for the most greenhouse gas emissions in Redwood City, followed closely by buildings and more distantly by waste. Within the building sector, residential are the single sector with the most energy consumption per capita, but industrial and commercial buildings combined use more energy per capita than residential buildings. The city's energy supplier, PG&E, has a relatively low-emitting energy production portfolio, though much of its contracted renewable energy capacity has not yet come on line. The most solar power installed in Redwood City of any year on record were 2006 and 2007, but total installed solar in Redwood City still only provides about one out of every million units of energy used in the City.
- **Green Buildings.** Redwood City is in the process of establishing a city-wide green building program, to be in effect by 2009. There is currently one LEED-certified commercial building and one 58-unit LEED-certified residential development in the City. There is also one LEED-certified single-family residence planned and approved.
- **Green Business and Operations.** Redwood City has seven businesses certified by the Bay Area Green Business Program. The City is not a certified green operation and does not have standard for environmentally preferable procurement, but has made some significant environmentally preferable purchases in the past 10 years. The City also sponsors a well-used transportation demand management (TDM) program encouraging employees to commute to work using public transit, carpooling, or walking and biking.
- **Urban Ecology.** Significant ecological features in Redwood City include 225 acres of parks, 701 acres of public open space, 12 school gardens and 2 community gardens, over 15 miles of creeks, and a significant and increasing number of trees on city streets. There are 2.99 acres of parks per 1,000 people, which is only slightly below the city-adopted standard of 3 acres per 1,000 residents. Additionally, over 60% of residential parcels in the City are within $\frac{1}{4}$ mile of a park

- **Health.** As with many other communities in California, Redwood City suffers from high rates of obesity, low levels of physical activity, and limited access to healthy food sources. Over ½ of San Mateo County residents are overweight or obese, and only around 30%-40% of Redwood City 5th – 9th graders meet state physical activity standards. This is partially due to the fact that less than 1 in 10 of county residents exhibit multiple healthy behaviors like adequate exercise and nutrition. Additionally, while there are three Farmer's Markets in the City, less than 20% of residential parcels are within ¼ mile of a grocery store. There is a total of 20 fruit and vegetable vendors in the City.
- **Education and Childcare.** Education and child care is a broad topic, and indicator results for Redwood City are mixed. Only around 1/3 of Redwood City students read above the 50th percentile and around ½ qualify for entrance to the California State University system, though an increasing majority of high school students demonstrate math proficiency. Redwood City contributes a higher amount per capita to its library than the state or county average and provides after-school programs for roughly 10% of school-age children. The City lacks sufficient available childcare for infants, school-age children, and preschoolers needing full-day care, and particularly lacks subsidized care for low-income children across each of these groups
- **Housing Affordability.** Home prices throughout San Mateo County have more than doubled since 1998, representing a major region-wide challenge to housing affordability. The household income needed to purchase a home in Redwood City in 2007 was \$189,000, more than double the City's median income. Similarly, around 40-50% of Redwood City renter households would be cost-burdened if they rented at average market rates. For qualifying cost-burdened households, there are 802 subsidized affordable housing units in the City, 216 of which are due to expire in the next five years.
- **Civic Engagement.** Redwood City residents benefit from a wide variety of civic and recreational opportunities, and a large percentage visit facilities or participate in programs sponsored by the Parks, Recreation and Community Services Department or the City Manager's Office. Many residents report feeling a sense of community, particularly after participation in civic engagement programs or as the result of friend and family living nearby, participation in sports and hobbies, or other social activities
- **Public Safety.** Redwood City's rates of violent crime are generally below state averages, while property crime rates are similar to state averages. Around 1% of Redwood City young people between age 10 and 19 are arrested each year for juvenile felonies.

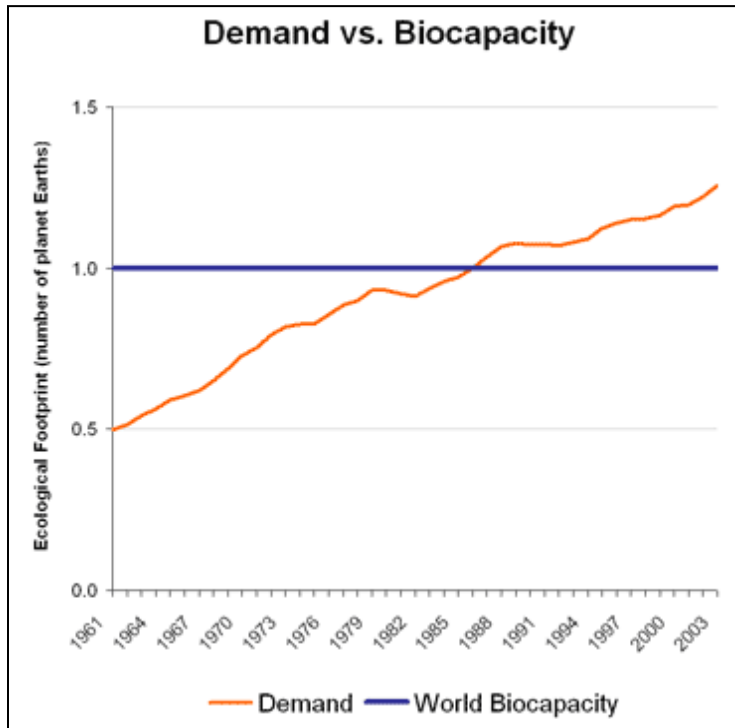


Figure 1: Humanity's Ecological Footprint
 Source: Global Footprint Network, 2008