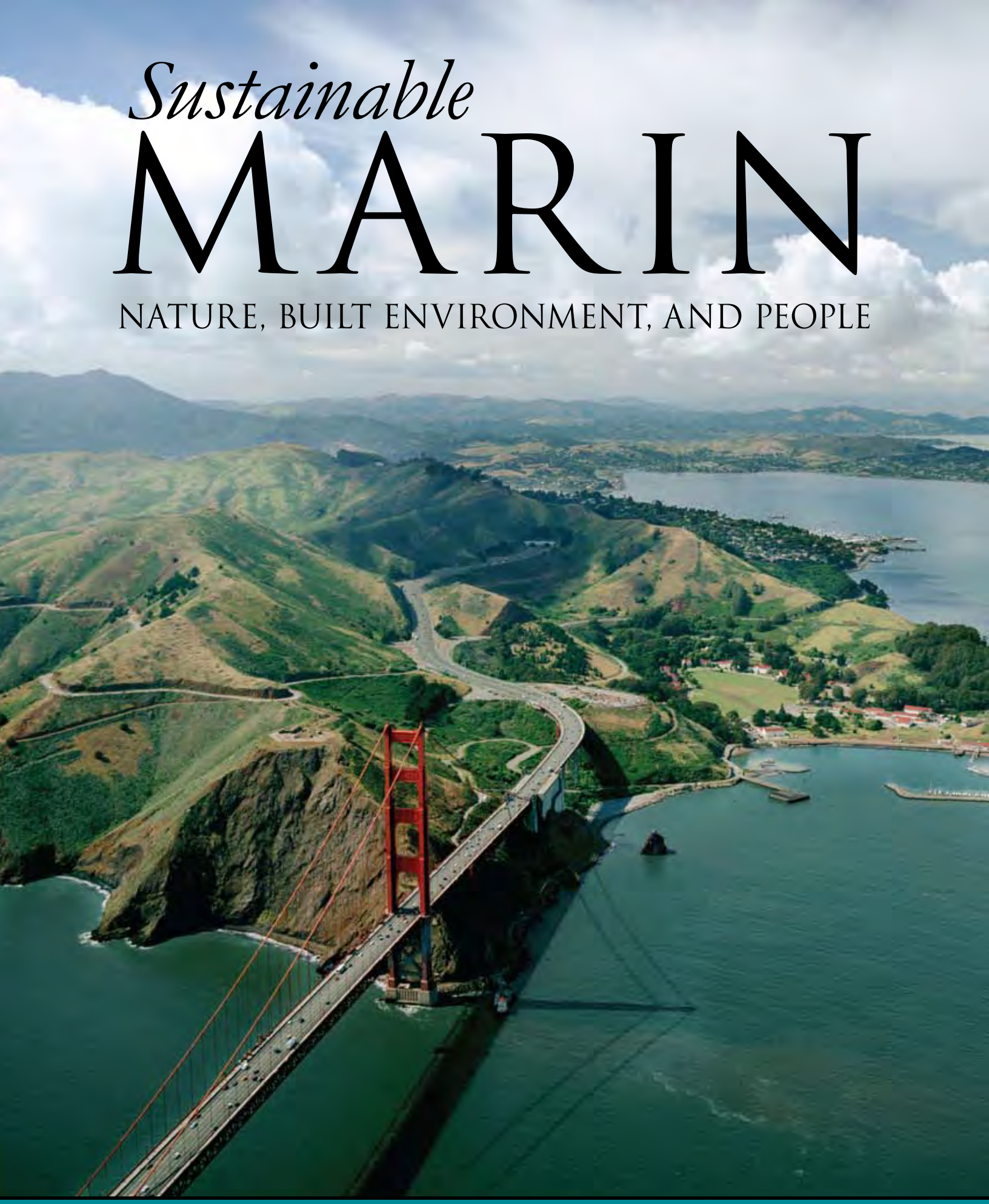

Sustainable MARIN

NATURE, BUILT ENVIRONMENT, AND PEOPLE

SUMMARY OF THE 2007 MARIN COUNTYWIDE PLAN

Foreword

Marin County has long been considered a center of innovative environmental planning. In keeping with that spirit, the Community Development Agency launched a series of educational forums—along with a comprehensive public participation effort in 2001—to help draft the latest update of the Marin Countywide Plan. With the help of four working groups, we completed a set of guiding principles and the *Trends, Issues, and Strategies Report*, which served as the foundation of the updated Plan. Supporting materials included scores of environmental and technical studies, a children's art project, an analysis of Marin's ecological footprint and greenhouse gas emissions, and a book celebrating the stories and recipes of local farm families. By the time the Marin County Board of Supervisors unanimously adopted the Plan on November 6, 2007, 115 public meetings involving some 2,000 participants had been held.

Although largely completed before the passage of California's landmark environmental legislation, the Countywide Plan comprehensively addresses climate change and other sustainable development issues, in addition to all legally required topics. To our knowledge, it was the first local general plan in the nation to calculate its ecological footprint and substantively confront the climate change issue. The Plan also establishes the longer-term goal of reducing our footprint by at least half, to a level similar to that of Western European countries. Toward that end, the Plan was substantially reformatted to focus on nature, the built environment, and people.

Each Element of the Plan asks the following questions: *What are the desired outcomes? Why is this important? How will results be achieved? How will success be measured?* The answers to these questions are organized into respective goals, policies, implementation programs, and a series of indicators, benchmarks, and targets—many of which are summarized in the following pages.

Concurrently, the Marin County Community Development Agency, along with other County departments and local entities, implemented many of the sustainability programs proposed in the Plan. Thanks to the contributions of an informed public, our hard-working staff, a variety of highly qualified technical consultants and nongovernmental organizations, a meticulous and dedicated Planning Commission, and an enlightened Board of Supervisors, our work has been widely recognized and has received many awards. More important, this effort has resulted in programmatic and regulatory changes that have already helped to make green practices business as usual in Marin.

We hope the following summary contains information and strategies that will benefit you and your community.

—Alex Hinds, Director, 1999–2008
Marin County Community Development Agency

PLANNING SUSTAINABLE COMMUNITIES

Sustainable MARIN

NATURE, BUILT ENVIRONMENT, AND PEOPLE

Summary of the 2007 Marin Countywide Plan

Prepared by the Marin County Community Development Agency

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October 2008

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WHAT IS THE COUNTYWIDE PLAN?

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The Marin Countywide Plan guides the conservation and development of Marin County. California law requires every city and county in the state to prepare and adopt a comprehensive long-range general plan for the physical development of the jurisdiction. While the law establishes specific requirements for the contents of the general plan, within that framework each community has the latitude to design its own future. Through extensive public participation, individual residents and representatives of many organizations have contributed to the creation of this document.

MARIN COUNTYWIDE PLAN
ENVIRONMENTAL CORRIDORS

INTRODUCTION

Marin County has long maintained a tradition of environmental planning—while recognizing the essential links between land use, transportation, and housing. In the Countywide Plan, the 606 square miles of land and water that make up Marin County are designated into four distinct *corridors*. Each corridor is based on specific characteristics and natural boundaries formed by north-and-south-running ridges (see map on previous page). In the original Plan, the following three environmental corridors were designated:

The Coastal Corridor (formerly named the Coastal Recreation Corridor) is adjacent to the Pacific Ocean and is primarily designated for federal parklands, recreational uses, agriculture, and the preservation of existing small coastal communities.

"Planning is best done in advance."

—Anonymous

The Inland Rural Corridor, in the central and northwestern part of the county, is primarily designated for agriculture and compatible uses, and for preservation of existing small communities.

The City-Centered Corridor, along Highway 101 in the eastern part of the county near San Francisco and San Pablo bays, is primarily designated for urban uses and for protection of environmental resources including open space that separate towns and cities.

For over 30 years, these geographic designations have been widely recognized as the organizing principle of the Countywide Plan. In this update of the Plan, a fourth corridor has been designated:

The Baylands Corridor, encompassing lands along the shoreline of San Francisco, San Pablo, and Richardson bays, provides heightened recognition of the unique environmental characteristics of this area and the need to protect its important resources. The area generally contains marshes, tidelands, and diked lands that were once wetlands or part of the bays, and adjacent, largely undeveloped uplands.

History

The Countywide Plan, first adopted in 1973, was revised twice before the current update. The first update was adopted in 1982 and the second in 1994.

In 2007, the scope of the Countywide Plan was revised to reflect the theme of planning sustainable communities. This latest version was also expanded to include climate change, and social equity and cultural issues such as public health, environmental justice, child care, the economy, and arts and culture. This update also benefited from widespread community input resulting from a series of public outreach and working group meetings, as well as public access to the Countywide Plan website.

> ***"When one tugs at a single thing in nature, he finds it attached to the rest of the world."***
>
> —John Muir

Framework: Planning Sustainable Communities

What Is Sustainability?

Sustainability is about aligning our built environment and socioeconomic activities with the natural systems that support life. In the long run, sustainability means adapting human activities to nature's constraints and opportunities. Central to this definition is meeting the needs of both the present and the future.

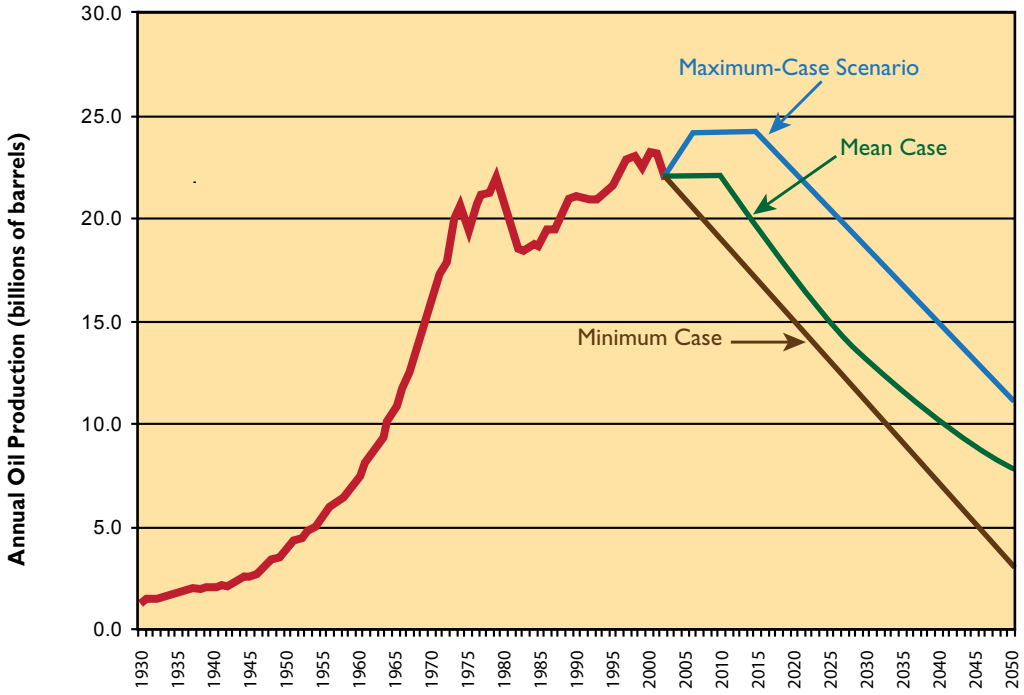
Why Plan Sustainable Communities?

Current trends have demonstrated the need for planning healthy, safe, and sustainable communities. One trend is the increasing impact of greenhouse gases on the world's climate. Another trend is the decreasing supply of resources that support life.

Climate Change

Much of our built environment is now powered by fossil fuels. Fossil fuel use creates the greenhouse gases that contribute to global warming. Increasingly, global warming has raised concerns about the need to reduce the use of fossil fuels. On average, climate models suggest about a three-degree rise in global temperature over the next 50 to 100 years.

Global Oil Production 1930–2050
Maximum-, Minimum-, and Mean-Case Scenarios



Source: 2004 C. J. Campbell; Marin County CDA.

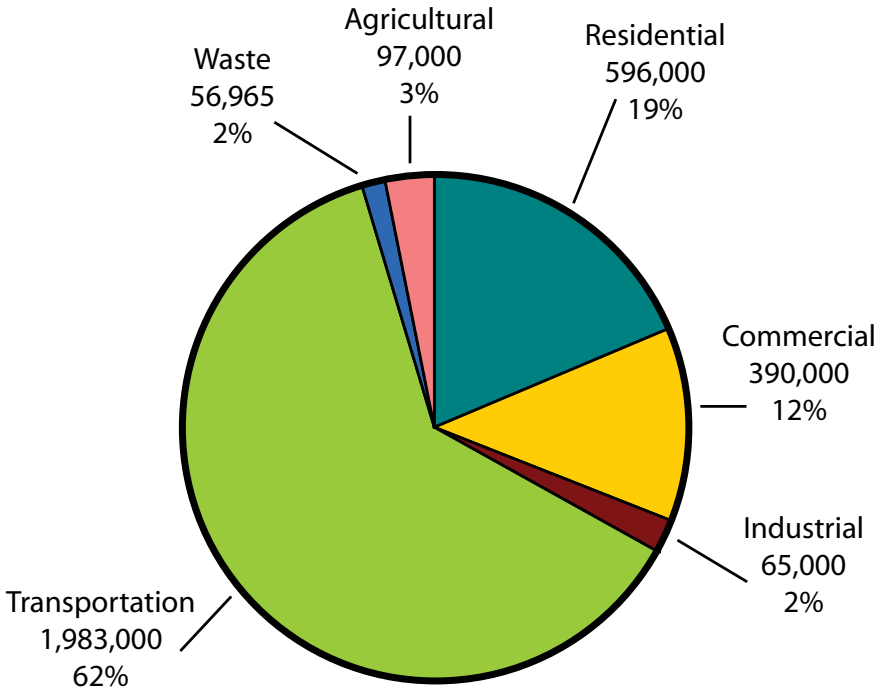
"A hundred years after we are gone and forgotten, those who never heard of us will be living with the results of our actions."

—Oliver Wendell Holmes

As the above figure depicts, oil production is projected to begin a rapid decline sometime before 2020. This, combined with the negative impact of fossil fuel use on the climate, prompts the need to shift away from the use of fossil fuel.

The impact of global warming is compounded by a decreasing resource base. Water, forests, and productive farmland are diminishing. Social inequities mount along with competition for natural resources. Equitably providing the means for prosperity, while also improving environmental quality, is a core challenge.

Countywide Greenhouse Gas Emissions, 2005



Source: 2007 Marin County CDA.

The above figure illustrates the distribution of greenhouse gas emissions countywide by sector. This information is useful for developing policies and programs to reduce Marin's contribution to greenhouse gases.

Resource Use

Research about ecological sustainability increasingly indicates that the worldwide use of resources is exceeding the earth's capacity to renew them. This is driven largely by energy and materials consumption in the United States and other industrialized nations, and, more recently, by increased levels in developing nations. *The Living Planet Report*, issued in 2004 by the World Wildlife Fund, describes how in the past 30 years human demand on natural resources has increased 160 percent while the health of natural systems (as measured by loss of wild species populations) has declined 40 percent.

INTRODUCTION

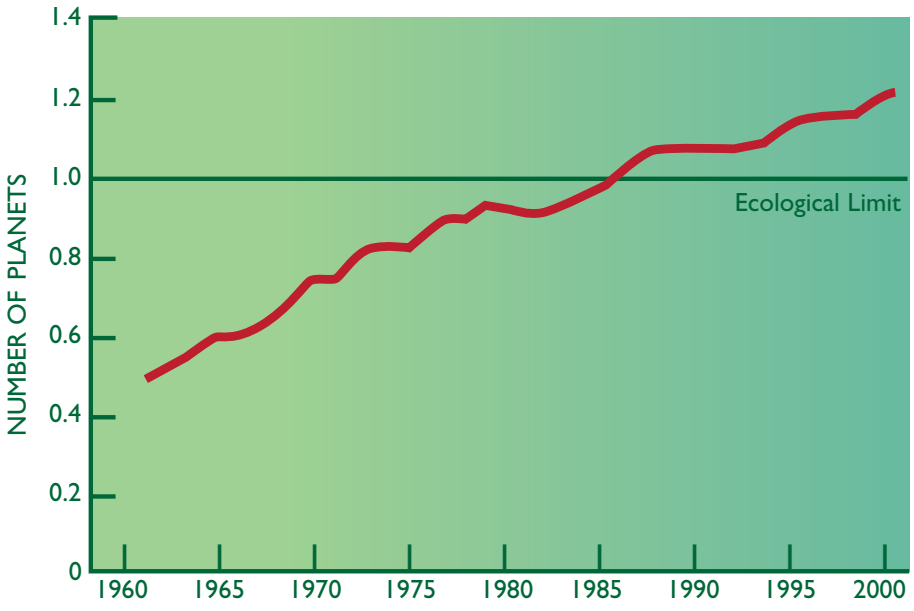
The **ecological footprint** measures the use of natural resources against the planet's actual biocapacity and its ability to supply these resources. It can be calculated for individuals, regions, countries, or the entire earth and is expressed as the number of *global acres* (acres with world average biological productivity) that it takes to support one person. Given the current global population, about 4.5 global acres are available to support each individual on earth. When humanity's footprint exceeds the amount of biocapacity, an overuse of natural capital occurs.

Ecological Footprint

To learn more about the ecological footprint, go to www.footprintnetwork.org or www.redefiningprogress.org.

The figure below shows that since the mid-1980s, humanity's demand for ecological resources has exceeded the earth's supply each year.

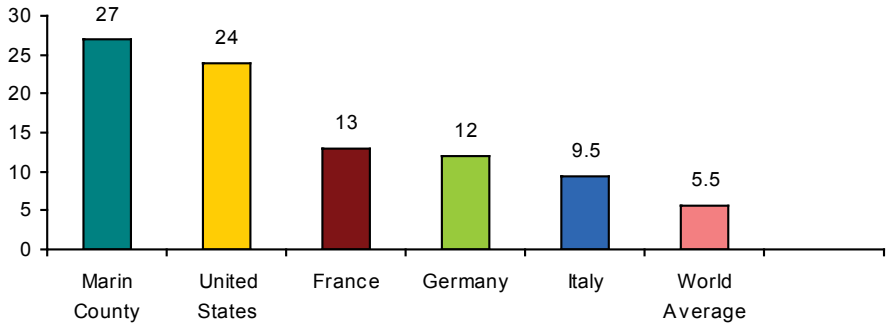
Humanity's Ecological Footprint



Source: 2004 World Wide Fund for Nature.

As illustrated in the figure below, the average American uses 24 global acres per capita, while the average Marin resident requires 27 global acres. Other western democracies, such as France, Germany, and Italy, have footprints of 13, 12, and 9.5 global acres per person, respectively.

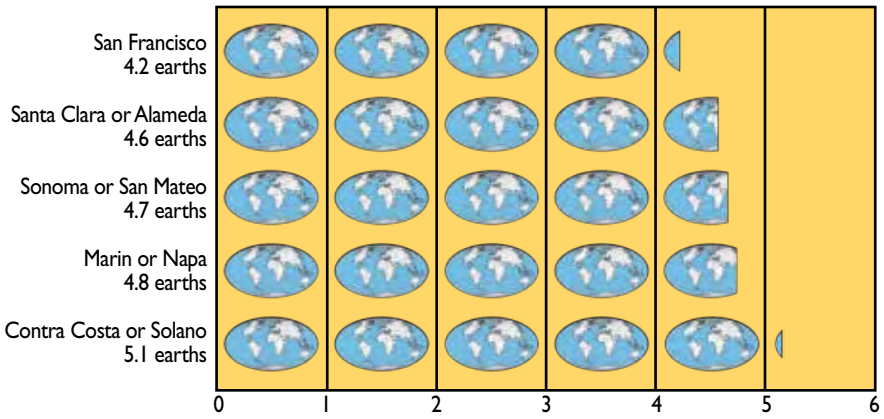
Ecological Footprint Comparison



Source: Global Footprint Network.

Planning sustainable communities is of global importance, as distant decisions can affect the health of natural systems and, consequently, human well-being, even in faraway places. Furthermore, the carrying capacity of an ecosystem, city, or bioregion is also affected by land use planning and human resource consumption.

Number of Earths Required
If the World Population Footprint Equaled a Bay Area County



Sources: Global Footprint Network and Redefining Process.

INTRODUCTION

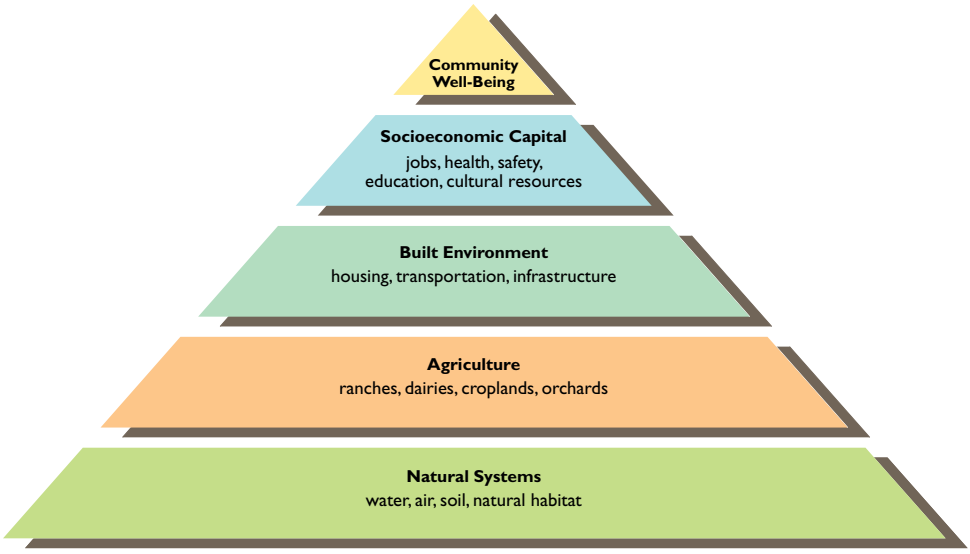
How Can We Plan Sustainable Communities?

Marin County is a major contributor to the Bay Area's regional open space and agricultural greenbelt, and the Countywide Plan establishes land use policies intended to provide a balanced mix of jobs and housing. A strategic infill approach that supports affordable housing for members of the workforce at selected mixed-use locations near existing jobs and transit, along with an emphasis on green building and business practices, offers Marin communities a way to carry out the Three E's of sustainability (environment, economy, and social equity).

> ***"We cannot direct the wind, but we can adjust the sails."***
>
> —Anonymous

A conceptual framework designed by the economist Herman Daly was considered during the development of this Plan. Illustrated as a pyramid, it integrates natural systems, social systems, and human aspirations. The pyramid below has been modified to more closely correlate to the organization of the Countywide Plan. The foundation consists of natural systems, such as water, air, soil, and natural habitats, that support life. The illustration depicts the mutually supportive relationship of natural and built environments that, along with economic and social capital, provide the means to achieve individual and community well-being.

Framework for Sustainability



Daly's conceptual framework has three principles:

1. Renewable resources (such as groundwater, soil, and fish) should not be used faster than they regenerate.
2. Nonrenewable resources (such as minerals and fossil fuels) should not be used faster than renewable substitutes for them can be put into place.
3. Pollution and waste should not be emitted faster than natural systems can absorb, recycle, or render them harmless.

To accomplish these, it will be necessary to make significant changes in the way communities process and consume resources, a shift sometimes referred to as an "ecological U-turn." Toward this end, it is intended that the nonbinding targets listed in Plan implementation sections will be periodically monitored and reevaluated during future Countywide Plan updates throughout the 21st century.

The precautionary principle, another conceptual framework considered during the preparation of the Plan, carries the sense of foresight and preparation, and is the common-sense idea behind many adages: "Be careful." "Better safe than sorry." "Look before you leap." "First, do no harm." The precautionary principle is an approach characterized by minimizing or eliminating potential hazards at the onset of an activity instead of determining an "acceptable level of harm." In addition, the precautionary principle utilizes full cost accounting to assess the potential costs and benefits of a given activity or product.

Countywide Goals

Countywide goals reflect core community values and identify what fundamental outcomes are desired. Although these overarching goals are not quantifiable or time dependent, implementation of the policies and programs of the Countywide Plan is intended to assist the larger Marin community in achieving the following:

- **A Preserved and Restored Natural Environment.** Marin watersheds, natural habitats, wildlife corridors, and open space will be protected, restored, and enhanced.
- **A Sustainable Agricultural Community.** Marin's working agricultural landscapes will be protected, and the agricultural community will remain viable and successfully produce and market a variety of healthy foods and products.

"The world will not evolve past its current state of crisis by using the same thinking that created the situation."

—Albert Einstein

- **A High-Quality Built Environment.** Marin's community character, the architectural heritage of its downtowns and residential neighborhoods, and the vibrancy of its business and commercial centers will be preserved and enhanced.

- **More-Affordable Housing.** Marin's members of the workforce, the elderly, and special needs groups will have increased opportunities to live in well-designed, socially and economically diverse affordable housing strategically located in mixed-use sites near employment or public transportation.

> ***"We did not inherit the land from our fathers. We are borrowing it from our children."***
>
> —Amish proverb

- **Less Traffic Congestion.** Marin community members will have access to flexible work schedules, carpools, and additional transportation choices for pedestrians, bicyclists, and transit users that reduce traffic congestion.

- **A Vibrant Economy.** Marin's targeted businesses will be clean, be prosperous, meet local residents' and regional needs, and provide equal access to meaningful employment, fair compensation, and a safe, decent workplace.

- **A Reduced Ecological Footprint.** Marin residents and businesses will increasingly use renewable energy, fuel efficient transportation choices, and green building and business practices similar to the level of Western Europe.

- **Collaboration and Partnerships.** Marin public agencies, private organizations, and regional partners will reach across jurisdictional boundaries to collaboratively plan for and meet community needs.

- **A Healthy and Safe Lifestyle.** Marin residents will have access to a proper diet, health care, and opportunities to exercise, and the community will maintain very low tobacco, alcohol, drug abuse, and crime rates.

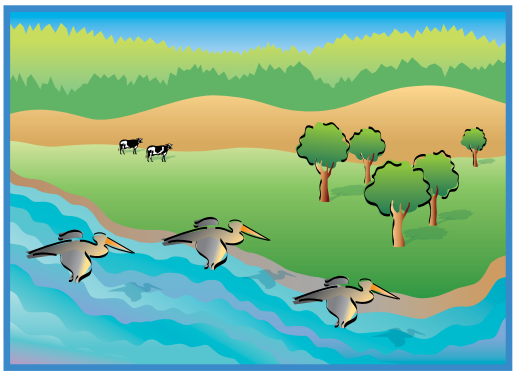
- **A Creative, Diverse, and Just Community.** Marin will celebrate artistic expression, educational achievement, and cultural diversity, and will nurture and support services to assist the more vulnerable members of the community.

- **A Community Safe from Climate Change.** Marin will be a leader in averting and adapting to all aspects of climate change.

User Guide

How Is the Countywide Plan Organized?

While the basic components of a general plan are established by the requirements of California State planning law, the organization of the document is left to local discretion. This edition reorganizes the Countywide Plan into the following three sections:



The Natural Systems & Agriculture Element

Focuses on nature and life-support systems.

The Built Environment Element

Principally addresses villages, towns, and construction-related activities.

The Socioeconomic Element

Focuses on people and what they do for each other.

Each Element of the Plan is organized to answer the following questions:

- What are the desired outcomes?
- Why is this important?
- How will results be achieved?
- How will success be measured?

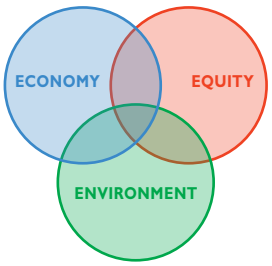
Basic Building Blocks of the Plan

The Plan includes background information and key trends, as well as goals, policies, programs, and diagrams and maps. These components represent the development policies, diagrams and maps, objectives, principles, standards, and plan proposals called for in California's planning law.

Goal: An expression of community values and desired outcomes—a sought-after end state that is not quantifiable or time dependent. A graphic displays which of the Three E's (environment, economy, and social equity) are benefited by the goal as indicated within the overlapping circles.

Why is this important?

Goals are evaluated for their environmental, economic, and social equity benefits.



Policy: A statement derived from a goal that represents the jurisdiction's adopted position and guides action by decision-making bodies.

Program: A specific implementation measure to carry out goals and policies of the Countywide Plan.

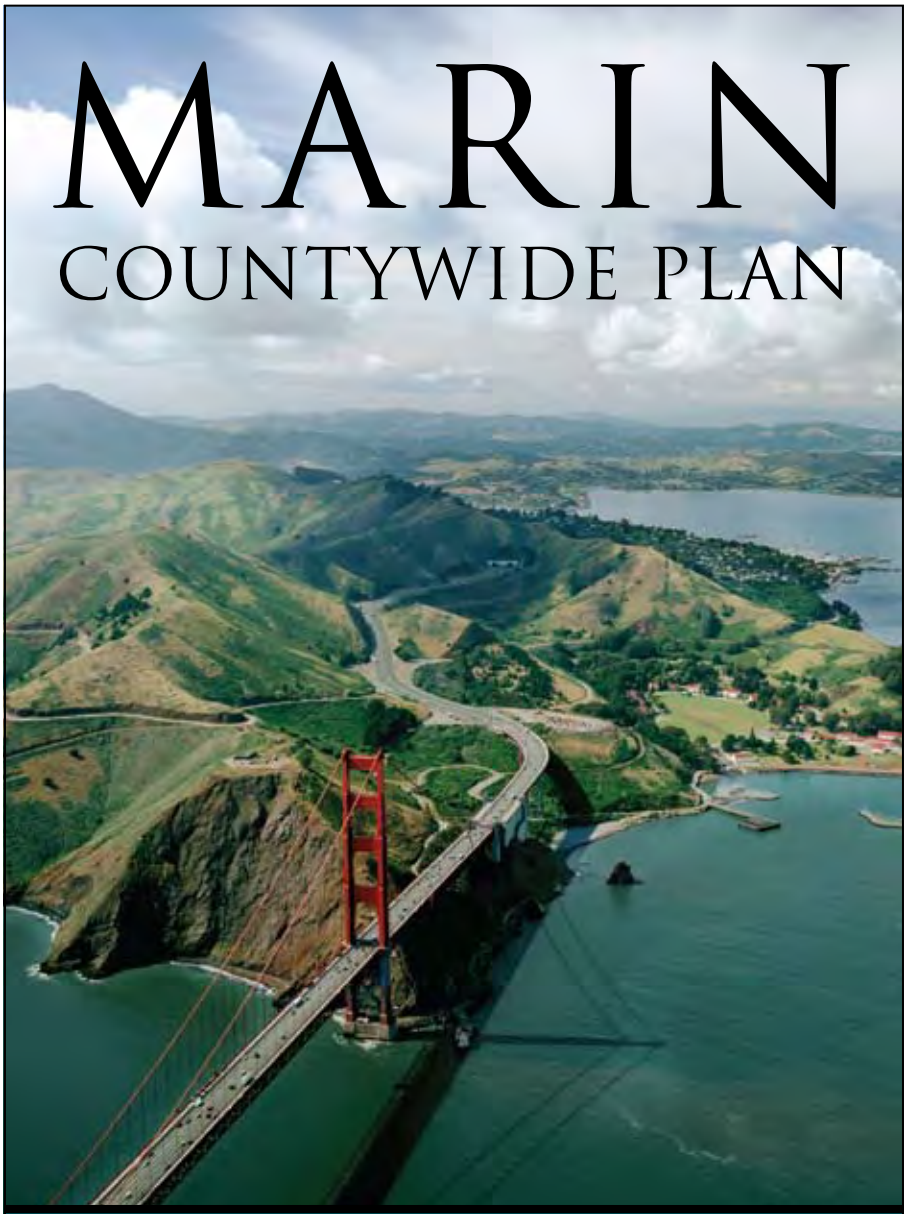
Diagram: A graphic representation of the Plan's policies. While the Plan's land use diagrams and maps are not as specific as zoning maps, they do provide guidance about the appropriate uses of each parcel of land within the County's jurisdiction.

Indicators, Benchmarks, and Targets

One criticism of general plans is that there is insufficient feedback to know whether progress is being made in meeting the plan's goals and policies. The Countywide Plan addresses this concern by including a series of *indicators*, *benchmarks*, and *targets*.

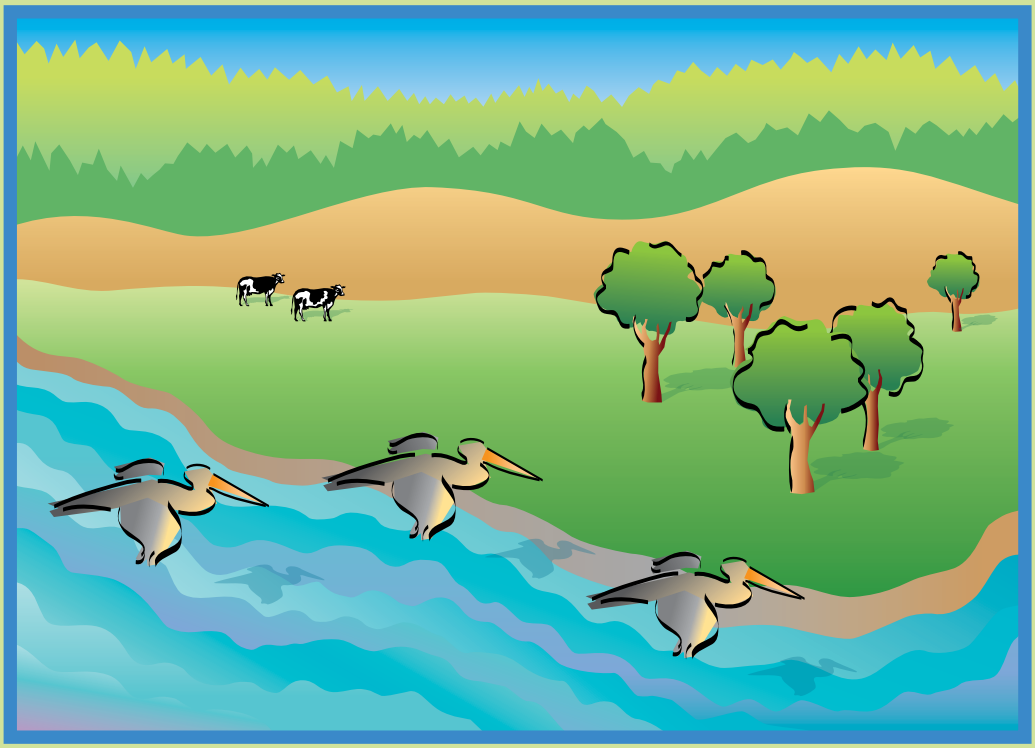
An *indicator* is a measurement that assists in demonstrating movement toward or away from Plan goals and policies. Proposed indicators have been crafted to be understandable, representative, and relevant. *Benchmarks* establish a "starting point"—the state of an indicator as of a particular point in time. A *target* is a quantifiable outcome that provides a framework for measuring progress. This process provides an opportunity to consider the need for new or revised Countywide Plan strategies or implementation measures.

MARIN
COUNTYWIDE PLAN



ADOPTED NOVEMBER 6, 2007

PLANNING SUSTAINABLE COMMUNITIES



NATURAL SYSTEMS & AGRICULTURE ELEMENT

NATURAL SYSTEMS & AGRICULTURE ELEMENT

© Richard Blair

Marin County is known for its distinctive natural setting and environmental and agricultural heritage. Surrounded on three sides by water, Marin encompasses abundant, beautiful, and rich environmental resources as well as working agricultural landscapes. We depend on nature to provide for us—in the quality of the air we breathe, the water we drink, the food we eat, and the unspoiled state of our prized open space. Our shared responsibility to understand and protect the environment and agriculture is a fundamental component of the Natural Systems and Agriculture Element. Reinforcing the critical role of watershed planning is an overarching concern.

The Natural Systems and Agriculture Element addresses watershed functions, water quality, riparian habitat, wetlands, and baylands. All natural systems are interrelated. Water-quality degradation, invasive flora and non-native animal species, habitat fragmentation, and the loss of sensitive biological resources because of land conversion and development threaten not only one natural system but agriculture and food production as well. How we treat streams, marshes, and wetlands not only affects the plants and animals that depend on aquatic habitats but can lead to flooding in low-lying areas. The following sections of the Natural Systems and Agriculture Element are summarized here:

- Biological Resources
- Water Resources
- Environmental Hazards
- Atmosphere and Climate
- Open Space
- Trails
- Agriculture and Food

Topics related to naturally occurring environmental hazards are located in the Natural Systems and Agriculture Element, while hazardous materials issues are discussed under Public Safety in the Socioeconomic Element. Issues pertaining to environmental justice, public health, historical and archaeological resources, and parks and recreation are addressed in the Socioeconomic Element.

© Don Freundt

Protecting Biological Resources

Marin is home to diverse natural communities—from coastal marine environments to bay marshlands and mudflats, riparian habitats, and an upland mosaic of forests, woodlands, grasslands, and chaparral. Since the mid-19th century, human activities such as grazing, logging, agriculture, road building, and other development have markedly altered the natural landscape. Despite a substantial loss of biological resources, Marin County retains a wealth of natural habitats. The county remains home to a myriad of protected species, including steelhead trout, coho salmon, the northern spotted owl, the California red-legged frog, the salt marsh harvest mouse, the Point Reyes bird's-beak, the California clapper rail, and the Tiburon mariposa lily. Natural habitats of critical concern are summarized on the following page.

Baylands ecosystems—vital to the health of the San Pablo, San Francisco, and Tomales bays—have undergone tremendous change, as historic tidal areas were diked for agricultural use, marshes filled and drained for development, and channels dredged and straightened for navigation. The remaining baylands ecosystem forms a varied pattern of open water, tidal marshes and mudflats, rocky shoreline, seasonal wetlands, and adjacent uplands.

> ***"In the end, our society will be defined not only by what we create, but by what we refuse to destroy."***
>
> —John C. Sawhill

Used primarily for farming and grazing, agricultural baylands support grassland cover and provide winter habitat for shorebirds and waterfowl. To protect remaining baylands and undeveloped uplands along the San Pablo and San Francisco bays, the 2007 Countywide Plan established the Baylands Corridor.

Wetlands support a myriad of plant and animal species, provide essential habitat for special-status species and migratory birds and fish, recharge groundwater, and purify water. Filling and dredging has wiped out about 90 percent of America's wetlands. Marin wetlands include coastal salt marsh, brackish marsh, freshwater marsh, the lower channel slopes of streams and riparian habitat, seasonal wetlands, vernal pools, and freshwater seeps and springs. A high priority is placed on protecting and enhancing wetlands.

Special-status species are plants and animals protected under state and federal laws or deemed rare enough to warrant special consideration, particularly to protect isolated populations, nesting areas, communal roosts, and other essential habitat. With state and federal designations of coho salmon and steelhead trout as special-status species, Marin County has renewed its pledge to keep streams healthy and to restore distressed waterways.

Streams convey, filter, and store sediments and nutrients. Their floodplains recharge groundwater aquifers and control flooding. They also provide critical wildlife-movement corridors between important habitats for both water and land animals.

PLANNING SUSTAINABLE COMMUNITIES

This section details policies to preserve native habitat and protect sensitive resources, and sets out programs to restore and enhance ailing habitat.

Desired outcomes

- Sustain and enhance native habitat
- Protect and restore sensitive biological resources, including wetlands, riparian areas, and baylands

Why is this important?

Environment: Development has substantially impacted riparian habitats and has filled or altered more than 80 percent of historic tidal marshlands along the San Francisco Bay–Delta Estuary. Because of their vulnerability, the state monitors about 120 plant and animal species in Marin County, including the red-legged frog and the spotted owl. Sustaining native ecosystems secures essential habitat for special-status species and protects remaining sensitive natural communities, wetlands, and other critical biological resources.

Economy: Protecting natural resources reduces the cost of flood damage, water pollution, and water-supply redistribution. It minimizes erosion and sedimentation and protects natural water filtration and recharge functions. Healthy natural resources draw visitors and support recreational industries. Protecting natural resources such as historic baylands minimizes the need for costly mitigations; this will become increasingly important in light of projected climate change.

Equity: Healthy natural resources provide outdoor recreational opportunities for all, stabilize hillside slopes, and preserve environmental beauty and diversity.

How results will be achieved

- Review development applications to protect biological resources, wetlands, migratory species of the Pacific flyway, and wildlife-movement corridors
- Promote native plant use
- Continue to acquire sensitive resources
- Continue to protect native trees and update the Native Tree Preservation and Protection Ordinance

- Encourage integrated pest-management and organic practices—and restrict toxic chemicals in sensitive habitats
- Prohibit the planting of invasive plants in proposed developments
- Preserve ecotones, or natural transitions between habitat types, because of their importance to wildlife

> ***"Look deep into nature, and then you will understand everything better."***
>
> —Albert Einstein

- Insist upon "no net loss" of sensitive habitat during the environmental review process
- Protect wildlife-movement corridors through discretionary permits
- Limit construction in sensitive riparian corridors, wetlands, and baylands from March 1 through August 1 to protect bird-nesting activities
- Require development to avoid wetlands through a Wetland Conservation Area Ordinance
- Set back development to protect water quality in streams and provide upland buffers in Stream Conservation Areas

- Establish a Baylands Corridor to protect and encourage enhancement of historic baylands
- Restrict access to environmentally sensitive marshland and adjacent habitat, especially during spawning and nesting seasons
- Manage humanmade flood basins to provide seasonal habitat for waterfowl and shorebirds
- Consider requiring larger setbacks from water bodies for development of new septic systems and leach fields

© Kathleen Goodwin

Protecting Water Resources

Ridge-bounded ecosystems that drain into the Pacific Ocean and its bays, Marin watersheds carry water, sediments, and nutrients downstream, infiltrating the ground to recharge aquifers and springs. While it takes many millennia for watersheds to achieve equilibrium, concentrating runoff, altering drainages, and interfering in other ways can degrade them in a matter of years.

Sediment is a major concern countywide because it damages aquatic habitat and causes flooding by filling in channels and floodplains. Construction, road building, and farming contribute to sediment. Mercury and other toxic chemicals also degrade local water resources, as does improperly treated sewage and livestock waste.

Tomales Bay alone is home to nearly 900 species of plants, 500 species of birds, and a mariculture industry. The Lagunitas Creek watershed produces as much as 15 percent of the state's estimated 5,000 spawning adult coho salmon each year. However, both of these water bodies are considered impaired by the state of California.

Marin County's watershed management plan efforts detail recommended changes to the development review and permitting process to preserve and enhance watershed health and water quality in Marin. This section details policies and programs to restore and enhance local watersheds.

> ***"Wetlands have a poor public image. … Yet they are among the earth's greatest natural assets… mankind's waterlogged wealth."***
>
> —Edward Maltby

Desired outcomes

- Protect, restore, enhance, and maintain healthy watersheds
- Provide adequate supplies of clean water for wildlife and for people

Why is this important?

Environment: Runoff from urban and agricultural uses contributes to excessive pollutant levels in local streams and bays. Careful control of such pollutants is critical as the amount of impervious paved surface coverage in Marin approaches 10 percent—the threshold at which watershed health often suffers.

Economy: The agriculture, mariculture, and tourist industries particularly depend upon clean water. Conserving water and developing sustainable, alternative water sources saves money.

Equity: Water pollution and improperly functioning wastewater systems pose significant human and animal health risks. Water-efficient homes are more affordable to maintain.

How results will be achieved

- Reduce toxic runoff
- Continue public outreach to minimize water pollution
- Simplify the permit process for watershed restoration and enhancement
- Protect watersheds, aquifer-recharge areas, and natural drainage systems

- Limit development and grazing on steep slopes and ridgelines
- Maintain or increase predevelopment infiltration to reduce downstream erosion and flooding
- Maximize groundwater infiltration and minimize surface water runoff, by measures such as restricting wet-weather grading
- Require replanting of vegetation, remediation of erosion, and steam restoration in conjunction with land-use approvals
- Integrate stormwater-pollution prevention design into all projects
- Research and permit alternative septic waste options
- Continue to provide high-priority, no-cost inspections of wastewater systems near waterways
- Establish a county service area to relocate septic leachlines away from Tomales Bay
- Establish a countywide septic inspection, monitoring, and maintenance district in a risk-based, comprehensive, and cost-effective way
- Establish a groundwater-monitoring program, including regular water-level measuring and water-quality sampling
- Follow the Local Government Commission's Ahwahnee Principles for Water Supply

Excerpts from the Ahwahnee Principles for Water Supply

Communities should do the following:

- Recognize and live within the limits of available water resources
- Promote a stewardship ethic to care for and sustainably manage water resources
- Develop a diverse portfolio of local and regional water supplies and efficiency practices
- Ensure that the type of water being used is matched with the appropriate end use
- Support planning on a watershed basis and use whole-system management approaches
- Protect and restore natural systems, habitats, groundwater recharge areas, and watersheds
- Use natural systems wherever possible to achieve flood control, water quality, and water supply goals
- Encourage the design of buildings, landscapes, and land use that maximize water efficiency

Source: Local Government Commission, 2004.

© Tom Yarish

Avoiding Environmental Hazards

Earthquakes, landslides, flooding, and fires—all pose a threat to Marin County. Countywide Plan policies and programs are intended to minimize harm to people and property as a result of these environmental hazards.

Although several fault lines run through Marin County, the San Andreas is the only local fault subject to the Alquist-Priolo Act, which prohibits building certain structures within 50 feet of a fault. Ground shaking is the most likely threat from earthquakes, although shaking of water-saturated soil can cause loose sand and silt to behave like liquid and cause liquefaction.

Earthquakes can generate tsunamis—ocean waves that threaten coastal areas—and seiches—waves in enclosed waters that can overtop dams and flood downstream. Geologists consider a tsunami a greater potential local hazard. Tsunami run-up and inundation maps would help identify the extent of possible hazards. Current hazard maps, however, do not include the Marin coast.

Earthquakes can cause dams to fail, setting off flooding. On steep slopes, earthquakes and heavy rainfall can trigger landslides. On coastal bluffs, erosion and soil instability can threaten structures.

Storm runoff, tidal activity, and high surf can cause flooding. Areas near streams may flood after heavy rains, while high tides combined with heavy rain can flood bayfront and coastal areas. Proliferation of impermeable surfaces, alteration of natural drainage patterns, and the effects of climate change have increased the frequency and severity of floods. Scientists estimate that sea level could rise 36 inches by 2100.

> ***"We learn geology the morning after the earthquake."***
>
> —Ralph Waldo Emerson

Suppression of natural fires has left much of the county overrun with dangerously high levels of vegetation that can fuel fire. For example, areas surrounding Mount Tamalpais have not burned since 1945, resulting in a forest overstocked with trees and brush, and high concentrations of dead material. To make matters worse, a disease dubbed Sudden Oak Death has left a stockpile of tinder that amplifies the threat of wildland fires. In some locations, insufficient water pressure and supply and difficult access also contribute to the risk of property damage, injury, and loss of life from fire.

Marin County provides structural fire protection to most unincorporated areas, while local fire protection districts, fire departments, and volunteers serve some rural and all urban areas.

The Marin County Office of Emergency Services (OES) coordinates efforts to develop disaster-resistant communities and to educate residents on emergency preparedness. In the event of a major emergency or disaster, the OES has established an Emergency Operations Center for centralized emergency management. The 2005 Marin County Operational Area Hazard Mitigation Plan describes strategies to ensure the safety of lives, preservation of property, and protection of the environment during disasters.

Desired outcomes

- Protect people and property from risks associated with earthquakes, fires, flooding, landslides, tsunamis, and seiches
- Raise public awareness about environmental hazards

Why is this important?

Environment: Well-planned development protects the natural environment as well as people and property. Prohibiting development in floodplains preserves valuable habitat and vital groundwater-recharge capacity. Using measures such as controlled burning to remove vegetation improves firefighters' effectiveness and helps restore environmental balance.

Economy: Communities throughout Marin County have suffered hundreds of millions of dollars in losses from flooding over the past 30 years. Wildland-fire-suppression costs can soar to millions of dollars a day. Increased hazard awareness helps people decide where best to invest in homes and businesses. Careful placement and construction of buildings helps ensure safety during floods, fires, earthquakes, and other disasters; reduces potential costs; and speeds recovery.

Equity: Limiting development in floodplains and other hazardous areas protects residents and property. Providing the public with information about potential hazards can save lives and reduce property damage. Wildland fires, floods, and earthquakes on the San Andreas and Hayward–Rodgers Creek faults could cost Marin residents their homes and their lives. The community's health and prosperity depends upon its ability to cope with major hazardous events.

How results will be achieved

- Require development to avoid or minimize potential hazards from earthquakes, unstable ground conditions, fire, and flooding
- Work with the U.S. Geological Survey and other agencies to track bay and ocean levels to anticipate and plan for an anticipated sea level rise

"If they'd lower the taxes and get rid of the smog and clean up the traffic mess, I really believe I'd settle here until the next earthquake."

—Groucho Marx

- Become a National Weather Service Tsunami Ready Community to promote public awareness and preparedness in case of a tsunami
- Distribute maps showing evacuation routes and areas prone to environmental hazards
- Seismically retrofit County-owned buildings and prohibit placement of public-safety structures within tsunami-inundation or flood-prone areas
- Limit uses in areas with high potential for slope instability and restrict development in flood-prone areas
- Strictly limit the extent of proposed fill, excavation, or other grading that could increase geologic risks
- Undertake immediate damage assessment of essential service buildings in response to damaging earthquakes
- Maintain updated geologic-hazard-area maps
- Maintain flow capacity in stream channels and floodplains, and control floods using biotechnical techniques and other forms of structural stabilization rather than storm drains
- Consider cumulative impacts to hydrologic conditions, including alterations in drainage patterns and the potential for a sea level rise, when processing development applications in watersheds with flooding or inundation potential
- Maintain publicly controlled flood ponding areas in a natural state for flood control
- Pursue funding for levee construction in areas, such as Santa Venetia, threatened by sea-level rise
- Consider the effects of upstream development on flooding potential in low-lying areas

> ***"The only thing that stops God from sending another flood is that the first one was useless."***
>
> —Chamfort

- Continue to require automatic fire sprinkler systems in all new structures and existing structures undergoing substantial remodeling, and require and provide incentives for Class A fire-resistant roofing
- Assess the adequacy and number of firefighters trained as emergency medical technicians and train more paramedics or firefighters, as needed

Reducing Air Pollution and Greenhouse Gas

While Marin County enjoys relatively excellent air quality, emissions from the county contribute to global warming and pollution elsewhere in the region. In some parts of the Bay Area, ozone levels exceed National Ambient Air Quality Standards, and particulate concentrations exceed state standards. Automobiles produce most of the emissions. Construction, wood burning, off-road travel, and agriculture also generate pollution. Some scientists predict that the average global surface temperature could rise as much as 4.5 degrees Fahrenheit in the next 50 years and as much as 10 degrees Fahrenheit in the next century. Mounting evidence indicates that global warming stems largely from human activities that discharge gases and trap heat in the atmosphere. The earth's warming melts glaciers and raises the temperature of waters, causing oceans to expand and rise. Scientists expect sea level rise and higher evaporation rates to increase storm frequency and severity.

PLANNING SUSTAINABLE COMMUNITIES

> ***"Everybody talks about the weather, but nobody does anything about it."***
>
> —Mark Twain

Forecasters predict dramatic economic losses from increased storm activity. The cost of storm damage already has multiplied tenfold over the past 40 years. Climate change will amplify existing hazards, such as erosion, storm-surge floods, and landslides. Experts expect climate change to further stress domestic water supplies as well as indigenous plant and animal populations.

While we know that damage from weather-related events is rising, it is not known whether future changes will be gradual or abrupt. Nor do scientists completely understand the full spectrum of climate change's impacts. Given the global risks to economic, environmental, and social stability, climate change must be addressed at all levels of government.

Fortunately, local governments can play meaningful roles in addressing climate change. Steps taken to address climate change also will improve air quality because vehicle traffic and energy generation contribute to both greenhouse gas emissions and air pollution. Consequently, building a modern world-class transportation system in Marin County will reduce greenhouse gas emissions and improve air quality.

The Bay Area Air Quality Management District encourages local jurisdictions to implement policies to help improve regional air quality and to protect child care centers, retirement homes, and other facilities housing people particularly vulnerable to illnesses associated with air pollution. The Atmosphere and Climate section articulates air quality objectives consistent with regional programs. The Transportation, Energy and Green Building, Public Facilities and Services, and Community Development sections of the Built Environment Element also include policies and programs to reduce development's impact on air quality and global warming.

Coping with climate change is part of a larger challenge of fostering sustainable communities. Communities can more effectively reduce their contributions to global warming when they focus on integrating principles of sustainability. While the aim of this section is to provide a framework for addressing atmosphere and climate change, detailed programs and policies addressing climate protection are located throughout the Countywide Plan.

Desired outcomes

- Improve regional air quality
- Reduce greenhouse gas emissions and air pollution
- Promote strategies that aid people and systems in adapting to climate change

Why is this important?

Environment: Vehicle travel is responsible for more than half of the nitrogen-oxide emissions and about three-quarters of the carbon-monoxide and particulate-matter releases in Marin. Air pollution stresses Marin's fragile and sensitive ecosystems by reducing reproductive capacity and food sources. Greenhouse gas emissions lead to climate change, which will likely increase temperatures and shift rainfall patterns. Higher temperatures increase evaporation rates, reduce stream flow, and raise the probability of drought. In Marin, 80 percent of the water comes from rainfall.

Economy: Poor air quality raises public health costs associated with respiratory illnesses. Lowering pollutants would reduce public health costs and lead to fewer sick work and school days. The Tellus Institute estimates that California can save $1.9 billion annually by using more renewable energy and adopting more stringent building codes and efficiency programs. Aquaculture represents more than 5 percent of Marin's agricultural revenues. Warmer ocean water threatens aquaculture's health.

> ***"My interest is in the future, because I am going to spend the rest of my life there."***
>
> —Charles Kettering

Equity: Poor air quality can trigger asthma. In Marin, 17,083 people, or 7 percent of the population, suffered from asthma in 2004. Children, people who already are ill, and the elderly suffer disproportionately from air pollution. Residents of lower-income neighborhoods tend to live closest to major traffic routes and to be exposed to higher levels of vehicle-source pollutants. Prevalence of asthma and bronchitis is about 7 percent higher for children in neighborhoods with more traffic pollutants than for children in other neighborhoods, according to a Bay Area study.

How results will be achieved

- Promote new clean-vehicle technologies and other incentives to reduce emissions, such as continuing to allow zero or partial-zero emission vehicles rated at 45 miles per gallon or more in Marin County carpool lanes
- Replace County fleet vehicles with clean vehicles, and with hybrid fuel and other viable alternative fuel vehicles
- Require projects that generate potentially significant air pollutants to incorporate best available air quality mitigations in project design
- Continue to participate in the Cities for Climate Protection and Spare the Air programs

- Phase out older, polluting wood-burning appliances and limit installation of wood-burning devices in new or renovated homes to pellet stoves, EPA-certified woodstoves and fireplace inserts, or natural gas or propane appliances
- Require measures to control particulate emissions according to the Bay Area Air Quality Management District CEQA guidelines
- Buffer emission sources from sensitive land uses
- Require mitigation measures, such as increased buffers or indoor air filtration, to protect facilities housing people particularly vulnerable to air pollution, and require projects involving sensitive land uses within 150 feet of freeways to include analyses of potential health risks
- Support voluntary employer-based trip reduction by assisting ridesharing organizations and advocating legislation to expand employer ridesharing incentives such as tax credits
- Promote clean alternative fuels and modify roads to allow more efficient bus operations
- Continue to expand energy efficiency and renewable energy programs
- Promote transit-oriented development and alternative modes of transportation
- Encourage recycling and the use of methane recovery in energy production

Department of Public Works

- Incorporate carbon-emissions assessments into land-use planning and environmental reports for proposed projects
- Foster and restore Marin's wetlands, forests, baylands, and agricultural lands to sequester carbon over time and determine their potential value as carbon sinks
- Participate in research that examines the effects of climate change on people and natural systems in Marin
- Encourage appropriate agencies to track environmental indicators of climate change and provide public outreach about the topic
- Prepare response strategies to aid in adapting to climate change

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Protecting Open Space

Marin County residents enjoy a wealth of public open space unparalleled in the nine-county Bay Area, with 48 percent of Marin land permanently preserved as open space, watershed, or parkland. Land preservation has a long history in Marin. In the early 20th century, the state and federal governments established Muir Woods, Mount Tamalpais, and Samuel P. Taylor parks. In 1962, federal law set up the Point Reyes National Seashore.

In 1971, the Marin County Planning Department published a seminal land-use planning document, *Can the Last Place Last?* It proposed a vision for a countywide open space system. Since then, government agencies at every level have partnered with Marin residents and nonprofits to acquire or otherwise protect the hills, ridgelines, wetlands, watersheds, agricultural lands, and other undeveloped properties in Marin.

In 1972, Marin voters created the Marin County Open Space District. Its mission: "To enhance quality of life in Marin through the acquisition, protection, and responsible stewardship of ridgelands, baylands, and environmentally sensitive lands targeted for preservation in the Countywide Plan."

The Open Space District has focused primarily on preserving land in the City-Centered Corridor, specifically in upland greenbelts and community separators. This effort, along with the land preservation and management work of other public and nongovernmental agencies, has provided a highly visible, defining element of the County's landscape. Together they offer beauty, educational opportunities, watershed and habitat protection, and trail-based recreation.

The Open Space section of the Countywide Plan is intended to complement and support the mission and policies of the Open Space District and other public agencies charged with managing public lands.

The Open Space District recently reviewed its land-management policies in these areas:

- Fire
- Trails
- Non-native plants and animals
- Special-status species
- Parking
- Visitor facilities
- Access for the disabled
- Countywide trail system
- Public outreach
- Camping

Desired outcomes

- Manage open space sustainably for environmental health and the long-term protection of resources

- Preserve open space for the benefit of the environment and Marin residents

Why is this important?

Environment: Sustainable open space management yields reduced runoff, cleaner air and water, beautiful landscapes, and a healthy ecosystem.

Economy: Good land management can save governments, homeowners, and businesses money by staving off costly disasters, such as landslides and floods. Open space preservation can be the most affordable way to safeguard drinking water. Public open space improves property values.

Equity: Intelligent, sustainable open space management provides recreational opportunities, healthy and safe communities, and a legacy for future generations.

How results will be achieved

- Continue to acquire or otherwise preserve additional open space
- Promote collaborative resource management among land-management agencies
- Ensure that protected lands remain protected in perpetuity and that adequate funding is available to maintain them
- Utilize integrated pest management to minimize pesticide use in open space
- Educate open space visitors about its value and appropriate uses
- Partner with schools and colleges to foster appreciation of open space
- Identify and apply best management practices to make cost-effective, sustainable, and environmentally sound land-management decisions
- Consider ballot measures, possibly in partnership with other agencies, and private funding, grants, endowments, and bequests to fund open space stewardship
- Establish partnerships among land-management agencies, cities, towns, and nongovernmental organizations to maximize open space funding
- Encourage volunteers to care for open space resources
- Require clustered development to protect open space and environmental resources

Maintaining and Expanding Marin's Trails

Trails offer Marin residents and visitors opportunities to enjoy the county's wealth of parks and open space. Recognized as one of the world's finest, Marin's trail system has become a destination for hikers, equestrians, and bicyclists from throughout the Bay Area, the state, and beyond.

Trails offer Marin residents and visitors opportunities to enjoy the county's wealth of parks. Many of Marin's trails originated as links between Native American communities. In the 19th and early-20th centuries, missions, loggers, and ranchers expanded the trails. Some of the old trails became part of Marin's road system. Others disappeared. Still others survive in parks and on open space lands and ranches. Public agencies created the existing public trail network over decades by acquiring land segment by segment, mile by mile. Today, the county boasts some 640 miles of public trails.

County trails connect environmentally vital areas, parks and open space, and greenbelts. Preserving existing trails, acquiring new ones, minimizing environmental impacts, and balancing access with property rights remain key issues in managing local trails. Some of Marin's public trails are—or could be—part of regional or statewide trail systems, including the State Coastal Trail, the Bay Area Ridge Trail, and the San Francisco Bay Trail.

Five agencies own and manage the vast majority of county trails—the Marin County Open Space District, the Marin Municipal Water District, the Golden Gate National Recreation Area, Point Reyes National Seashore, and California State Parks.

This section outlines policies and programs to acquire, build, and manage trails. It also seeks to ensure access to trails for everyone. The Transportation Section of the Built Environment Element discusses paved bike paths.

"Cycle trails will abound in utopia."

—H.G. Wells

Miles of Trails in Marin County by Managing Agency

Agency	Miles
Marin County Open Space District	190
Marin Municipal Water District	149
Golden Gate National Recreation Area and Point Reyes National Seashore	212
California State Parks	88
North Marin Water District	2
Total	641

Desired outcomes

- Preserve and expand the public trail network
- Manage trails in a safe and sustainable way that protects natural resources
- Facilitate trail connections for safe routes to school and work

Why is this important?

Environment: A well-maintained trail system and well-managed public use of trails protect open space resources. For example, by implementing seasonal trail closures and rebuilding and realigning erosive trails, the Marin Municipal Water District and the Marin County Open Space District reduced sediment loads and improved habitat for endangered coho salmon and steelhead trout.

> ***"The future is not someplace we are going to, but a place we are creating. The paths to it are not found, they are made."***
>
> —Jane Garvey

Economy: Marin's trail network stimulates tourism by attracting hikers, bikers, and equestrians from throughout the Bay Area, the state, and the world. Equestrian activity alone contributed $97 million directly to Marin's economy in 2000.

Equity: The Open Space District offers nearly 100 free interpretive outings a year. The Marin Conservation Corps maintains trails, providing jobs and training for disadvantaged employees.

How results will be achieved

- Maintain the existing trail system and protect the public's right to access
- Promote collaboration among public land-management agencies, nongovernmental agencies, private landowners, and trail interest groups to improve trail-use opportunities and minimize conflicts
- Preserve undedicated paper streets to provide access to trails, and seek voluntary dedication or sale of trail easements
- Strive to secure public access rights to proposed trails crossing private land
- Strive to complete regional trail systems
- Consider public and private funding sources to aid trail acquisition and maintenance
- Encourage builders to grant or sell trail easements or improve trails in conjunction with development

> ***"Whenever the pressure of our complex city life thins my blood and benumbs my brain, I seek relief in the trail."***
>
> —Hamlin Garland

- Plan and maintain trails to protect user safety
- Consider historic and cultural uses in designing and designating trails
- Design and develop trails and trail programs to enhance accessibility for disabled people
- Align or relocate trails to avoid sensitive habitats and active agricultural lands, and to minimize erosion and disturbance to agricultural operations
- Consider programs to promote trail etiquette and cooperation among trail user groups
- Encourage carpooling and parking alternatives, and enforce parking restrictions at trailheads
- Enter into cooperative trail-maintenance agreements and encourage volunteer trail-stewardship programs
- Distribute periodically updated trail maps to promote trail systems for exercise, family activity, and everyday movement from place to place
- Consider seasonal trail closures to protect sensitive habitat and species

> ***"A nature trail is a roofless museum the width of a foot-path a mile or so long."***
>
> —William Alexander

© Marin County Open Space

Supporting Local Ranching, Farming, and Food

Since European settlers arrived in Marin in the mid-1800s, ranches and farms have been an integral part of the county's landscape and have provided food, forage, and fiber. Ranchers built Marin's agricultural economy on livestock and dairy, but local farms also produce a variety of vegetables, fruits, and forage crops. Dairies continue to generate the bulk of the county's agricultural revenue, with milk now generating more than half of the gross revenue, and dairies and livestock ranches still covering most of the agricultural land. Smaller areas of row crops occupy better soils, often in valley bottoms. Specialty products—such as organic vegetables, grass-fed meats, olive oil, and farmstead cheese—enrich the local bounty and supplement traditional farm income.

Local animals produce milk, beef, lamb, poultry, and eggs. An aquaculture industry started in the mid-1800s continues to harvest oysters, mussels, and clams today. Local farms also produce fruits, vegetables, wine grapes, flowers, nursery crops, wool, hay, honey, and herbs.

Organic farming, dry farming, and other sustainable agricultural practices reduce resource demand, preserve the land's ability to provide food in the future, and increase its future bio-capacity. Artificially fertilized farmland, on the other hand, consumes more energy. For example, 100 acres of artificially fertilized farmland has an energy footprint of nearly 10 global acres from fertilizer consumption alone.

Local producers and support agencies have mounted a concerted effort to certify organic food production in Marin. The Agricultural Commissioner established the first local government organic certification agency in the United States and the state's first grass-fed livestock certification. Since 2000, Marin Organic Certified Agriculture has certified 30 local producers and processors to meet USDA National Organic Program standards.

> ***"The soil is the great connector of our lives, the source and destination of all."***
>
> —Wendell Berry

In addition to 137,000 acres of private agricultural land, Marin claims 32,000 acres of federal agricultural land in the Point Reyes National Seashore and Golden Gate National Recreation Area.

Agricultural parcels meeting acreage, production, and zoning criteria are eligible for land-conservation contracts under the state's 1965 Williamson Act. The contracts restrict land to agriculture for ten years in exchange for tax assessments based on agricultural use rather than market value. Williamson Act contracts allow each parcel only one principal home, although additional homes may be allowed for relatives or employees. County Farmland Security Zones allow landowners to reduce their assessed valuations by 35 percent for at least 20 years.

The Marin Agricultural Land Trust was the nation's first private nonprofit specifically created to protect agricultural land. Since 1988, MALT has acquired conservation easements on 49 ranches covering about 33,000 acres—slightly less than one-quarter of the county's private agricultural land.

Conservation easements compensate landowners for giving up non-agricultural development potential. They can help modernize operations, pay taxes, and allow farmers and ranchers to pass land on to their children.

Desired outcomes

- Preserve agricultural lands and resources
- Improve the viability of Marin's ranches, farms, and agricultural industries
- Increase the diversity of agricultural products and access to locally produced and organic food

> ***"The farm is a place to live. The criterion of success is a harmonious balance between plants, animals, and people; between the domestic and the wild; between utility and beauty."***
>
> —Aldo Leopold

Why is this important?

Environment: Food-producing working landscapes provide habitat for native plants and animals and maintain open areas with plants that absorb greenhouse-gas emissions. Eating locally grown food requires less energy to transport, decreasing greenhouse-gas emissions and the county's ecological footprint.

Economy: Agricultural operations contribute to Marin's healthy economy. Marin residents who work in agriculture benefit from accessible, stable jobs. Consuming local products supports the local economy and ensures the availability of food regardless of trade and other supply-limiting issues.

Equity: Local agriculture provides consumers with additional, often healthier foods, which would be readily accessible in an emergency.

How results will be achieved

- Limit residential development—including the location, number, and size of homes—on agricultural lands
- Facilitate agricultural conservation easements, Farmland Security Zone contracts, and transfer of development rights when used to preserve agricultural lands and resources
- Maintain very low density agricultural zoning in the Inland Rural and Coastal corridors to support agricultural production and discourage conversion to housing
- Discourage the subdivision of agricultural lands and allow it only when subdivision demonstrably leads to enhanced long-term productivity
- Protect and enhance the quality of water used for mariculture through outreach, education, and cooperation with other stakeholders

- Require agricultural production and stewardship plans for residential development on agricultural land if proposed by applicants without a long history of production agriculture
- Continue to implement the right-to-farm ordinance to protect agricultural and mariculture operations from nuisance complaints
- Explore incentives to non-farming landowners to encourage leasing land to farmers and ranchers and for mergers of contiguously owned agricultural lands
- Encourage water conservation, collection, treatment, reuse, and development of potential small-scale water sources—including the use of recycled water for irrigation and irrigation alternatives
- Support local farmers' and ranchers' efforts to develop profitable markets, including a permanent public farmers' market
- Assist ranchers in using nonlethal methods to protect herd animals from predators
- Develop incentives to encourage farmers and ranchers to transition from conventional farming to organic farming and other ecologically sound farming practices
- Consider a program of signs for directions to farm sales areas
- Increase allotments of farmers' market food coupons to food stamp and WIC recipients
- Support sustainable-agriculture education, such as the Food for Thought curricula, in local schools
- Allow community gardens on County property and require space for community gardens in new residential developments of ten units or more
- Encourage planting of fruit trees and other edible landscaping when possible in new development and when renewing planting on County property
- Support programs that incorporate organic and locally grown foods in cafeteria services, the jail, County-sponsored events, and school gardens

Local Food

One way to save energy is to eat locally produced food. Flying a single bottle of Australian wine to the United States demands an almost 250-square-foot energy footprint.

How Success Is Measured

INDICATOR	BENCHMARK	TARGET
Number of identified northern spotted owls	75 pairs in 2000	No decrease in the number of owls identified
Water quality—standard industry measure—beneficial water uses	16 beneficial uses in 2004	No decline in water quality through 2015
Number of days of poor air quality per federal and state guidelines	No exceedences in 2000	No increase through 2015
Amount of greenhouse gas emissions countywide	3,005,674 tons CO2 in 1990 and 3,252,049 in 2000	Reduce 15% by 2015
Amount of greenhouse gas emissions from County government sources	16,857 tons CO2 in 1990	Reduce 15%–20% by 2015
Percentage of land preserved	48% (159,744 acres) in protected open space, watershed, or park land in 2000	Increase land preserved by 5% (add 16,640 acres) by 2010 and 7% (add 23,296 acres) by 2015
Miles of trails in Marin County	641 miles in 2004	Maintain and increase
Acres preserved with agricultural easements	28,377 acres preserved in 2000	Increase by 25,000 acres by 2010 and by 12,500 additional acres by 2015
Acres of land farmed organically	357 acres in 2000	Increase by 1,500% by 2010 and 1,700% by 2015
Annual sales at Marin farmers' markets	$9,860,000 in 2005	Increase annual sales 10% by 2010 and 15% by 2015

PLANNING SUSTAINABLE COMMUNITIES

BUILT ENVIRONMENT ELEMENT

BUILT ENVIRONMENT ELEMENT

© Ken Smith

Marin County is a highly desirable place in which to live, work, and own a business because of its beautiful setting, distinctive communities, and abundant cultural and recreational opportunities. Within Marin one can find unique villages, commercial activity centers, and high-quality residential neighborhoods. The attractiveness of many Marin neighborhoods is enhanced by the presence of nearby public open space and protected environmental resources.

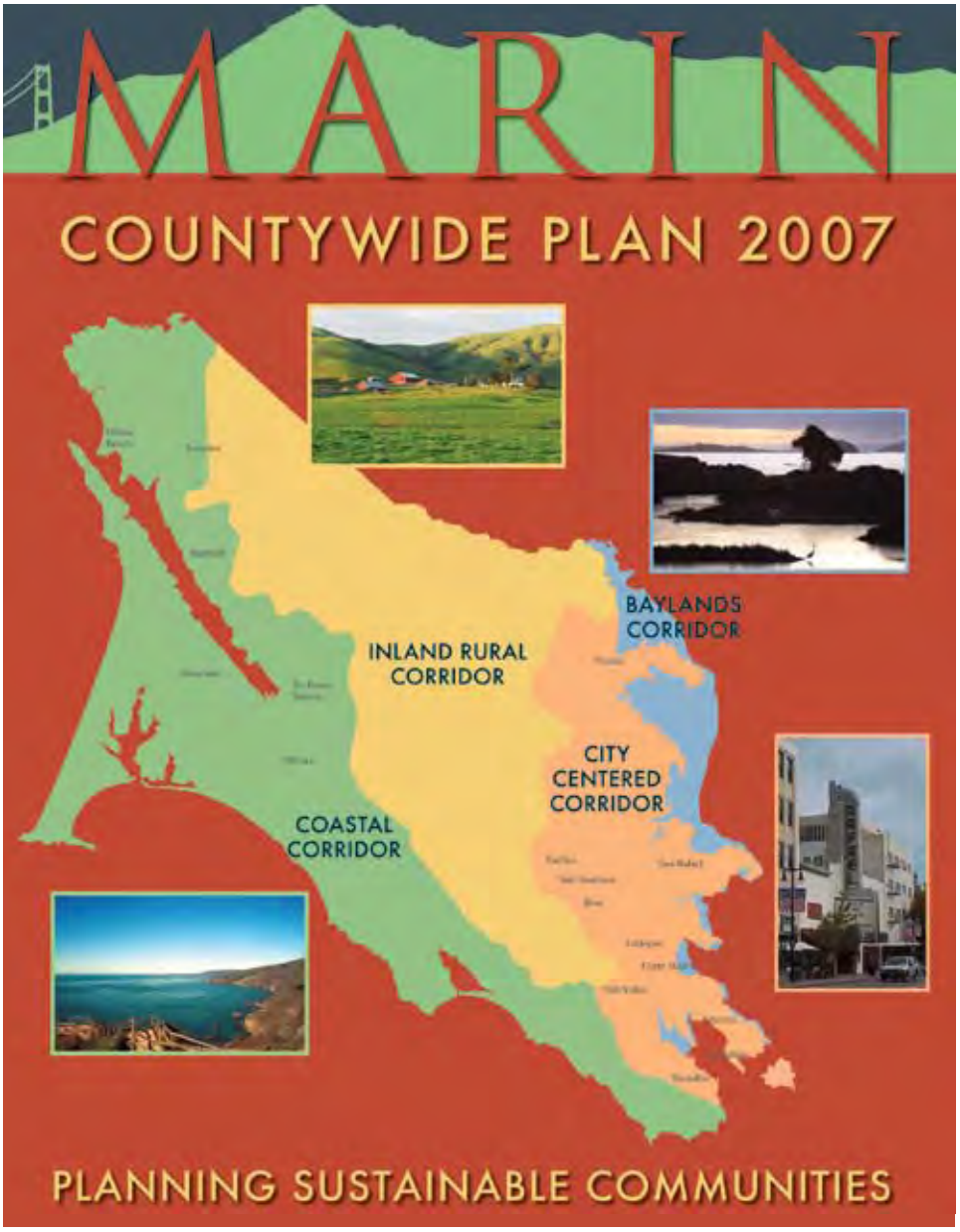
BUILT ENVIRONMENT ELEMENT

The Built Environment Element plays a central role in identifying many land use issues, constraints, and opportunities, and in addressing the numerous needs, perspectives, and desires within the unincorporated county. It also attempts to balance the amount of growth based on the availability of public services. It sets forth a pattern for land use, and sets out standards for the density of population and the intensity of development for each type of allowable use.

The Built Environment Element also establishes a direct tie between the timing, amount, type, design, and location of development and the traffic, service, and infrastructure resources available to serve additional demand. The following sections of the Built Environment Element are summarized here:

- Community Development
- Energy and Green Building
- Mineral Resources
- Housing
- Transportation
- Public Facilities and Services

Topics related to the economy, to public safety, and to parks and recreation are located in the Socioeconomic Element.



Design: Susan Bercu Photos: Coastal–Marin County Community Development Agency, Inland Rural–University of California Cooperative Extension, Baylands–Richard Blair

Managing Community Development

Sound environmental and planning principles have guided Marin County's land use since the Countywide Plan's adoption in 1973. To focus development and protect environmental resources, the Plan divides Marin's 606 square miles of land and water into four easily recognizable environmental units called *corridors.*

- The Coastal Corridor includes parklands, recreational areas, agriculture, and small coastal communities.
- The Inland Rural Corridor includes agriculture and compatible uses and small communities located in the central and northwestern part of the county.
- The City-Centered Corridor includes areas designated for urban development and community greenbelts within corresponding watersheds along Highway 101 in the eastern portion of the county.
- The Baylands Corridor includes tidal and largely undeveloped historic baylands along the shoreline of San Francisco and San Pablo bays. This corridor, added in 2007, generally consists of marshes, tidelands, and diked lands once part of wetlands or bays—along with applicable upland habitats.

The Plan reduces development potential for environmentally constrained sites and increases development potential at locations closest to jobs and transit.

Tackling growth-related problems requires coordination with federal, state, and regional agencies on issues ranging from air and water quality to housing, transportation, and coastal protection. County officials also coordinate land-use planning with numerous local agencies and jurisdictions. The Local Agency Formation Commission plans for the provision of urban services and sets boundaries for cities and towns. In 1990, a joint powers agreement between the County and all Marin's cities and towns created a now-defunct Countywide Planning Agency to review the respective general plans of all members.

The County Redevelopment Agency coordinates the redevelopment and rehabilitation of blighted residential, retail, commercial, and industrial properties. The agency provides assistance to revitalize physically and economically underutilized areas—and sponsored housing, commercial and public facilities in Marin City.

Photo simulation: redesigning a strip mall to include housing and a village center.

Implementation tools such as zoning and development code regulations are used to consistently apply the land-use designations and policies in the Countywide Plan, onto individual properties. Community plans also guide unincorporated communities in land use, transportation, community facilities, building design, and environmental quality, in addition to other issues unique to particular communities.

Desired outcomes

- Continue to use the environmental corridors framework as the basis for local land-use management policies and regulations
- Maintain balanced communities capable of housing and employing people of all income groups—and providing needed facilities and services
- Facilitate employment opportunities that minimize the need for automobile trips, and provide mixed-use residential development at infill locations with services
- Coordinate planning with other jurisdictions, and evaluate and monitor implementation of the Countywide Plan

Why is this important?

Environment: Confining urban and suburban development to the City-Centered Corridor helps link housing to public transportation and jobs, and reduces farmland conversion, habitat disruption, greenhouse gas emissions, and Marin's ecological footprint.

Economy: Concentrating housing and jobs near commercial centers increases financial opportunities for all segments of the population and contributes to healthy and vibrant mixed-use self-sustaining communities. Locating high-intensity uses in the City-Centered Corridor saves money and workers' commuting time.

Equity: People living in counties with the most sprawl tend to weigh six pounds more than people living in the most compact communities. Concentrating development expands affordable housing and employment options and improves the quality of life for residents.

Community Design Principles
Like Facing Like Similar land uses and building types should face each other.
Sense of Proportion A comfortable building scale is around one foot of building height to one foot of street width.
Streets Provide interconnected narrow streets to encourage pedestrian activity.
Civic Spaces Include civic spaces such as plazas, squares, and waterfronts lined with public streets.
Building Frontages Encourage shopfronts and awnings, and discourage surface parking lots and soundwalls.

Source: Adapted from Fisher and Hall, *Urban Design*.

How results will be achieved

Urban Sprawl

Compared with clustered development, urban sprawl, on average, requires 21 percent more land and a 10 percent increase in local roadways.

- Confine urban development to the City-Centered Corridor and designate environmentally sensitive areas within and surrounding the corridor for resource protection
- Calculate development potential at the low end of the applicable range on sites without public water or sewer systems, with sensitive habitat, within the Ridge and Upland Greenbelt, and within the Baylands Corridor
- Establish a housing-overlay designation to encourage construction of workforce and special-needs housing units in the City-Centered Corridor close to transit, public services, employment, and in existing shopping centers or other underutilized sites
- Discourage extension of urban services to serve development beyond urban-service areas, and discourage big-box retailers and strip development along roadways
- Utilize all available methods—including allowing housing over parking areas, residential duets on corner lots, upper-story housing over one-story commercial buildings, transfer-of-development-rights programs, and redeveloping commercial areas for mixed use—to create affordable housing; promote strategies to convert existing market-rate housing units to permanently affordable units
- Enhance commercial areas, especially historic downtowns, so that they continue to define community identity, while also encouraging mixed-use development
- Encourage Marin's cities and towns to revise their plans to enable more affordable and workforce housing and mixed uses instead of full commercial build-out
- Re-establish a city-County entity to share information and collaborate on housing, transportation, land use, and sustainability issues—and pursue funding for mutual planning efforts
- Work with others to formulate specific or master plans along the Highway 101 corridor to identify and plan for higher-density, transit-oriented development
- Consider creating a program to transfer development rights from bayfront or ridge and upland greenbelt areas to higher-intensity centers in existing communities
- Plan the circulation system and public infrastructure and services to provide capacity for the unincorporated county's realistic build-out

Greening Energy Supplies and Buildings

Every sector of the economy and the community depends upon energy. Energy generated from coal, oil, and natural gas is the largest single contributor to greenhouse gas emissions. Well-designed buildings with efficient appliances can use up to 75 percent less energy.

Marin County imports the vast majority of its energy, with Pacific Gas & Electric Co. the sole distributor of electricity and natural gas. Marin is vulnerable to supply disruptions and price increases like the 2000–01 oil-price spike, where local residents spent about $60 million more on energy than in previous years. Community-wide electricity use in Marin increased a disproportionate 18 percent from 1991 to 2000 with only a 5 percent increase in customers. Bigger homes and building in warmer areas where people rely more on air conditioning has fueled the rising energy demand.

While imported energy prices skyrocket, the costs of new energy-efficient and renewable technologies are falling. By investing in energy efficiency, renewable energy, and green building, Marin will protect public health and the environment while reducing our ecological footprint and greenhouse gas emissions. Becoming more energy self-reliant will enable the County to reduce water use, stabilize energy prices, create high-quality jobs, and keep millions of dollars in our local economy annually.

Ecological Footprint

If Marin County reduced energy use by 10 percent, the county would reduce its ecological footprint by 63 percent.

Marin has access to ample renewable resources, such as solar, wind, micro-hydro, biogas, and tides. The number of solar-power systems being installed in Marin has been steadily increasing, and in 2007 over 800 solar electric systems were operating countywide. Local government policies and programs can contribute to a sustainable future by increasing energy efficiency and conservation, prioritizing local production of renewable resources, and promoting green building materials and design.

A green building approach to design and construction protects the environment, conserves resources, creates healthier air quality, and saves money. Green building practices include siting and designing to utilize passive solar, cross ventilation, energy and water efficiency, renewable energy, and recycled and reused building materials. By using materials that protect natural resources, green buildings reduce energy and water costs, increase water productivity, and provide healthier indoor air.

Green buildings pay for themselves many times over, according to a study examining national data. The report estimates that over time, green design can save $50 to $70 per square foot—more than ten times the additional cost for building green.

Renewable Energy
Biogas energy is recovered methane from landfills or agricultural operations used to power an engine or a turbine.
Micro-hydro turbines use the energy of falling water to create electricity. MMWD and NMWD have hydro-power potential at their reservoirs.
Solar energy uses the sun's energy to provide heat, light, hot water, and electricity for homes, businesses, and industry.
Tidal energy systems use the energy of waves, rising/falling tides, or the flow of water through a venturi to power a turbine. San Francisco is pursuing a tidal energy system, and Marin is exploring the idea with it.
Wind generators are turbines that use the energy in the motion of the wind to make mechanical energy, which is then converted to electrical energy. **Wind** is the least expensive method of generating electricity, and there is enough potential wind energy in the United States to power the entire country.

Source: National Renewable Energy Laboratory (NREL).

Desired outcomes

- Reduce energy demand through efficiency and conservation
- Increase the use of renewable energy resources
- Require green building practices through the development-review and building-permit process

Marin County Sustainability Programs

- Green Business
- Solar Incentives
- Energy Watch Partnership
- Green Building
- Climate Protection
- Sustainable County Operations

Why is this important?

Environment: Generating electricity from fossil fuels is one of the world's largest contributors to greenhouse gases. Generating renewable energy increases supply reliability while reducing greenhouse gas emissions and dependence on imported energy. Retrofitting existing buildings and designing new ones to be more energy efficient offers immediate opportunities to reduce fossil fuels.

Economy: In 2005, Marin spent $216 million on electricity. A dollar spent on energy efficiency cycles through the economy four times, whereas a dollar spent on imported fossil fuel immediately flushes out of the economy. Locally produced renewable energy provides price stability, lowers energy bills, and creates jobs. The solar industry generates about nine jobs per megawatt installed, whereas traditional fossil fuel generates one job per megawatt installed.

Equity: Lower-income households use a higher percentage of their incomes to pay energy bills. Rental housing often lacks energy efficient insulation, windows, heating, and appliances.

How results will be achieved

Marin County Sustainability Ordinances

- Single Family Dwelling Energy Efficiency
- Green Building Development Code
- Construction and Demolition Waste Recovery
- Wood Smoke Reduction

- ♦ Expand education, marketing, training, and technical assistance about energy efficiency and renewable power to property owners, development professionals, schools, and special districts
- ♦ Review and revise incentives, including rebates, fee reductions, and expedited processing, for using energy-reducing and renewable practices
- ♦ Adopt energy efficient and green building standards that exceed state requirements
- ♦ Continue to require that new and remodeled homes comply with the Marin County Single Family Dwelling Energy Efficiency Ordinance and Development Code
- ♦ Consider adopting local energy efficiency standards for inspecting and upgrading commercial buildings at the time of substantial remodels or when buildings are sold
- ♦ Ensure that Marin is implementing adequate low-income weatherization programs
- ♦ Provide energy efficiency analyses in conjunction with required County approvals, and help commercial, industrial, and agricultural operations to more efficiently store, transport, refrigerate, and process commodities
- ♦ Use Geographic Information Systems to map local renewable resources and possible sites for energy production, and evaluate potential constraints and opportunities affecting their development
- ♦ Continue to require protection of solar design elements and systems from shading by neighboring structures and trees

Features of Marin County Energy Efficiency and Green Building Programs

- Fast-track permitting and waiving energy fees for projects that
  a. exceed state and local standards by 20%
  b. install a solar system that meets 75% of project's energy needs
  c. meet the Green Building checklist requirements
- Technical Assistance
- Green Building Resource Library
- Trainings for agency staff, building professionals, and the public
- Coordination with other municipalities

- Identify and remove regulatory or procedural barriers to producing renewable energy in building and development codes, design guidelines, and zoning ordinances
- Evaluate and pursue Community Choice Aggregation to enable municipalities to provide electricity, as a strategy to accelerate the use of renewable energy
- Consider incentives and regulations to achieve carbon-neutral buildings
- Develop protocols for storage of biodiesel, hydrogen, compressed air, and other alternative energy sources
- Continue to reduce energy consumption and use energy efficient technologies in County buildings, use tax-free, low-interest loans and other available financing options to power County facilities with renewable energy
- Improve and continue to implement the Construction and Demolition Waste Recovery Ordinance, requiring building projects to recycle or reuse at least 50 percent of unused or leftover building materials
- Provide incentives and consider regulations requiring new buildings to incorporate fly ash to offset some of the energy use and greenhouse gas emissions associated with cement manufacturing
- Support minimum green building certification requirements for architects, contractors, and other building professionals
- Implement LEED Gold certification requirements or a higher standard for development and major remodels of public buildings

Gas Use

Marin's homes use 72 percent of the County's natural gas. Weatherization, window retrofits, and installing high-efficiency furnaces would significantly reduce gas use.

Energy Efficient

Retrofitting at the Marin Civic Center has saved more than $300,000 and 1,000 tons of carbon dioxide annually—the annual equivalent of planting 288 acres of trees.

© Ken Smith

Managing Mineral Resources

California municipalities are legally required to restrict designated mineral resource sites from premature development. State policies also encourage extraction of minerals reasonably close to their markets and ensure reclamation of mined lands. Local governments have a responsibility to protect residents' public health and safety by working to ensure that operators adequately mitigate the impacts of mining using the best available management practices.

The State Mining and Geology Board designated eight Marin County mineral resources sites as Class 2—lands having the greatest importance. The state considers Ring Mountain (pictured above) a Scientific Resource Zone rather than a production site because of its rare geologic formations. Marin has mineral resource sites with County-approved operating permits and reclamation plans but without state designations. Four of the state-designated sites should be considered for removal from the state list because the Marin County Open Space District has purchased them for public open space, they have been subdivided and are being used for homes, and/or they are highly environmentally sensitive.

Desired outcomes

- Ensure long-term viability of mineral resource sites
- Protect environmental and public health from mining operations

Why is this important?

Environment: Mining operations can create nuisances, hazards, and significant environmental impacts. Requiring compliance with best management practices can ensure environmentally sensitive operations, reduce hauling distances and carbon emissions, and result in healthy site reclamation.

Economy: Using locally mined material reduces transportation costs and supports local businesses.

Equity: Limiting and buffering exposures to mining's noises, odors, dust, vibrations, and traffic upholds neighborhood quality of life.

How results will be achieved

- Prepare and distribute Marin County land-use maps showing designated mineral resources areas and protect these sites from encroachment
- Incorporate sufficient buffers between mining operations and neighboring land uses to minimize adverse public health and safety effects
- Require best-available management practices reflecting state-of-the-art mitigation to existing and proposed mining operations through the environmental review process
- Continue to enforce adopted mining reclamation provisions and ensure sufficient financial assurances to enable full reclamation
- Require mining operations to protect and buffer wetlands and to enable full wetlands reclamation
- Require mining operations to mitigate visual impacts and modify the Mineral Resource overlay zone to include all state-designated mineral-production sites
- Reduce demand for mined materials by promoting alternative materials and optimizing recycling of construction and demolition waste
- Request that the state remove the mineral designation status from Ring Mountain, Black Point, and Burdell Mountain because they are public open space and/or environmentally sensitive

Providing Housing

Marin County's natural beauty, accessibility to open space, and proximity to San Francisco make it a very attractive place to live. The principal challenge of this section is how to meet local housing needs in unincorporated Marin. Toward that end, these strategies also take into account ensuring that new housing is compatible with the natural environment, character of existing neighborhoods, and traffic concerns.

Marin residents face chronically low vacancy rates and escalating rents and housing prices. Because suitable vacant land for large-scale development is very limited, housing goals must usually be met on smaller or underutilized sites. Integrating housing into existing commercial areas to create mixed uses—and supporting continued development of second units in residential areas—more efficiently uses land within the built environment.

The state requires every California municipality to include a Housing Element in its general plan. In 2003, Marin County adopted an updated Housing Element, which was certified as being in compliance with legal requirements by the state of California. The state-certified Housing Element is due for amendment in 2009.

Desired outcomes

- Maintain and enhance existing housing, and blend well-designed new housing into existing neighborhoods
- Use land efficiently to meet diverse housing needs linked to necessary services
- Build local government institutional capacity and monitor accomplishments
- Work with community groups, developers, other jurisdictions, and other agencies to achieve affordable- and workforce-housing goals
- Ensure that everyone in Marin has a home and no one experiences discrimination when seeking housing

Why is this important?

Environment: According to recent studies, providing infill housing within a suburban context close to jobs, public transit, and services reduces greenhouse gas emissions by 10 to 40 percent. Conversely, not providing housing for Marin's workforce exacerbates regional traffic congestion, and contributes to air and water pollution, habitat fragmentation, and loss of agricultural lands in surrounding areas.

Economy: Approximately 40 percent of Marin's workforce resides outside of the county, and the current cost and availability of housing limits the ability of many to live in the community in which they work. Providing additional housing near commercial centers and job sites would help retain employees and avoid the high cost of long-distance commuting.

Cohousing Projects

Cohousing consist of private dwellings with private kitchen and living spaces and common dining and recreation facilities. Cohousing encourages social contact and attempts to create a collaborative environment through a sense of community among neighbors.

Equity: Shelter is basic to human health and dignity. The Plan seeks to provide housing for homeless people, farmworkers, people with disabilities, the elderly, people with serious illnesses, and other special needs individuals.

How results will be achieved

- Conduct community outreach and education about housing issues and programs, and encourage outreach to nearby neighbors early in the development process
- Require designs for multi-unit buildings that break up perceived bulk and minimize apparent height and size
- Protect existing rental-housing stock by prohibiting, to the extent possible, conversion of rental units to nonresidential uses
- Provide rehabilitation-loan assistance for low- and moderate-income housing, and protect the affordability of mobile homes and mobile-home parks
- Work with nonprofits seeking to acquire and remodel affordable rental units
- Require nonresidential development proposals to provide affordable workforce housing
- Work with large-scale employers to ensure local housing for employees, and engage employers to assist employees with housing as part of their salary packages
- Encourage opportunities and identify locations for live/work developments
- Be flexible in applying development standards, as more affordable housing near transit, jobs, and services will generate fewer trips and require less parking

- Encourage development of single-room occupancy and efficiency apartments
- Redevelop shopping centers into mixed-use projects with housing, and use density bonuses and other incentives to entice developers to build affordable housing
- Require developments with two or more dwellings to provide a percentage of on-site units for very low-, low-, and moderate-income housing

> ***"Peace—that was the other name for home."***
>
> —Kathleen Norris

- Enable construction of well-designed second units in both new and existing residential neighborhoods, and require second units and duplexes as part of new single-family subdivision development proposals with four or more units
- Establish an amnesty program for unpermitted second units, and give property owners ample time to legalize their units and meet health and safety standards
- Study and determine the nexus for affordable housing from nonresidential uses
- Encourage cohousing, cooperatives, and similar collaborative housing developments
- Work with school districts, government agencies, and neighborhood groups to develop surplus or underdeveloped property for affordable housing for teachers and government personnel
- Conduct a survey of nonresidential sites with the potential for mixed-use development, and establish appropriate standards and incentives
- Conduct a study to evaluate properties as affordable housing sites, especially for homeless people or people at risk of homelessness
- Establish a Housing Trust Fund to create permanent funds for affordable housing
- Create a Housing Assistance Team to provide technical expertise for working with affordable housing developments and continue to retain a full-time County affordable housing strategist
- Continue to provide nondiscrimination clauses in rental agreements and deed restrictions, and refer discrimination complaints to Fair Housing of Marin or other appropriate agencies

> ***"You only need***
> ***a heart full of grace.***
> ***A soul generated by love."***
>
> —Martin Luther King

Greening Transportation

Transportation and land use are inextricably linked. Although Marin residents already pedal and walk more than most Americans—in 2000, biking and walking trips made up 10 percent of daily trips in Marin and only 6 percent in the U.S.—traffic congestion still plagues many local highway and road sections, especially during peak commute times. And a whopping 62 percent of the County's greenhouse gas emissions come from transportation.

Most new development will be built in the City-Centered Corridor, home to the most congested roads. The Countywide Plan calls for much of the residential growth to be in medium- to higher-density, mixed-use developments near transit. Road widening and other traditional solutions to reducing traffic congestion tend to do little to relieve long-term congestion.

The best way to significantly reduce traffic congestion will be to entice drivers to get out of their cars or at least not drive alone during peak hours—and onto their feet, bicycles, and public transit. Many more Marin residents will need to change their transportation habits to reduce traffic congestion, greenhouse gas emissions, and air pollution in the County.

Moving Forward: A 25-Year Vision for Transportation in Marin County, written in 2003, calls for buses, trains, ferries, bicycles, and walking to supplement Marin's primary mode of transportation—motor vehicle use. It outlined $1.6 billion worth of projects and found that local funding would be necessary to address the most immediate needs. In November 2004, Marin County residents voted overwhelmingly to approve a sales-tax measure to fund local transportation projects. Measure A, the Traffic Relief and Better Transportation Act, authorizes a half-cent sales tax. It is expected to generate about $331 million over 20 years. Measure A aims to improve transportation and mobility for all residents and workers through a variety of transportation improvements and options. They include expanding bus service; completing a Highway 101 high-occupancy vehicle, or HOV, lane through San Rafael; improving roadways; and improving safe access to schools. Measure A opens opportunities for Marin to receive state and federal matching funds because government entities award more grants to counties with guaranteed matching funds for transportation projects.

Marin County Transportation Sales Tax Expenditure Plan

Strategy	Measure A Funds	Share of Measure A Funds
Develop a seamless local bus system that serves community needs, including special services for seniors and those with disabilities.	$182.4 million	55%
Fully fund and accelerate completion of the Highway 101 HOV Lane Gap Closure Project through San Rafael.	$24.9 million	7.5%
Improve, maintain, and manage Marin's local transportation infrastructure, including roads, bikeways, pathways, and sidewalks.	$87.9 million	26.5%
Reduce school-related congestion and improve safe access to schools.	$36.5 million	11%

The four key strategies of Measure A for reducing congestion and improving transportation in Marin.

If approved by voters, Sonoma Marin Area Rail Transit (SMART) would provide passenger train service for approximately 71 miles on an already publicly owned railroad right of way from Cloverdale to Larkspur, with 14 stations, nine in Sonoma County and five in Marin. Half of the traffic entering Marin from the north on Highway 101 is destined for Marin County. With gas prices hovering around the $4 mark, commuter rail service to Larkspur would provide another option for drivers on Highway 101 and enable commuters to transfer to San Francisco–bound ferries. A continuous bicycle and pedestrian path also would be part of the project.

BUILT ENVIRONMENT ELEMENT

Desired outcomes

- Provide a range of energy efficient transportation options to meet the needs of residents, businesses, and travelers
- Expand, improve, and promote the bicycle and pedestrian network
- Provide efficient, affordable public transit service
- Minimize environmental disruption and energy use related to transportation

Why is this important?

Environment: Transportation-related greenhouse emissions in Marin equal 62 percent, in contrast with only 15 percent in areas of Western Europe where people walk, ride bicycles, and use public transportation to a much higher degree. Using a blend of asphalt cement and reclaimed tire rubber has superior engineering properties and keeps waste tires out of the landfill.

Economy: The average American spends more than 100 hours a year commuting, with almost half the average commute time spent stuck in traffic. Reducing the proportion of single-occupancy vehicles and decreasing traffic congestion results in time and cost savings. Pursuing alternative fuel sources creates jobs and financially supports environmentally sound technologies. When fuel costs decrease, consumers save money.

Modal Split

A resident of Marin who drives alone to work each day has a commuting footprint more than four times greater than the same commuter who rides a bus. One-third of Marin residents already carpool, use public transportation, walk, or bike to work. If this fraction increased to one-half, the total footprint of commuting for Marin County residents would decrease by 11,000 global acres.

Equity: Faster commutes equal more time for meaningful pursuits and more convenient access to goods and services. Providing pedestrian-friendly and other alternative transit methods encourages social interaction, strengthens sense of community, and increases opportunities for exercise. Public transit can save Americans thousands of dollars a year in transportation costs. Bus, ferry, and rail transit reduces the number of cars on the road, enhancing the quality of life for both riders and drivers with no feasible alternative to automobile travel. Clean-fuel vehicles reduce exposure to toxic emissions. Reducing our dependence on foreign oil is good for our national security.

How results will be achieved

"Very simply—when the area devoted to parking is too great, it destroys the land."

—Christopher Alexander, Sara Ishikawa, and Murray Silverstein

- Assign projects that reduce fossil fuel use and single occupancy vehicle trips the highest priority when funding transportation improvements
- Require new development to pay its fair share of the transportation system costs, and require improvements to be in place before or concurrent with new development
- Amend regulations to encourage telecommuting, satellite work centers, alternate-work schedules, and live-work, cottage industry, and home occupation uses in appropriate locations
- Provide incentives for using public transit, vanpools, carpools, car sharing, bicycles, walking, and other transportation alternatives
- Reduce parking requirements for projects participating in transit-subsidy programs or within half a mile of transit hubs or bus stops with regularly scheduled service
- Broaden the use of traffic-mitigation fees to include alternative-mode projects
- Limit West Marin roads to two lanes, and improve pedestrian, bicycle, and transit access by limiting parking and providing shuttles
- Identify and require strategies for reducing vehicle miles traveled, and consider imposing tolls, congestion pricing, parking fees, gas taxes, and residential parking-permit limits to encourage alternatives to single-occupancy vehicles
- Support the establishment of a "car share" program to reduce individual car ownership
- Where appropriate, require new development to provide bicycle and pedestrian trails or roadways or in-lieu fees, and include safe and convenient bicycle and pedestrian access in transportation-improvement projects
- Explore creating bicycle and pedestrian trails that connect urban areas to federal and state parklands
- Encourage the development of bicycle stations, guarded "valet" parking, and other attended bicycle parking support facilities at the San Rafael Transit Center, the Larkspur Ferry Terminal, and other transit hubs, and ensure that all transit systems provide bicycle-storage room on transit and at transit centers

- Implement the *Marin County Unincorporated Bicycle and Pedestrian Master Plan,* and work to incorporate and fund a multi-use pathway generally following the proposed railroad corridor
- Identify and improve roads with shoulders wide enough to be designated as bicycle lanes, and encourage innovative bicycle lane design, considering techniques employed elsewhere in the U.S. and in Europe
- Continue to work with school districts to ensure that children have safe walking and bicycling routes to school
- Work with local municipalities to ensure that traffic signals are timed to allow safe and comfortable pedestrian crossing, and to improve pedestrian access to freeway bus pads along Highway 101
- Encourage and support expanding local bus and ferry services and adding rail service on the Northwestern Pacific Railroad right of way
- Fund paratransit service and integrate it with fixed-route service, including school services, to efficiently meet the needs of transit-dependent people
- Work to increase the coverage and frequency of public bus and ferry service
- Support the creation of shuttle service, corridor trolleys, and jitneys to collect riders for public transit

"Bikes are cheap, healthy, and good for the environment; but the environment is not designed for them. Bikes on roads are threatened by cars; bikes on paths threaten pedestrians."

—Christopher Alexander, Sara Ishikawa, and Murray Silverstein

- Use resource-efficient materials, such as rubberized asphalt concrete and pervious pavement, in road repair and construction
- Encourage switching to zero-emission or other low-emission vehicles
- Promote the use of hybrid and low-emission vehicles and clean fuels, including biodiesel, and increase the proportion of clean-fuel County vehicles
- Actively support infrastructure necessary for alternative-fuel vehicles, including fueling and charging stations

Providing Public Facilities and Services

Distributing drinking water and safely processing sewage and solid waste are essential to our communities. This section includes strategies to increase recycling and conservation—and more efficiently provide public services. Because urban-level infrastructure and services are often more readily available in incorporated areas, the Plan directs major development to Marin's City-Centered Corridor and within its incorporated cities and towns. The Local Agency Formation Commission establishes each city's sphere of influence—its ultimate boundary and service area. Each sphere includes an urban-service area, which can best accommodate development over the next five to ten years.

Marin Municipal Water District, MMWD, and North Marin Water District, NMWD, provide water in urban areas. Several small community water districts serve rural areas in West Marin.

Three-quarters of MMWD's water comes from the local watershed and is stored in reservoirs. MMWD's remaining water comes via pipeline from Sonoma County's Russian River. MMWD conducted a one-year desalination project to evaluate drawing additional water from San Francisco Bay. Despite a 10 percent increase in population and a 10 percent reduction in water supply to restore the Lagunitas Creek fishery, MMWD has met all new water demand by conserving and recycling water since 1987. NMWD water comes from the Russian River and Stafford Lake, west of Novato. Underlying bedrock and saltwater intrusion limit Marin groundwater supplies. Most Marin agricultural operations rely on impoundments, springs, and potable well water.

There are nine sanitary-treatment plants, most of which connect to lines from more than one district, in the City-Centered Corridor. West Marin has three sanitation districts. The County Environmental Health Services office regulates most septic systems.

Marin's only active disposal site is Redwood Landfill, north of Novato. Increased recycling and resource recovery along with a limited expansion could extend the landfill's life. West Marin Sanitary Landfill, north of Point Reyes Station, no longer receives solid waste. Marin also has a materials-recovery facility, a large-volume transfer station, and a composting facility. Additional composting operations and facilities are expected to open in the future. The Marin County Hazardous and Sold Waste Joint Powers Authority implements a household hazardous-waste program for most of Marin. The program includes a permanent collection facility in San Rafael and a periodic collection event in West Marin. The cities of San Rafael and Novato, in conjunction with the Novato Sanitary District and Novato Disposal, operate their own hazardous-waste programs.

Demand for cell phone coverage has led to installation of wireless service towers and other visible structures. The County Telecommunications Facilities Policy Plan guides development of telecommunications facilities while protecting the environment and people.

Desired outcomes

- Provide public facilities to accommodate planned development in the County
- Assure a reliable, sustainable water supply for existing and future development
- Continue to enhance the Alternative Onsite Wastewater Monitoring Program to ensure innovative wastewater system designs
- Minimize, treat, and process solid waste while planning for reuse and recycling to achieve zero waste
- Site telecommunications facilities to avoid adverse visual, health, and environmental effects

PLANNING SUSTAINABLE COMMUNITIES

Why is this important?

Environment: Local water requires less energy to transport than imported water. Reduced water consumption leaves more water in natural systems to benefit the environment and shrinks the amount of wastewater and our ecological footprint. Reducing the solid-waste stream saves energy, conserves forests, and decreases greenhouse gas emissions, air and water pollution, and the need for additional landfill space.

> ***"There's no 'away' to throw things to."***
>
> —Donella Meadows

Economy: Low flow fixtures, drought tolerant landscaping, reused treated wastewater, and other cost-saving conservation measures extend scarce supplies to all homes and businesses. Every ton of solid waste diverted from the landfill results in $275 in goods and services and generates $135 in sales.

Equity: Requiring new development to pay for facilities that serve them relieves current residents and businesses of a potentially unfair burden. Efficient wastewater treatment can ensure clean and safe living and working conditions. A precautionary approach and the careful siting of telecommunications facilities can avoid potential health risks.

How results will be achieved

- Require new development to contribute its fair share to public services and facilities
- Ensure that necessary public facilities and an adequate, sustainable water supply are adequately funded and in place before occupancy of new development
- Support water and wastewater districts' efforts to reduce waste and increase reuse through integrated planning, land-use, and building regulations
- Minimize demand for water in new development—in districts lacking a sustainable, long-term water supply, require new construction to offset demand so there is no net increase
- Support guidelines for local water providers to enact programs that promote the Ahwahnee Principles for water supply
- Require drought-tolerant native landscaping and ultra-efficient irrigation systems for all appropriate development applications and re-landscaping projects
- Restore and promote the Civic Center native plants garden and develop a master plan for public facilities using water-wise landscaping

- Work with water and wastewater agencies on energy conservation, renewable power projects, and methane capture for electrical generation
- Encourage on-site rainwater capture, storage, and infiltration for irrigation and other non-potable uses—and study the efficiency and cost-effectiveness of rainwater-harvesting and groundwater infiltration and recharge systems
- Require that new development, including well installations, not degrade or deplete water resources or in-stream flows for aquatic habitat
- Work with water agencies and sanitary districts to evaluate the potential of small-scale portable graywater converter systems, and evaluate waterless urinals, composting toilets, other water-saving technologies, and wastewater-treatment technologies, including advanced biological treatments, living machines, and bio-solid composting
- Encourage all Marin water agencies to adopt the California Urban Water Conservation Council's Best Management Practice of tiered billing rates
- Continue to revise County septic regulations to streamline the process, prioritize monitoring of wastewater systems, and provide incentives to repair systems
- Encourage sanitary districts to reduce treatment plant accumulation of heavy metals
- Continue to implement the construction and demolition recycling waste ordinance, and aggressively pursue recycling, resource recovery, and composting strategies to reduce landfill waste
- Explore establishing a West Marin waste transfer station
- Promote biodegradable plastic bags, fast-food containers, utensils, and other product redesigns to reduce the volume and toxicity of discarded products
- Integrate a curbside food-waste-collection program into waste hauler bid specifications
- Ensure that telecommunications site users consolidate and share facilities
- Require telecommunications facility applicants to submit visual analyses and to screen facilities
- Prohibit installation or expansion of telecommunications facilities that would threaten public health, endangered species, or migratory birds
- Discourage privatization and commercially driven naming rights of public facilities

How Success Is Measured

INDICATOR	BENCHMARK	TARGET
Number of dwelling units within ½ mile of a transit stop	82,773 dwelling units	89,997 dwelling units
Energy use per capita countywide	16,636 kWh unincorporated per capita in 2000	Reduce consumption of electricity per capita 10% by 2020
Total megawatts of photovoltaic systems installed countywide	0.0255 MW in 2000	15 MW by 2015 and 30 MW by 2020
Total megawatts of photovoltaic systems installed by County government	0 MW in 2000	0.5 MW by 2010 and 1 MW by 2015
Regional fair share housing allocation	Met in 2000	Meet regional fair share allocation in 2010 and 2015
Jobs-housing balance countywide	1.22 workers per household in 2000	Reach and maintain a 1.3-employed-resident-workers-to total-jobs ratio through 2015
Number of employees who live and work in Marin	61% in 2000	No decrease
Number of vehicles with a fuel economy of at least 45 miles per gallon countywide	362 in 2002	Increase the number of zero and partial zero emission vehicles with a fuel economy of at least 45 mpg through 2020
Vehicle miles traveled overall countywide (VMT)	2,764 million VMT in 2000	No or minimal increase through 2015
Miles of class I and II bicycle pathways in unincorporated areas	3.5 miles of class I in 2000 and 2.25 miles of class II in 2000	Increase to 4.5–10 miles by 2010 and 9–25 miles by 2015
Public transportation ridership share of modal split countywide	11% (bus and ferry) in 2000	Increase public transportation ridership by 2015, again by 2020
Per capita use of potable water	299 gallons daily per capita in 2000	No increase through 2020
Per capita use of non-potable water for appropriate end use	5 gallons daily per capita in 2000	Increase through 2020
Percent of solid waste diverted from landfills	Diversion rate was 65% in 2000	Increase diversion rate to 75% by 2010 and 80% by 2015

PLANNING SUSTAINABLE COMMUNITIES

SOCIOECONOMIC ELEMENT

SOCIOECONOMIC ELEMENT

Marin County is known for its creativity, innovation, and high quality of life. This lifestyle depends a great deal on the beautiful natural setting and excellence of residential neighborhoods in Marin, as well as many other factors that affect how people learn, work, obtain goods and services, and play. The Socioeconomic Element focuses on the people of Marin County and seeks to reinforce the complex connections between individual well-being, economic prosperity, community involvement, cultural richness, and the environment.

Because a truly healthy community embraces and cares for its least fortunate members, the Socioeconomic Element emphasizes the need for universal health care, abundant child care, community policing, full civic participation, open access to information, education and the arts, proper nutrition and physical fitness. The Element seeks to enhance quality of life for everyone in Marin. Its policies and programs are intended to bolster a strong and diverse economy, improve conditions for disadvantaged and underrepresented groups, and engender fair and just social relationships within the Marin community. The following sections of the Socioeconomic Element are summarized here:

- Economy
- Child Care
- Public Safety
- Diversity
- Education
- Environmental Justice
- Public Health
- Arts and Culture
- Historical and Archaeological Resources
- Parks and Recreation

Topics related to naturally occurring environmental hazards are covered in the Natural Systems and Agriculture Element; and housing, transportation, and community facilities are addressed in the Built Environment Element.

Sustaining Our Economy

Marin County has enjoyed relative prosperity and economic diversity during the past decade, but rising labor costs, traffic congestion, and a shortage of affordable housing have exacted a toll on businesses. Between 1989 and 2002, the county added more than 6.5 million square feet of office, retail, and industrial space. During the same period, more than 40 companies left Marin, vacating about 2.5 million square feet of primarily office space. Still, the county job base continues to grow by more than 1 percent a year. Almost half the employees work in the service and retail sectors. Demographers expect the ratio of jobs per household—more than 1.2 in 2000—to increase. Marin businesses tend to be highly productive, and the average Marin worker produces 5 percent more revenue than the average American worker. Nearly one-quarter of Marin businesses are home-based.

Marin continues to be a center of creativity and innovation. It spawned the mountain bike industry as well as a spate of multimedia enterprises. A higher-than-average concentration of artists, designers, small and home-based firms, and managerial and professional workers call Marin home.

A 2004 study concluded that the County must act to see that both local-serving and broader-based businesses thrive. The study targeted business types that would help address key economic issues facing Marin. Among the targeted businesses: green building, environmental technology, digital imaging, software engineering and design, interactive media and game development, wealth-management services, alternative medicine, biotechnology, and organic agricultural products.

Four Principles for Economic Sustainability

1. Plug the leaks. Produce goods locally that Marin residents consume, or import more efficiently.
2. Support existing businesses.
3. Encourage new local enterprise—for example, by adding value before exporting, and facilitating lending.
4. Recruit compatible new businesses that would develop underutilized resources, meet needs unfulfilled by existing businesses, complement existing economic activities, and be consistent with community social and environmental values.

Source: Rocky Mountain Institute —Michael J. Kinsley.

The Countywide Plan seeks to attract and retain environmentally aware businesses that provide goods and services needed locally and that offer stable, living-wage employment in interesting, pleasant, and healthy work environments—close to employees' homes or transit.

Because only 10 percent of the county's economic activity and 2 percent of its jobs are in unincorporated Marin, the plan's policies and programs will be more effective if local towns and cities also adopt them.

Existing and Targeted Businesses

Existing Clusters	Targeted Businesses
Real Estate and Construction	Green Building
Business Services	Boutique Consulting Environmental Technology
Multimedia	Digital Imaging (Motion Pictures) Interactive Media and Game Development Engineering and Design Software
Finance and Insurance	Integrated Wealth Management Services Online Financial Services Personal Financial Advising
Restaurants and Tourism	Agri-Tourism Outdoor Recreation and Equipment Arts and Crafts
Health Services	Alternative Healing and Meditation Alternative Medicine Biotech Emergent Care
Agriculture	Organic Value-Added (Niche) Agricultural Products Food Product Manufacturing

Source: Marin Economic Commission, Targeted Industries Study, 2004.

Desired outcomes

- Establish and maintain a vibrant, diverse, and sustainable local economy
- Strive to achieve meaningful employment, fair compensation, adequate benefits, and a decent work environment for all persons working in Marin

Why is this important?

Environment: Using locally produced goods and services reduces transportation costs and environmental impacts and consequently reduces greenhouse-gas emissions and our ecological footprint. Local companies employing green business practices further reduce the environmental impacts of economic activity.

"You make a living by what you get, but you make a life by what you give."

—Winston Churchill

Economy: Buying locally produced goods and utilizing locally provided services recirculates dollars within the community, improving the local economy. Johns Hopkins University researchers found that living-wage jobs increase productivity and reduce job turnover, boosting the economy.

Equity: Recirculating local dollars increases demand for local services, products, and employment opportunities. Job training and work opportunities with benefits and good working conditions will improve Marin residents' quality of life.

How results will be achieved

- Support and retain local businesses consistent with the economic, social equity, and environmental policies in the Marin Countywide Plan and Targeted Industries Study
- Streamline review for minor projects—especially for targeted businesses with minimal environmental impacts
- Identify strategies to protect the economy from natural disasters, disease outbreaks, and sea-level rise
- Facilitate installation of digital communications infrastructure
- Inventory existing business space as well as vacant and underutilized commercial sites
- Pursue intensification and reuse of underutilized sites, and work with local cities and towns to encourage commercial development patterns that support public transit
- Expand the green business and green building programs, and assist these businesses with technical and permitting assistance
- Integrate economic disaster planning into disaster-preparedness plans and analyze economic impacts from climate change
- Provide fair compensation in accordance with the County living-wage ordinance
- Make the County a model employer by providing on-site child care and/or child care subsidies, and by providing internships and allowing working parents to share jobs and telecommute
- Strongly encourage employee-support services, including child care, in conjunction with approval of large mixed-use and commercial projects
- Explore partnerships to create a community hiring hall or similar service for day laborers
- Encourage employers to hire youth, senior citizens, people with disabilities, the homeless, and people from other traditionally underemployed groups
- Update listings of vocational and technical skills programs, and work to place unemployed residents in skill-enhancement programs

MarinCARES

Providing Quality Child Care

While the number of licensed child care providers increases, demand continues to outpace supply for caregivers of infants and school-age children. In 2001, local providers served less than 10,000 of the estimated 24,000 Marin County children needing care. Shortages are most severe for infants and children in need of after-school care.

As the cost of living in Marin remains high, the local employment base expands to include more women, and welfare reform continues to send women into the workplace, child care shortages could grow. Low wages paid to child care workers coupled with the high cost of housing make it difficult to retain qualified staff. Projected growth in lower-paying service and retail jobs likely will further increase the need for subsidized and affordable child care.

Although licensed child care providers take in $57.5 million a year in Marin, parents pay only 85 percent. Government subsidies pay about 10 percent, and the corporate sector pays about 1 percent. Additional subsidies are needed to ensure that existing child care facilities can continue to operate and that new ones can locate in Marin. New funding sources may be necessary to provide quality child care for those who need it.

Demand Exceeds Supply

More than 24,000 children competed for 9,500 child care slots in 2001. Demand consistently exceeds supply.

School facilities once used for child care are reverting to classrooms, and child care faces stiff competition for commercial and residential space. Child care providers' lack of experience with the development-review process can impede building of new and expanded facilities. The County can ease regulations to increase the number of child care sites.

Desired outcomes

- Increase the number of Marin County child care facilities
- Expand the range of available child care options

Why is this important?

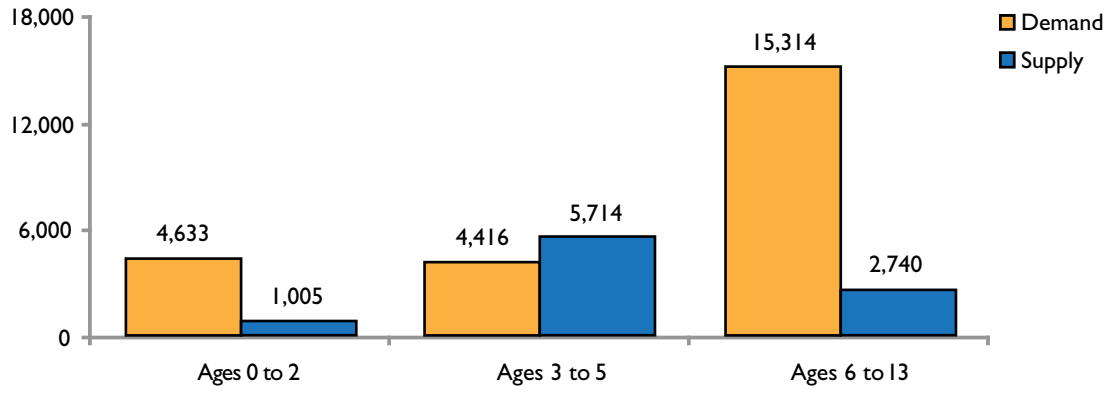
Economy: Between 1996 and 2001, 2.7 children competed for each child care slot. Projected job growth will increase the need for affordable and subsidized child care. Encouraging construction of child care facilities can help reduce employee turnover and save businesses money. Additional facilities would add revenue and jobs to the local economy and contribute to employee satisfaction and productivity.

Equity: Low-income families experience the brunt of the lack of child care. Increasing the availability of child care facilities will benefit all families. Subsidizing child care will provide lower-income households with better access to care. Broadening child care options, especially through the workplace, will allow children from a wide range of socioeconomic groups to receive adequate care.

How results will be achieved

- Facilitate and streamline the permitting process for child care in all residential zones and in businesses, places of worship, schools, and other community facilities
- Study the impact of new nonresidential development on child care demand, and, based on the results, require on-site child care or in-lieu fees in new mixed-use and nonresidential development
- Assign a planner to coordinate child care facility applications and shepherd them through the permit process
- Consider adopting whole or partial fee waivers for child care facilities, and consider exempting large family day-care projects from use-permit requirements
- Amend the Development Code to exclude floor-area ratio requirements for child care facilities
- Reduce parking requirements for new projects that include child care facilities
- Work with schools to increase the number of after-school child care programs, and offer training and support for child care providers and parents
- Establish an amnesty program for unpermitted large family day-care providers
- Consider offering child care at the Civic Center and other locations for County employees
- Seek new funding sources for child care operations and for additional affordable placements for low-income parents

Licensed Child Care Supply and Demand in Marin County, 2001



Source: 2001 supply and demand data from analysis conducted by Marin County Child Care Commission and Applied Survey Research.

San Rafael Police Department

Keeping Marin Safe

Marin residents can directly influence public safety. In cooperation with law-enforcement agencies, they can participate in community policing and restorative-justice programs. Community policing empowers residents to prevent crime by forming neighborhood-watch groups and other cooperative ventures with local police agencies. Restorative-justice programs include victim-offender programs, neighborhood-accountability boards, and courts for domestic violence, mental health, drugs, and teens.

Restorative-justice programs help offenders empathize with the plight of victims. Through mediation, offenders learn the depth of their wrongdoing, and learn to accept responsibility for their actions and for the need to repair the harm. In exchange, the community helps offenders to become law-abiding, contributing community members.

Traditional criminal-justice agencies continue to play an essential role in apprehending and punishing more serious and violent criminals and those for whom alternative efforts have failed. In Marin, resources should be focused on people with mental and emotional issues and substance-abuse problems that lead to domestic violence, child abuse, and other related crimes attributable to these problems.

The County maintains an Emergency Operations Plan. The plan coordinates emergency management of natural and human-made disasters. It identifies personnel responsibilities and actions necessary to protect health and safety, property, and the environment. The plan also details procedures before, during, and after major events. During the first 72 hours following a major disaster, the plan assumes that community members may have to be self-sufficient. Geologists estimate a 70 percent chance of a major earthquake, one registering 6.7 or more on the Richter Scale, hitting the Bay Area before 2030.

California Pays for Drug Abuse

Alcohol and drug abuse costs Californians an estimated $35 billion a year in health care, prevention and treatment, lost productivity, criminal-justice services, and theft.

Despite relatively low and dropping crime rates in Marin, child abuse and neglect, elder abuse, and domestic violence continue to be widespread problems. The 2001 Marin Community Health survey found that 20 percent of 18-to-24-year-olds reported being threatened or being the victim of physical violence in the previous year. In three out of four cases of domestic violence, the victim reported that alcohol or drugs had been a factor. While all segments of the community experience domestic violence, families with substance abusers may be more frequent victims of domestic violence. Both teens and adults routinely report higher rates of alcohol use than others in the state and the nation. Drunken-driving rates also are higher in Marin.

Desired outcomes

- ♦ Keep county neighborhoods safe and reduce crime
- ♦ Provide effective emergency- and disaster-preparedness services
- ♦ Decrease risks to human and environmental health from hazardous materials

Why is this important?

Environment: Fire and earthquakes represent an increasing hazard in Marin. The well-being of the natural environment will depend upon response to wildfires, hazardous-materials releases, and other disasters.

> ***"An earthquake achieves what the law promises but does not in practice maintain—the equality of all men."***
>
> —Ignazio Silon

Economy: Street lighting and other infrastructure can deter crime and benefit business. Quick recovery from major emergencies and disasters will be critical to the survival of affected businesses. More than 500 Marin County businesses are regulated users of hazardous materials. Safe storage, transportation, and disposal of hazardous materials reduces the associated risks.

Equity: Since 1998, Marin's physical-abuse rate has exceeded the state average. Parental alcohol and drug abuse contribute to 7 out of 10 child abuse or neglect incidents and 75 percent of all foster-care placements. Effective emergency preparedness and relief helps to ensure the long-term safety and health of people in our communities. Lower-income neighborhoods often are disproportionately exposed to hazardous materials.

How results will be achieved

- Provide public outreach in multiple languages about community policing, restorative justice, reporting of child abuse and neglect, and other crime-prevention techniques
- Involve residents and businesses in neighborhood-watch programs
- Upgrade street visibility for neighborhood safety and promote graffiti removal, cleanup, and other neighborhood-beautification efforts
- Have law-enforcement agencies review design of new and rehabilitated buildings to identify ways to increase safety
- Prepare contingency plans for sea-level rise, violent storms, and flooding
- Establish mandatory counseling for perpetrators of domestic violence and seek financial support to establish restorative-justice programs
- Work with schools, community, and faith-based organizations to support and expand after-school recreation, youth mentoring, conflict resolution, team building, and other similar programs
- Continue the collaboration between County Health and Human Services and law enforcement personnel for training and education addressing mentally ill offenders, and promote alternatives to jail—such as the mental health court and the Support and Treatment After Release (STAR) programs
- Distribute information in multiple languages about local safety hazards and emergency plans

- Establish an annual Emergency Preparedness Awareness Week, and encourage residents to go through the Community Emergency Response Training program so they can serve as volunteers during emergencies
- Work with neighborhood and civic groups to prepare for disasters, and encourage jurisdictions and institutions to adopt emergency-response plans
- Prohibit placement of critical public facilities in hazardous areas such as designated fault zones, and formulate definitive plans and procedures for evacuation of hazard-prone areas
- Adopt regulations for development of land on or adjacent to known solid- or hazardous-waste sites; identify businesses that use or transport hazardous materials, and require them to follow approved transportation routes and other measures to protect public health and safety
- Develop a policy to reduce the use of hazardous materials in County buildings and operations
- Continue to implement the precautionary principle in County purchasing, selecting the alternative with the least potential threat to human health and natural systems
- Promote ecologically friendly products and use of least-toxic substances, and provide public education to encourage the proper disposal of hazardous materials

Celebrating Diversity

Supporting populations that have traditionally been underrepresented celebrates diversity and cultivates a rich community fabric. Increased ethnic and cultural awareness on the part of public agencies and nonprofit organizations will promote self-sufficiency. Marin is growing in diversity, but community integration has failed to keep pace. A large proportion of the county's Latino and African-American populations, for example, live in Novato, San Rafael, and Marin City. Cultural and economic vitality should be supported in neighborhoods with high proportions of minorities. Diversity should be celebrated at community events, workplaces, and schools. Recent immigrants may need English as a Second Language classes and other help adjusting to life in their new home.

SOCIOECONOMIC ELEMENT

Desired outcome

- Support and enhance cultural and ethnic diversity

Why is this important?

Economy: Workplace diversity fosters ideas that resonate throughout the community.

Equity: African-Americans encountered discrimination or difficulties finding housing 47 percent of the time, according to a 2000 audit. Recognizing and celebrating diversity, as well as increasing participation in decision making, improves quality of life while opening opportunities in housing, education, and employment.

How results will be achieved

- Identify public and private spaces for cultural-awareness activities
- Support organizations that foster community dialogue about diversity
- Support the Marin Human Rights Commission and other local diversity-advocacy groups
- Work with schools, colleges, and community groups to promote understanding of various cultures and ethnicities
- Ensure that multilingual County employees receive appropriate compensation
- Provide recent immigrants with access to programs, meeting space, volunteer opportunities, English-language instruction, and employment opportunities
- Practice fair hiring, and provide job opportunities for people of diverse backgrounds
- Provide County information in multiple languages and create a bulletin board on the County website for discussion of multicultural events
- Encourage individuals from underrepresented minorities to join County staff and commissions
- Require agencies contracting with the County to practice nondiscrimination and comply with the living wage ordinance

> ***"We must learn to live together as brothers, or perish together as fools."***
>
> —Peter Schwartz

Marin County Department of Parks, Open Space, and Cultural Resources

Closing the Education Gap

Marin's educational programs generally excel. However, the high-quality education for which Marin is known generally is less accessible to students in rural areas, from lower-income households, or in ethnic minorities. Early education and extracurricular programs, counseling and other support services, and free or reduced-cost school meals need to be more widely available.

After-school programs, as well as adult and other community-based educational programs, should be expanded, and students of limited financial means need more access to nutritious meals at school. Marin County has one of California's lowest dropout rates. But graduation and dropout rates should be monitored and educational opportunities improved for traditionally underserved populations and recent immigrants.

Desired outcomes

- ♦ Ensure that adequate school facilities, including institutions of higher education, meet the needs of current and future Marin County residents
- ♦ Ensure that all Marin students have the best possible educational opportunities

Why is this important?

Environment: Well-planned and properly located schools allow students to bike or walk to school, reducing emissions from vehicle commutes. Expanded educational opportunities may include training in environmental awareness, conservation, and sustainability.

> ***"If you plan for a year, plant rice. If you plan for 10 years, plant trees. If you plan for 100 years, educate your children."***
>
> —Chinese proverb

Economy: A well-educated, healthy population contributes to better-informed decision makers who will be more productively employed in the future. Students who participate in extracurricular activities are more apt to fully contribute to the community. A national study of sixth through 12th graders found that students who spent time in extracurricular activities were six times less likely to drop out of school, two times less likely to be arrested, and 75 percent less likely to use drugs. Lifetime criminals cost society as much as $1.7 million.

Equity: During the 2000–01 school year, 56.1 percent of Sausalito Elementary School District students and 50 percent of San Rafael City Elementary School District students received free or reduced-cost meals. Equitably distributed classroom space, teaching equipment, and nutritious meals will help eliminate social inequities in schools and beyond.

How results will be achieved

- ♦ Coordinate and share data with school districts to determine appropriate locations and project facility needs
- ♦ Encourage school districts and colleges to lease unused facilities—possibly for child care centers, recreation and community centers, private schools, offices, or art studios—to reserve the sites for future school needs
- ♦ Monitor school meal programs to ensure that all students have affordable access to healthy food and proper nutritional guidance
- ♦ Support free financial-management and parent education

- Expand the Marin Literacy program; increase the number and capacity of English as a Second Language classes, and work with school districts to provide after-school tutoring, especially for children of lower-income households

- Encourage nonprofits, schools, and colleges to develop and expand curricula about sustainability, climate change, and diversity

> ***"Education is for improving the lives of others and for leaving your community and world better than you found it."***
>
> —Marian Wright Edelman

- Promote placement of computers in classrooms, libraries, and after-school settings, opening access to unconnected students

- Pursue scholarships and programs to support homeless people in attending school, college, and training programs

- Support and expand library services throughout Marin County in partnership with library-support groups

- Employ teens and adults from the Civic Center Volunteers Program to expand library programs, including after-school tutoring and homework help

- Make homebound deliveries of library materials to disabled individuals and seniors

- Support expanded summer camp and library opportunities, especially for lower-income children, and solicit youth input on scholastic policies

© Ken Smith

Combating Environmental Injustice

Environmental justice is intended to ensure that all people live in a safe and healthy environment. While only a relatively small number of Marin County businesses emit large amounts of hazardous materials, most county residents and business owners regularly use gasoline and plastics. These products impose health consequences on the communities where they are manufactured and disposed of, resulting in the export of environmental hazards to other, often less affluent, communities already suffering disproportionately from toxic pollution.

"Environmental Justice means the fair treatment of people of all races, tribes, and economic groups in the implementation and enforcement of environmental protection laws."

—Redefining Progress

Desired outcome

- Ensure that all Marin residents live in a safe and healthy environment

Why is this important?

Environment: In 2005, Marin residents drove 2.8 million miles, emitting 1.9 million tons of carbon dioxide. But the impact of Marin's fuel consumption is felt most strongly outside of Marin, where fuel is processed.

Economy: Businesses benefit from practices that shield workers and communities from toxins and related health impacts. For example, U.S. IKEA saves more than $500,000 and 4.5 million pounds of carbon-dioxide emissions a year by conserving energy.

Equity: Some 13 percent of Latino children in Marin suffer from asthma, compared to 9.6 percent of white children. An estimated 21.4 percent of African-American adults suffer from asthma in Marin, compared to 9.1 percent of white adults. Low-income families are less able to afford pesticide-free food and more likely to be exposed to lead-based paint and toxins.

How results will be achieved

- Map locations with known toxins and other health-threatening pollution, and examine possible correlations by comparing these areas with census-tract data on income and ethnicity
- Educate elected officials and agency staff on the brownfield cleanup and development process
- Work with the California Environmental Protection Agency to identify and address environmental-justice gaps in land-use decisions
- Work to abate the release of toxins by creating buffer zones and relocating sources away from residential areas and sites with sensitive receptors
- Encourage state, regional, and County agencies to work with businesses, neighborhood groups, and schools to reduce toxic exposure in disproportionately impacted communities
- Obtain authority to withhold permits for new toxin sources and to require applications for new or modified facilities that may produce toxins to incorporate pollution-prevention analyses
- Engage the local community when considering land-use actions that could affect local environmental and public health

Protecting Public Health

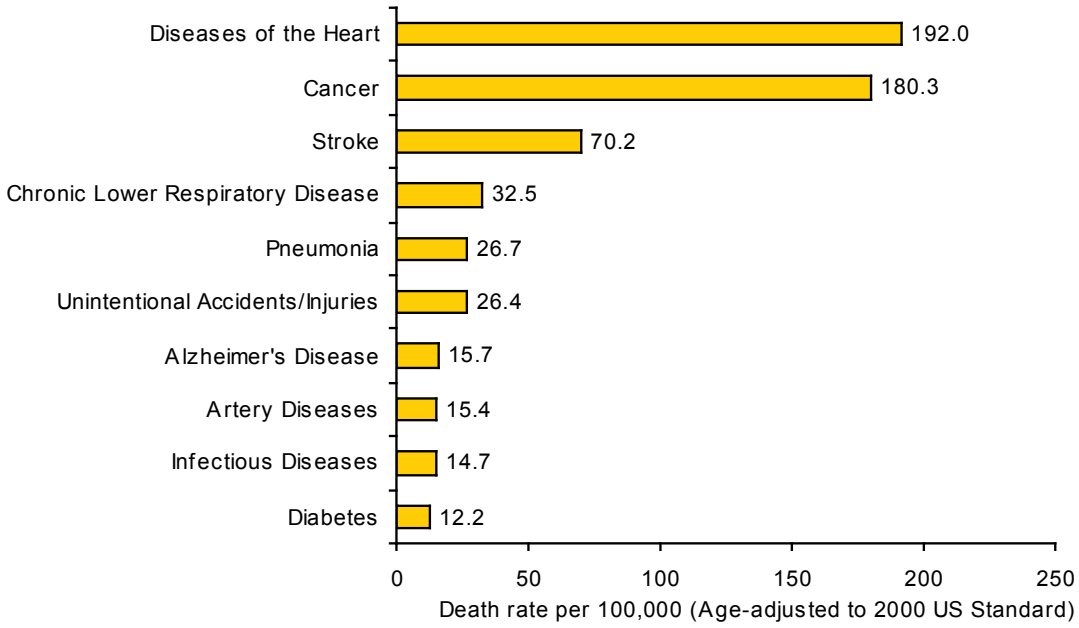
Public health focuses on the well-being of communities and on the principle that everyone is entitled to protection from unnecessary death and disability. A combination of science, skills, and a commitment to maintaining and improving the health of all people through collective action makes public health practices work. Activities that focus exclusively on individual behavioral change isolated from broader community factors have been less successful than a more comprehensive, well-coordinated approach. At its core, public health is about prevention and creating healthy conditions.

Despite the general good health of Marin County residents, some disturbing trends face the population. Marin's breast and prostrate cancer rates are very high. Obesity is prevalent among both adults and children. High rates of alcohol consumption among Marin teens, adults, and seniors merit serious concern. The county's increasingly aging population faces a shortage of accessible and affordable health care services and housing. Approximately 3,300 Marin children lack health insurance. While more than 90 percent of Marin adults have health insurance, only 64 percent of low-income adults and 76 percent of Hispanic adults have health coverage.

Avoiding tobacco use, poor diet, lack of exercise, and excessive alcohol consumption—behaviors that underlie the 10 leading causes of death in Marin—can prevent or reduce the devastating effects of heart disease, cancer, stroke, diabetes, and other associated chronic diseases. Creating community norms and conditions that support people making healthy choices will successfully influence these behavioral patterns.

Local governments and community partners are uniquely positioned to improve the public's health by establishing policies and programs about lifestyle choices that influence chronic disease and death. For example, land-use policies promoting walking, biking, and access to healthy fresh, local foods—along with restricting alcohol and tobacco outlet density—have been shown to result in community health benefits.

Leading Causes of Death in Marin County, 2000

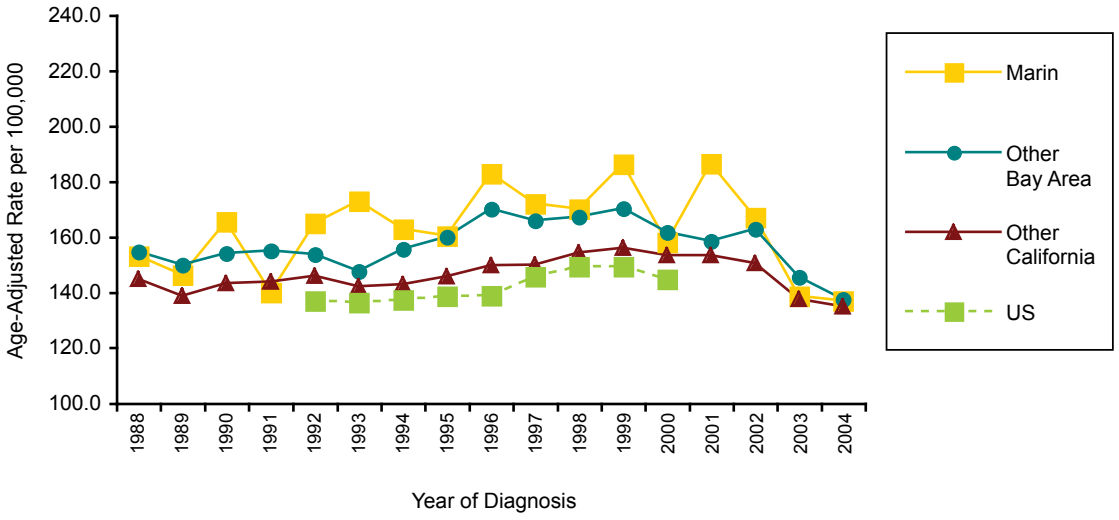


Sources: State of California, Dept. of Health Services Center for Health Statistics, ***Death Statistical Master File, Marin County,*** 2000. State of California, Dept. of Finance, 2000 Population: 1997–2040 ***Population Projections by Age, Sex, and Race/Ethnic Detail,*** Dec. 1998.

Desired outcomes

- Reduce rates of obesity, eating disorders, breast cancer, heart disease, and other chronic diseases
- Reduce alcohol, tobacco, and other drug use
- Ensure access to affordable and convenient quality health care
- Increase access to care for seniors and others who traditionally have difficulty obtaining health care

Breast Cancer Incidence Trends in Marin County[1]



[1]White non-Hispanic women, invasive cancers only.
Source: 2004 Northern California Cancer Center and California Cancer Registry.

Why is this important?

Environment: Land-use policies that promote physical activity, as well as foster sustainable agricultural practices and diverse local food production and marketing, support a healthy environment and community.

Economy: Chronic diseases burden the economy with high health care costs and a less productive workforce. Reducing the health care burden from tobacco, alcohol, and substance abuse will increase community health. Health insurance coverage reduces the probability that workers will change jobs by as much as 31 percent. Full health coverage reduces health-related absenteeism by an average of 9 percent. Access to health care reduces unnecessary hospitalizations and emergency room visits.

Equity: Inactivity and poor diet are beginning to approach tobacco use as Americans' leading causes of death. Healthy food, physical activity, and access to quality health care promote better academic performance and prevent sickness and chronic disease. Providing low-cost preventive services in senior housing complexes supports people's rights to live as independently as possible.

How results will be achieved

- Support policies and programs that promote healthy eating, exercise, walking, and biking
- Provide fresh, locally grown foods in schools and other public places
- Support school- and community-based nutrition and fitness programs
- Support schools, senior centers, and community organizations in efforts to develop nutrition and physical fitness standards and policies
- Promote policies that restrict availability and marketing of alcohol and tobacco to youth, and regularly submit public service announcements highlighting issues related to alcohol and drug use
- Support farmers' markets, food banks, pantries, and other sources that provide federal food assistance for fresh fruits and vegetables

> ***"Heightened smog levels trigger asthma attacks and pose health threats to children and the elderly in particular."***
>
> —Natural Resources Defense Council

SOCIOECONOMIC ELEMENT

Youth Go Without

About 3,300 Marin children lack health insurance, according to surveys and field reports. While more than 90 percent of Marin adults have health insurance, less than 80 percent of 18-to-24-year-olds have health insurance.

- Form a coalition of youth, parents, health advocates, businesses, and law enforcement to establish responsible beverage service programs and policies
- Educate the public about the hazards of tobacco and secondhand smoke, and increase school- and college-based tobacco prevention programs
- Expand the children's health initiative to improve health care access, and include other underserved populations in the initiative
- Promote cross-cultural education and awareness of the importance of preventive health care and having a regular health care provider
- Develop a one-stop electronic application to enroll people in health insurance and other public-benefit programs, and support electronic medical record portability
- Support state and national proposals for single-payer health insurance
- Continue collaborations between the Buck Institute, County Health and Human Services, and other interested organizations on the epidemiology of breast cancer, and continue public education about breast cancer risk factors
- Mobilize physicians and other health care workers, and promote reimbursement for screening and treating behaviors that lead to obesity, eating disorders, breast cancer, and other preventable diseases
- Use the precautionary principle to guide disease-prevention efforts
- Encourage funding for a range of mental health treatment programs and services, including psychiatric beds
- Encourage efforts to provide on-site health care services at senior housing facilities
- Allow senior day-care services as a permitted use in residential zones
- Maintain and expand the Marin home-care registry
- Encourage universal building design techniques that enable seniors and disabled people to remain in their homes

Marin County Department of Parks, Open Space, and Cultural Resources

Promoting Arts and Culture

The birthplace for much of the music and cultural creativity of the 1960s, Marin remains home to world-class musicians, writers, artists, filmmakers, actors and actresses, designers, inventors, and cultural icons. The creative legacy of George Lucas, Gary Fisher, Anne Lamott, Carlos Santana, Sim Van der Ryn, Paul Hawken, the Grateful Dead, Stewart Brand, Bonnie Raitt, and Isabel Allende, among untold others, fosters a culture of iconoclasm, activism, cutting-edge thinking, and difference from the norm.

According to recent studies, Marin has more creative people per capita than any other county in the nation. Where Silicon Valley converted technological expertise into products that drive the world's technological infrastructure, Marin County has translated its creativity into a world-renowned cluster of innovation—from digital imaging to mountain bikes to small, craft-based specialty products.

> ***"You have to find something that you love enough to be able to take risks. … If you don't have that kind of feeling for what it is you are doing, you'll stop at the first giant hurdle."***
>
> —George Lucas

Arts and entertainment also fund a significant portion of the local economy. Marin residents show their support for the arts in their charitable giving. A 2000 Marin Community Foundation survey found that 22 percent of county households contributed financially to the arts and humanities—double the national rate. Nevertheless, many county-trained artists continue to move to other parts of the country, and public funding for the arts has decreased.

Arts and cultural activities foster individual creativity and connect people within a larger community. Marin County is rife with opportunities to participate in myriad arts and cultural experiences. Professional artists and cultural organizations require ongoing support along with partnerships that promote involvement, education, and diversity. Art should be considered an integral part of a sustainable community—and a key ingredient of educational and economic well-being.

Desired outcomes

- Support for the arts, local artists, and cultural organizations
- Encourage and support community-wide participation in arts and cultural activities
- Create a cultural focal point in Marin by renovating the Marin Center

Why is this important?

Environment: The natural environment inspires art and artists to educate and motivate people to protect natural areas.

Economy: Support of arts and cultural activities strengthens the local economy. A renovated Marin Center would draw people from throughout the Bay Area for theater, music, and art. Visitors would dine in Marin restaurants and stay in Marin hotels. Building renovation and construction would provide local jobs.

Equity: Low-income neighborhoods with high levels of cultural participation have significantly lower delinquency and truancy rates. During the 1990s, poverty rates were more likely to drop in areas with active cultural scenes. Many arts and cultural activities represent low-cost opportunities in which all community members can participate.

How results will be achieved

- Create a website to promote arts and cultural programming, including a countywide calendar of events
- Work with community organizations and neighborhood associations to support arts and cultural programs
- Maximize use of libraries, parks, and other County facilities for arts and cultural programs
- Inventory significant arts landmarks and reference them in County publications
- Host performances and exhibitions and provide professionally curated gallery/ exhibition spaces for high- caliber artists in County facilities
- Establish a Marin County Poet Laureate program
- Involve artists on design teams for public projects
- Encourage art in public spaces, and inventory potential sites
- Encourage the creation of mixed-use and live/work units for artists

- Require public art, or in-lieu fees, as part of applicable new development projects
- Encourage artistic signs and streetscape features in public and private projects
- Redesign and enhance the Marin Center's role as a community-wide cultural focal point
- Evaluate potential standards to support continued open-studio events while minimizing their impact on residential neighborhoods
- Use a sliding scale for access to County facilities, and work with Friends of Marin Center to expand the subsidized voucher program offering reduced-cost tickets to artists, performers, seniors, youth, and low-income and disabled people
- Explore long-term funding for art in public spaces
- Consider establishing a fund to support arts and cultural facilities and programming

Courtesy: Anne T. Kent California Room, Marin County Free Library

Preserving Historical and Archaeological Resources

For thousands of years, the Coastal Miwok Indians made Marin County their home. When European settlers arrived in the early 1800s, Miwok civilization ended abruptly. But the Miwoks left a rich legacy in archaeological sites throughout the county. And today, the Federal Indians of Graton Rancheria, where Coast Miwoks and Southern Pomos live, carry on their heritage and continue to speak their intricate, complex native language.

Marin County contains 630 recorded archaeological sites: settlements and villages, hunting camps, quarries, rock art, and Native American trails. Historic ranches and small towns define rural West Marin. Greek Revival, Queen Anne, Italianate commercial, and Bungalow are typical architectural styles. Well-known architects whose designs were built in Marin include Julia Morgan, Bernard Maybeck, Willis Polk, Frank Lloyd Wright, and Joseph Eichler.

Historic Architectural Styles of Marin County
Greek Revival: Dates from the 1850s and consists of simple shapes, sharp lines, and doors and windows at regular intervals. Example: Presbyterian Church in Tomales.
Queen Anne: Mid- to late 1800s; it is marked by lots of ornamentation and detailing. Examples: many of the residences in Point Reyes Station.
Italianate: From 1840 to 1880, this style was used primarily for commercial structures on main streets; it typically has a false front with brackets beneath the cornice line. Example: Inverness Post Office.
Shingle Style: Arrived in California in the late 1800s and was characterized by the use of unpainted wooden shingles. Examples: Sausalito Woman's Club, Mill Valley Outdoor Art Club.
Mission Revival: From the early to mid-20th century, this style is defined by wide arches, low-lying roofs, and stucco façades. Examples: Sand Castle Foresters' Hall and the Grandi Building in Point Reyes Station.
Western Stick: Typical in the Bay Area from the late 1890s until the 1920s. Known for its wood detailing, wood shingles, porches, and larger windows, which are necessarily the same size. Examples: residences in Mill Valley, Larkspur, Sausalito, and Fairfax.
California Bungalow: Popular in the 1920s and marked by an open floor plan, front porches, a raised foundation, use of natural materials, and attention to detail. Examples: Historic residences in Mill Valley, Larkspur, Sausalito, and Fairfax.
Modern: Originated in the late 1940s to 1950s and used simple lines to truly express the use of materials. Examples: Eichler homes, the Civic Center.

Desired outcomes

- Identify and protect archaeological and historical resources
- Increase public awareness of local history and historic sites

Why is this important?

Environment: When downtowns are revitalized, historic neighborhoods are restored, and buildings are rehabilitated, there is less need for lumber from forests for new homes and less pressure to create sprawl and pave over farmland.

Economy: Maintaining a community's historical character makes it more attractive to visitors and residents. Preserved historic buildings benefit communities because their architecture uniquely contributes to the community's look and feel. Improving and promoting Marin's historical resources attracts visitors and bolsters the economy.

Equity: In California, owners of historic homes can save up to 60 percent annually in property taxes. In lower-income areas, owners of historic homes may be eligible for financial assistance to safeguard the historical integrity of their homes.

How results will be achieved

- Identify potential archaeological and historical resources, and require archaeological surveys for applicable new development
- Require development on an archaeological site to, where feasible, avoid harming and permanently protect the resource
- Refer development proposals on or near cultural resource sites or proposed general or community plan amendments to the California Archaeological Inventory and Native American representatives, as appropriate
- Apply for funds to preserve artifacts and acquire historical resource sites for parks and other public purposes
- Help low-income owners of historic homes to obtain low-interest Federal Community Development Block Grant loans for renovation, and inform owners of eligible properties about financial incentives for preservation and restoration
- Adopt guidelines for preservation of buildings and landscape elements of historical or architectural interest
- Allow flexibility in on-site parking and setbacks to facilitate restoration of historic structures and a range of reuse options for older buildings
- Provide documents, photographs, and other historical information to be catalogued in the Anne T. Kent California Room in the Marin Civic Center Library
- Work with local historical societies to nominate significant historical resource sites for listing in the historical registers
- Work with private owners of landmark structures to support rehabilitation
- Install historical markers on County roadways and plaques at significant structures to attract and inform the public
- Work with tribal members and the Marin Museum of the American Indian to promote educational programs about Native American history and culture
- Work with historical societies to develop educational programs and to prepare and distribute material describing local history
- Maintain the Anne T. Kent California Room as a historical information resource, and expand the Carla Ehat Oral History Program to document and create new oral histories from Marin residents

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Providing Parks and Recreation

Marin County residents and visitors have access to a wide variety of park and recreational sites. City, County, state, and national parks offer an array of recreational opportunities—from hiking and sightseeing to soccer and baseball. Marin County serves multiple roles concerning parks and recreation. Through the development-review process, the County works to ensure that new projects provide recreational opportunities for all residents. Marin's parks provide playing fields, pools, golf courses, tennis and volleyball courts, skate parks, and children's playgrounds.

Several of the planning areas listed in the Marin Countywide Plan fall short of the state standard of 3 to 5 acres of parkland per 1,000 residents. Demand continues to grow for a wide range of developed facilities for active recreation.

SOCIOECONOMIC ELEMENT

Desired outcome

- Provide park and recreation facilities and programs for all county residents

Why is this important?

Environment: Providing park facilities for active recreation can reduce demand and conflicts in open space and other areas managed for natural resource purposes. Use of sustainable design principles and recycled materials reduces impacts on natural resources.

Economy: Park and recreational facilities help visitor- and local-serving businesses such as restaurants, as well as sports shops that sell recreational supplies.

"Parks are at the center of a community's character; they reflect and strengthen the sense of place and identity that makes cities fit places for people to live."

—Conservation Foundation

Equity: Parks represent free or low-cost recreational opportunities, allowing everyone equal opportunities to participate.

How results will be achieved

- Periodically update the County Parks Master Plan and assess user needs for all socioeconomic segments of the population
- Work with cities, towns, and schools to determine which school fields and recreation facilities may remain open to residents during non-school hours
- Prepare acquisition plans addressing user needs, access modes, alternative sites, environmental impacts, and financing options, and annually review special programs
- Conduct a detailed facilities inventory, and identify areas for overnight group camping and group picnic areas
- Study the feasibility of community gardens in parks
- Use least-toxic means of reducing weeds and other pests
- Evaluate the potential benefits and liabilities of accepting funding for corporate naming rights and sponsorship arrangements for parks and recreational facilities
- Renovate the County's boat launches and evaluate need for additional boat moorings
- Improve Americans with Disabilities Act accessibility at parks
- Evaluate whether natural park areas should be re-designated as open space

How Success Is Measured

INDICATOR	BENCHMARK	TARGET
Gross county production in major economic sectors	10.5% in 2000	Increase 10% by 2020
Number of certified green businesses	0 in 2000	Increase to 250 by 2010 and 400 by 2015
Unemployment rate by county	3.2% in 2000	Do not increase unemployment rate from benchmark
Child care supply and demand	Demand exceeds supply by 42%	Supply increases until it is within 10% of child care demand by 2015
Survey of public perception of safety in unincorporated areas	89% in 2000 and 88% in 2004	No decrease through 2020
Recidivism (reoffenders) rate	61% recidivism rate	Decrease recidivism rate through 2020
Voter turnout in general elections	84.6% in 2000	No decrease through 2020
Amount of solid waste exported from Marin County annually	216,211 tons in 2000	No increase through 2020
Number of servings of fruits and vegetables consumed daily by children	53% of children ate five or more servings of fruits and vegetables per day	Increase 10% by 2020
Percentage of population overweight and obese by age and gender	15% as of 2003 for adults over the age of 18	Decrease 10% by 2020
Number of artists participating in the fine arts exhibitions at the Marin County Fair	1,210 artists participated in 2000	Increase 20% by 2015 and 30% by 2020
Parks in County government jurisdiction in acres	459 acres in 2000	Acquire 40 acres by 2010 and develop 10 acres; acquire an additional 40 acres by 2015 and develop 20 acres

PLANNING SUSTAINABLE COMMUNITIES

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Download a free PDF copy from www.future-marin.org.

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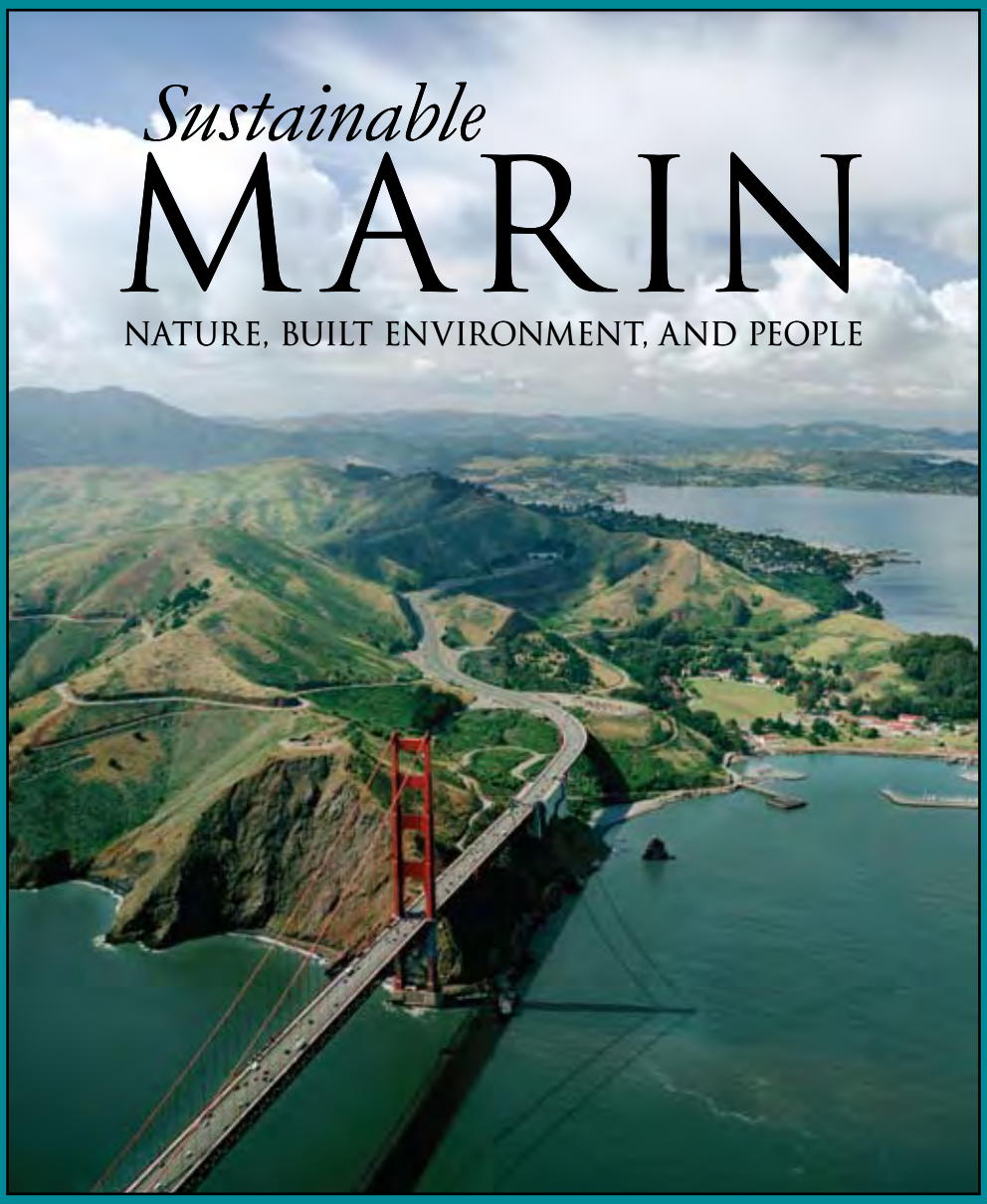

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