

CHAPTER 3 RESOURCE CONSERVATION AND SUSTAINABILITY

3.1 INTRODUCTION

This chapter includes policies and programs that promote community sustainability and effective management of renewable and non-renewable natural resources through energy conservation, solid waste management and recycling, natural area resource conservation, and preservation of cultural and historic resources. It meets the State's General Plan requirements for the Conservation and Open Space elements.



As part of the General Plan update process, Corte Madera residents expressed an interest in moving from the protection-oriented environmental framework of the 1989 General Plan to a more proactive approach that would advance the principles of community sustainability through strategies that conserve and enhance local natural resources.

The strategy in this Chapter is based on the understanding that conserving significant natural resources and biological diversity improves recreational opportunities, sustains natural systems, reduces negative environmental impacts, and improves overall quality of life.

Scientific consensus supports the conclusion that humans are impacting global climate by increasing greenhouse gases (GHG) in the atmosphere. Climate change is a global problem, and GHGs impact the global atmosphere; this means that activities that take place in one part of the world impact the entire atmosphere, unlike criteria pollutants which have an impact on local air quality. It will take a global effort to reduce GHG emissions to the point where global climate does not pose a serious threat to our communities. Climate change has and will continue to impact the environment in a variety of ways, and will also cause economic and social effects. Potential climate change impacts directly affecting Corte Madera include the following: sea level rise and increased flooding, water supply issues, wildfire risk, public health concerns, air quality threats, more intense storm events, and energy demand and supply. This chapter discusses the climate change issue and includes policies and programs directed at mitigation. Other chapters in the General Plan address measures to reduce greenhouse gas emissions, such as promoting mixed use and infill development, transportation alternatives, transit oriented development, and the creation of Design Guidelines that incorporate resource efficiency.

3.2 REGULATORY FRAMEWORK

CALIFORNIA GOVERNMENT CODE

The required General Plan provisions for Conservation and Open Space are included in this chapter, and provide direction for the conservation, preservation, development, and utilization of natural resources. Government Code Sections 65302(d) and 65302(e) require that a general plan include:

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“A conservation element for the conservation, development, and utilization of natural resources...”

“An open space element as provided in Article 10.5”

Guiding policies include comprehensive and long-range preservation and conservation measures with regard to open-space lands (§65563).

BIOLOGICAL RESOURCES

There are numerous local, state and federal agencies and laws that regulate biological resources, including:

- ◆ State Department of Fish and Game
- ◆ Bay Conservation and Development Commission
- ◆ U.S. Fish and Wildlife Service

Appendix A to the General Plan lists various agencies and laws protecting biological resources, including information related to endangered and threatened plant and animal species. The California Environmental Quality Act (CEQA) is the overriding State Law that requires analysis of impacts on biological and natural area resources. More detailed discussion about this topic is covered in Section 3.7 Natural Area Resource Conservation.

WASTE MANAGEMENT RESOURCES

The California Integrated Waste Management Act of 1989 (AB 939) required each city and county to divert 50 percent of its waste stream from landfill disposal by the year 2000. Diversion may include reducing the total amount of waste generated through source reduction, recycling, composting, and transformation programs. In 1992, Marin’s eleven cities and the County adopted a single Source Reduction and Recycling (SSR) Element that determined current diversion rates, evaluated alternative diversion programs, and set forth a course of action. More detailed discussions about this topic are covered in Section 3.6 Solid Waste Management and Recycling.

HISTORIC RESOURCES

The Town contains historic structures that are important to community identity. The General Plan provides the opportunity to recognize and preserve structures and artifacts from the Town’s origin in the late 1800s. Additionally, protection of significant historic resources is afforded under provisions of the California Environmental Quality Act (CEQA), which requires planning agencies to carefully consider the potential effects of a project on historical resources. More detailed discussion about this topic is covered in Section 3.8 Cultural and Historic Resources.

CLIMATE CHANGE

Among the evolving regulations that affect local General Plans are State regulations that specifically address greenhouse gas emissions and climate change. At the time of this General Plan Update, there are no regulations setting ambient air quality emissions standards for greenhouse gases.

Executive Order S-3-05

Executive Order S-3-05, which was signed by Governor Schwarzenegger in 2005, proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce the Sierra's snowpack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the Executive Order established total greenhouse gas emission targets. Specifically, emissions are to be reduced to the 2000 level by 2010, the 1990 level by 2020, and to 80% below the 1990 level by 2050. To comply with the Executive Order, the Secretary of the CalEPA created a Climate Action Team (CAT) made up of members from various state agencies and commissions. CAT released its first report in March 2006. The report proposed to achieve the targets by building on voluntary actions of California businesses, local government and community actions, as well as through state incentive and regulatory programs.

Assembly Bill 32, The California Global Warming Solutions Act of 2006

In September 2006, Governor Schwarzenegger signed AB 32, the California Global Warming Solutions Act of 2006. The State legislature recognizes the importance of the issue of climate change, as AB 32 states: "Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California."

AB 32 requires that statewide GHG emissions be reduced to 1990 levels by the year 2020. This reduction will be accomplished through an enforceable statewide cap on GHG emissions that will be phased in starting in 2012. To effectively implement the cap, AB 32 directs ARB to develop and implement regulations to reduce statewide GHG emissions from stationary sources.

State Attorney General

At the time of this General Plan Update, recent legislation in the form of AB 32 has prompted the California State Attorney General's office to send comment letters to local lead agencies regarding incorporating an analysis of GHG emissions and climate change mitigation measures in CEQA and long range planning documents. While the Attorney General has focused some comment letters towards specific development projects, much of the focus has been on long range planning documents such as General Plans.

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The Attorney General's office has suggested that by law, a General Plan must discuss climate change, and include meaningful, tangible, enforceable, and funded policies, implementation mechanisms and timelines.

3.3 SETTING

The transition area from the San Francisco Bay tidal wetlands and marshes to the upland grassy hillsides and oak woodlands has created many ecological niches in the Corte Madera region. Wetlands provide plant and wildlife habitat that aid in water purification by assimilating waste, and trapping and neutralizing pollutants from urban runoff. Wetlands contribute to groundwater recharge, protect the shoreline from wave action, and enhance recreational values as open space and wildlife sanctuaries. Vegetation in estuarine mudflats and the adjacent alluvial plains contributes plant materials that form the critical base of watery food chains and provides more oxygen per acre than any other natural ecosystem. Local marshlands assist flood control by providing a buffer between the Bay and developed portions of Corte Madera, and act as retention ponds for storm water overflow.

A variety of plants and wildlife occur in the Town of Corte Madera. In some cases, plants and wildlife are unique to the Corte Madera region and the Mount Tamalpais watershed. Species that are unique to the region are considered locally rare and are protected under the California Environmental Quality Act or the California Endangered Species Act. The State and Federal Endangered Species Acts determine threatened and endangered "special status" species. Special-status species include:

- ◆ Officially designated (rare, threatened, or endangered) and species that are candidates for listing by the California Department of Fish and Game.
- ◆ Officially designated (threatened or endangered) and candidate species for listing by the U.S. Fish and Wildlife Service.
- ◆ Species considered to be rare or endangered under the conditions of section 15380 of the CEQA Guidelines, such as those identified on lists 1A, 1B, 2, 3 and 4 by the California Native Plant Society in the Inventory of Rare and Endangered Plants of California.
- ◆ Other species considered sensitive or of special concern due to limited distribution such as those identified as animal "California Special Concern" species by the California Department of Fish and Game.

3.4 CLIMATE CHANGE

Scientific consensus supports the conclusion that humans are impacting global climate by increasing greenhouse gases (GHG) in the atmosphere. The Intergovernmental Panel on Climate Change's (IPCC)¹ Fourth Assessment Report includes the latest scientific research available at the time of this General Plan. The Report states that global atmospheric concentrations of carbon dioxide, methane and nitrous oxide have significantly increased since 1750 as a result of human activities. Fossil fuel use and land use changes are the primary sources of global increases in carbon dioxide concentration; agriculture is the primary source of increases in methane and nitrous oxide². The Report concludes that warming of the climate system is "unequivocal" and scientists agree that there is a 90 percent chance that this warming is the net effect of human activities since 1750.²

California is highly ranked in the world for the amount of GHG emissions emitted in the state, but has taken the lead in creating stringent GHG emissions reduction policies.³ Assembly Bill 32 requires the implementation of measures to reduce the state's GHG emissions to 1990 levels by 2020 – an expected 25 percent reduction. The main source of atmospheric carbon dioxide in California is the burning of fossil fuels, comprising 98% of gross carbon dioxide emissions.⁴

Quantifying, managing and reducing GHG will help protect the health of the community, ecosystems, and biodiversity from potentially dangerous climate changes. Reducing GHG also contributes to the achievement of various municipal goals such as improving air and water quality and fostering economic development.

3.5 COMMUNITY SUSTAINABILITY

Sustainability is an evolving concept that is defined in different ways, since it has both general and specific applications. In its broadest sense, global environmental sustainability is derived from an understanding that there are finite natural resources on this earth and that these life sustaining resources must not be consumed faster than they can be naturally replaced. Equally important, there must not be irreversible harm caused to sensitive ecological habitats or environmental systems beyond their capacity to sustain human life.

¹ The IPCC is a body created by the World Meteorological Organization and the United Nations Environment Program, and was created to assess peer reviewed scientific and technical studies and reports in order to present "comprehensive, objective, open and transparent" information on climate change.

² Contribution of Working Group I to the Fourth Assessment Report of the IPCC. *Climate Change 2007: The Physical Science Basis*. February 2007.

³ California Energy Commission. *Inventory of California Greenhouse Gas Emissions and Sinks 1990-2004* (CEC-600-2006-013-SF). December 2006.

⁴ California Environmental Protection Agency. *Climate Action Team Report*. March 2006.

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For the purposes of this General Plan, *sustainability* can be defined as a balance of the built environment, socioeconomic activities, and the natural environment that assures the natural resources are managed and protected so they can continue to sustain life..

As a local community, Corte Madera is limited in how much it can implement this overarching concept. The community can, though, focus its efforts on local policies and programs that take steps to encourage and advance sustainability principles both locally and regionally.

Corte Madera residents understand that local decisions regarding land use, housing, transportation, open space conservation, sensitive habitat preservation, recycling, waste management, water conservation and energy conservation have significant cumulative impacts on the regional health and quality of life. By taking steps to encourage and advance sustainability principles, the overall quality of life will be improved today and for generations to come.

Numerous sustainability ideas and approaches are integrated into all chapters of the General Plan, and address a variety of issues such as infill construction and redevelopment, provision of infrastructure, transportation modes and parking, and open space and parks.

A “Sustainable” Corte Madera, under this General Plan, will utilize various strategies to conserve and enhance local resources and safeguard the environment as a means of improving the livability and quality of life for Town residents.

3.6 GOALS, POLICIES, AND IMPLEMENTATION PROGRAMS FOR SUSTAINABILITY

GOAL RCS-1

An established vision for a sustainable Corte Madera

POLICY RCS-1.1

The Town will create a long-term sustainability program that includes essential elements for achieving economic, environmental, and social well-being, focusing on Town government operations.

Key components of a sustainable plan shall include principles of regional interdependence, shared responsibility, public involvement, prevention and precaution, informed understanding and diversity. Sustainability Goals and Policies are also discussed in the following section on Energy Conservation, Solid Waste Management & Recycling, Natural Area Resource Conservation and Cultural and Historic Resources.

Implementation Program RCS-1.1.a: Sustainability Plan for Town Government Operations

Prepare a Community Sustainability Plan within three years of adoption of the General Plan with the goal of implementing sustainability principles that include the following:

- Initiate a focused effort that will bring together the diverse environmental interests of the Town in order to craft a unifying vision of sustainability.
- Articulate the underlying principles of the Town’s vision for sustainability to use as a general guide in all areas of local government operations, including development procedures, operations, procurement, etc.
- Develop an integrated set of sustainability goals and objectives that includes an appropriate set of indicators for tracing progress.
- Devise strategies to ensure long-term commitment to the adopted sustainability policies and programs.

Responsibility: Planning and Building Department
Timeframe: Three years
Resources: General Plan Maintenance Fees

POLICY RCS-1.2

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Involve Town residents and businesses in sustainability projects.

Implementation Program RCS-1.2.a: Public information

Regularly disseminate information about community sustainability efforts and plans on the Town's web page, newsletter, and other methods.

Responsibility:	Planning and Building Department
Timeframe:	On-going
Resources:	General Fund

Implementation Program RCS-1.2.b: Business advertising

Study the feasibility of offering free, periodic advertising or other recognition in the Town's newsletter for local businesses that implement provisions of the Town's Sustainability Plan.

Responsibility:	Planning and Building Department
Timeframe:	Two years
Resources:	General Plan Maintenance Fees

3.7 ENERGY

Today's primary pattern of energy use, using non-renewable energy sources, cannot be sustained over the long run. Greater use of alternative energy sources will likely be part of our future community and economy. Additionally, fossil fuel consumption generates waste products that are toxic and greenhouse gas emissions that contribute to climate change. The environmental toll and health problems associated with toxic releases and climate change may incur irreparable damage. Climate change, air pollution from burning fossil fuels, and the breakdown of living systems due to the buildup of toxins are some of the costliest problems community members face. Addressing the need to change can begin with a community's efforts to improve energy efficiency.

Energy efficiency means using less energy to perform the same function, while energy conservation connotes "doing without" in order to save energy. Minimizing transportation-related energy consumption and reducing energy consumption in buildings are examples of important conservation techniques that Corte Madera can utilize. Factors that influence the Town's local energy-related activities include energy reliability, production, consumption, and conservation. Increased awareness of energy use will help the Town's efforts at conserving resources and establishing sustainable policies for energy production and consumption.

GREEN BUILDING

According to the US Green Building Council at the time this General Plan Update, buildings in the United States use almost 40 percent of our nation's total primary energy budget, produce at least 30 percent of our greenhouse gases, and create nearly 30 percent of our waste.⁵ The US Department of Energy has concluded that buildings in the nation currently use more energy than any other economic sector, including transportation and industry.⁶ Innovative and affordable efficient building strategies are now available to reduce the building sector's impact on the indoor and outdoor environment.

Performance based programs such as the US Green Building Council's Leadership in Energy and Environmental Design (LEED) certification system offer opportunities to increase a building's environmental performance and improve occupant health through efficient (also known as "green") building strategies. Cities and federal agencies are increasingly adopting the LEED or other rating systems for their buildings. The State of California Governor's Executive Order (S-20-04) calls for all newly constructed or renovated State buildings over 10,000 square feet to meet LEED Silver criteria, and a Green Building

⁵ *Why Build Green?*. US Green Building Council website as of June 2007: <http://www.usgbc.org/DisplayPage.aspx?CMSPageID=291&>

⁶ *Buildings Energy Data Book: 1.1 Buildings Sector Energy Consumption*. US Department of Energy. September 2006.

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Action Plan has been developed encouraging all public agencies to adopt green building practices.

Corte Madera can implement green building strategies for new development and renovations of existing buildings in order to reduce energy and water use, promote sustainable and healthy building materials, improve on-site storm drainage, and ultimately create healthier indoor and outdoor environments.

3.8 GOALS, POLICIES, AND IMPLEMENTATION PROGRAMS FOR ENERGY CONSERVATION

GOAL RCS – 2

Reduced consumption of non-renewable energy sources in Corte Madera.

POLICY RCS-2.1

Ensure that basic energy services are available to all Town residents.

Implementation Program RCS-2.1.a: Estimate Energy Demands

Continue to coordinate with Pacific Gas and Electric to identify projected energy demands for residential, commercial, industrial, and other land uses.

Responsibility: Planning and Building Department
Timeframe: On-going
Resources: General Fund; Application Fees

POLICY RCS-2.2

Increase energy conservation and efficiency within Corte Madera.

Implementation Program RCS-2.2.a: Energy Conservation and Efficiency

Identify opportunities for creating energy conservation and efficiency programs for application in all Town facilities, schools and local businesses.

Responsibility: Administrative Services
Timeframe: On-going
Resources: General Fund

Implementation Program RCS-2.2.b: Water Conservation

Institute a water conservation program for all Town facilities, to include the installation of waterless urinals and low-flow toilets, sinks and showers. Include funding for these improvements in the CIP.

Responsibility: Public Works Department
Timeframe: On-going
Resources: CIP Budget

Implementation Program RCS-2.2.c: Public Facilities Conservation

Strongly encourage the use of recycled water and drought-resistant landscaping in Town facilities, public roadway landscape, and in new development.

Responsibility: Planning/Building & Public Works Depts.
Timeframe: On-going
Resources: General Fund; CIP Budget; Application Fees

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Implementation Program RCS-2.2.d: Energy-Efficient Models

Require energy-efficient models for all new Town equipment purchases.

Responsibility: Public Works Department
Timeframe: On-going
Resources: CIP Budget; General Fund

Implementation Program RCS-2.2e: Energy Efficient Town Facilities

Manage Town facilities in the most energy efficient manner feasible.

Responsibility: Administrative Services
Timeframe: On-going
Resources: General Fund

Implementation Program RCS-2.2f: Cooperate with Regional Energy Programs

Cooperate with regional energy programs such as the Marin County Energy Watch Partnership to promote energy efficiency in Town facilities, residences, and commercial buildings.

Responsibility: Administrative Services
Timeframe: On-going
Resources: General Fund

Implementation Program RCS-2.2g: Conduct Energy Audits

Continue to conduct energy audits of Town facilities, and implement energy efficiency recommendations from those audits. Seek funding from available state sources and grant opportunities, as well as the CIP.

Responsibility: Administrative Services
Timeframe: On-going
Resources: General Fund

Implementation Program RCS-2.2f: Heat Islands

Minimize heat islands and the resulting increase in energy use for cooling, by avoiding the use of materials such as some types of artificial turf that have excessive heat reflection characteristics, and by using cooling techniques such as landscape shading where reasonably feasible.

Responsibility: Planning & Building Department; Public Works Department
Timeframe: On-going
Resources: General Fund

POLICY RCS- 2.3

Develop programs to increase energy conservation within Corte Madera residences.

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Implementation Program RCS-2.3.a: Utility Energy Efficiency Programs

Encourage homeowners to utilize programs offered by the utility services when designing plans for residences as a means of reducing energy demands and costs.

Responsibility:	Planning and Building Department
Timeframe:	On-going
Resources:	Application Fees

POLICY RCS-2.4

Support the development and utilization of renewable energy.

Implementation Program RCS-2.4.a: Use Alternative Energy Systems

Increase the use of renewable energy when retrofitting or constructing new Town facilities or when purchasing new equipment, provided they meet all public, safety, health, and design requirements and are proven to be reliable. Use renewable energy systems where they are cost effective. Analysis and consideration of payback time periods and future financial savings shall be included in the review of cost effectiveness.

Responsibility:	Public Works Department
Timeframe:	On-going
Resources:	CIP Budget

Implementation Program RCS-2.4.b: Renewable Energy

Provide for use of renewable energy systems to help meet future energy needs of the community. This may include use of photovoltaic solar collection systems to reduce dependency on fossil fuels. Include provisions for use of such systems in the Town's Design Guidelines.

Responsibility:	Planning and Building Department
Timeframe:	On-going
Resources:	Application Fees

POLICY RCS-2.5

Minimize transportation-related energy consumption.

Implementation Program RCS-2.5.a: Vehicle Program

Create and implement a Town vehicle green fleet program that includes the purchase of fuel-efficient and alternative-fuel vehicles, to be implemented in a timely manner.

Responsibility:	Public Works Department
Timeframe:	On-going
Resources:	CIP Budget

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Implementation Program RCS-2.5.b: Road Construction

The Town will ensure that contracts for roadway construction and repair shall utilize recycled and resource efficiency materials, where feasible. (For example rubberized asphalt concrete)

Responsibility: Public Works Department
Timeframe: On-going
Resources: CIP Budget

Implementation Program RCS-2.5.c: Programs to Reduce Fossil Fuel Based Transportation

Support municipal and community programs aimed at reducing fossil fuel based transportation. Programs should include alternatives such as employee carpooling, transit, walking and biking.

Responsibility: Planning and Building Department
Timeframe: On-going
Resources: General Fund

POLICY RCS-2.6

Reduce energy consumption in buildings by balancing energy efficient design with good planning principles.

Implementation Program RCS-2.6.a: Energy Efficient Building Design

Require energy efficient site and building design in all new development projects consistent with the requirements of Title 24 of the California Administrative Code. Measures may include, but are not limited to, building orientation and shading, landscaping, use of active and passive solar heating and hot water system, etc.

Responsibility: Planning and Building Department
Timeframe: On-going
Resources: Application Fees

Implementation Program RCS-2.6.b: Design Approaches

The Town's Design Guidelines shall include an emphasis on environmentally sensitive design approaches that incorporate resource-conserving construction practices.

Responsibility: Planning and Building Department
Timeframe: Three years
Resources: General Plan Implementation Fee

Implementation Program RCS-2.6.c: Green Building

Provide information to project designers regarding the Marin County Green Building Program.

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Responsibility: Planning and Building Department
Timeframe: On-going
Resources: General Fund

Implementation Program RCS-2.6.d: Green Building Guidelines

Adopt Green Building guidelines for new construction, renovations and municipal projects. Integrate green building requirements into the development review and building permit process. Collaborate with local jurisdictions to share resources, and develop green building policies and programs that are optimized for the region. This approach may include the following:

- Optional or incentive based green building provisions to encourage compliance.
- Conservation of natural resources when planning site development.
- Use of green building materials, including recycled-content materials.
- Promotion of water efficiency and conservation measures, including low impact development strategies.
- Increased energy efficiency in building and site designs.
- Promotion of the use of renewable energy.
- Improved indoor air quality that includes the use of formaldehyde-free, non-toxic construction materials.

Responsibility: Planning and Building Department
Timeframe: Two years
Resources: General Plan Maintenance Fee

POLICY RCS-2.7

Expand public participation in energy conservation and efficiency measures.

Implementation Program RCS-2.7.a: Public Conservation Outreach

Coordinate with local utilities to provide energy conservation information to the public. Periodically include information sources in the Town's newsletter.

Responsibility: Planning and Building Department
Timeframe: On-going
Resources: General Fund

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Implementation Program RCS-2.7.b: Energy Conservation and Efficiency Education

Educate planning and building staff and citizen review bodies on energy conservation and efficiency issues, including the Town's energy conservation policies, and instruct that they work with applicants to achieve energy conservation goals.

Responsibility: Planning and Building Department
Timeframe: On-going
Resources: General Fund

Implementation Program RCS-2.7.c: Promotion of Energy Efficient Products

Promote the purchase of Energy Star appliances rated at least "Energy Star" and fuel efficient or alternative fuel vehicles by Town businesses and residents.

Responsibility: Planning and Building Department
Timeframe: On-going
Resources: General Fund

GOAL RCS – 3

Reduce existing and future levels of GHG emissions originating from within the community.

POLICY RCS-3.1

Actively seek to reduce greenhouse gas emissions within the Planning Area.

Implementation Program RCS-3.1.a: Implement California Air Resources Board Regulations

The Town shall implement regulations adopted by the California Air Resources Board or other applicable regulatory agency to reduce greenhouse gas emissions.

Responsibility: Planning and Building Department
Timeframe: On-going
Resources: General Fund

Implementation Program RCS-3.1.b: Support Marin County's Greenhouse Gas Reduction Plan

The Town shall support Marin County's Greenhouse Gas Reduction Plan by implementing all feasible greenhouse gas mitigation measures outlined therein.

Responsibility: Planning and Building Department
Timeframe: On-going
Resources: General Fund

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Implementation Program RCS-3.1.c: Cities Climate Protection Campaign

Continue participation in the Cities for Climate Protection Campaign, administered by ICLEI (Local Governments for Sustainability), which includes conducting a greenhouse gas emissions audit and establishing a greenhouse gas emissions reduction target.

Responsibility:	Planning and Building Department
Timeframe:	Within one year of General Plan Update approval.
Resources:	General Fund

3.9 SOLID WASTE MANAGEMENT AND RECYCLING

The environmental movement helped to establish the connections between being a “throw-away” society, the dangers of landfilling and incineration, and resource-conservation issues. Natural resources, non-renewable petroleum reserves, and agricultural topsoil are buried in landfills at colossal rates. Independent recycling centers have been opened to remedy this trend. Most towns and cities now offer curbside residential recycling programs and many businesses have established recycling programs in the workplace.

The fundamental challenge of achieving sustainable urban waste management is in finding solutions to the increased production of disposable products and the use of packaging as a marketing tool. Approaches to reducing waste in Corte Madera can include purchasing durable, repairable, and reusable products, and purchasing products made from recycled materials. These strategies, combined with improved recycling collection and processing programs, will help to reduce Corte Madera’s waste stream and conserve resources.

SOLID WASTE COLLECTION

Mill Valley Refuse Service provides waste collection service in Corte Madera, and is one of seven privately owned waste haulers in Marin County. Redwood Landfill, located in Novato, is used for more than 95 percent of Marin County’s waste disposal, including the Town of Corte Madera. In July 1995, Redwood Landfill was issued a new Solid Waste Facility permit, which extended the landfill site life to the year 2039. The landfill has projected capacity to meet service needs for Corte Madera for the next several decades. Both Mill Valley Refuse and the Redwood Landfill meet applicable federal, state and local laws related to handling and disposal of solid waste.

RECYCLING

The monitoring and evaluation program described in the Multi-Jurisdictional Source Reduction and Recycling Element for Marin County, which also applies to the cities in the County, achieved compliance with requirements of AB 939. AB 939 mandated that communities divert at least 50 percent of their waste streams by the year 2000; Corte Madera diverted 56 percent of its waste stream by the year 2000, while Marin County as a whole diverted 63 percent.

Marin Recycling and Resource Recovery Association (MRRRA) operates the Marin Recycling Center where much of the material collected by curbside recycling in Corte Madera is processed. MRRRA operates a curbside recycling program for all residences in Corte Madera. Service includes weekly curbside collection of newspaper, cardboard, container glass, ferrous, aluminum and plastic. Other recycling activities in Corte Madera include aluminum and glass buyback centers, paper and cardboard recycling from commercial operations, and residential and commercial wood recycling. The Town’s Public Works Department composts a portion of landscape wastes from public parks.

3.10 GOALS, POLICIES, AND IMPLEMENTATION PROGRAMS FOR SOLID WASTE MANAGEMENT AND RECYCLING

GOAL RCS-4

Increased recycling participation by Town residents and businesses.

POLICY RCS-4.1

Encourage the expansion of vigorous recycling efforts so that all residents and businesses in Corte Madera recycle.

Implementation Program RCS-4.1.a: Reduction of Waste

Work with Marin County’s MRRRA and Office of Waste Management in distributing recycling and related educational information to businesses in order to reduce commercial and industrial wastes.

Responsibility: Administrative Services Department
Timeframe: On-going
Resources: General Fund

Implementation Program RCS-4.1.b: Recycling Receptacles

Include provisions in the Zoning Ordinance to allow for placement of recycling receptacles at public, multi-family residential, commercial, office and industrial use locations.

Responsibility: Planning and Building Department
Timeframe: Two years
Resources: General Plan Maintenance Fee

POLICY RCS-4.2

Ensure that solid waste disposal and recycling services are adequate to meet the needs of current and future residents.

Implementation Program RCS-4.2.a: Recycling for Existing Uses

Work with the Town’s refuse collection provider and Marin County in continuing to provide Town-wide recycling and waste reduction services to existing residences, schools and businesses, as well as increasing participation in composting and recycling programs for technology waste, hazardous waste, and green waste.

Responsibility: Administrative Services Department
Timeframe: On-going
Resources: General Fund

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Implementation Program RCS-4.2.b: Recycling for Future Uses

Cooperate with the Town's refuse collection provider and Marin County to provide for future Town-wide programs to promote waste reduction and recycling. Program development shall include innovative recycling options for future waste disposal and recycling as patterns and needs of consumption and waste generation change. Evaluate the Town's waste and solid waste management and recycling every two years to ensure that the City is taking every possible action to provide adequate and appropriate waste reduction and recycling services.

Responsibility: Town Manager
Timeframe: On-going
Resources: General Fund

GOAL RCS- 5

An enhanced environment through conservation of valuable resources.

POLICY RCS-5.1

Minimize waste through reducing, reusing, and recycling. Encourage reduced consumption of non-renewable resources by expanding choices for using and reusing materials, energy, and water in an efficient manner.

Implementation Program RCS-5.1.a: Public Outreach

Establish a Town outreach program to local businesses and schools that promotes awareness of buying products from green businesses and reducing the locally generated solid waste. Distribute information through the Town's newsletter, website and other means.

Responsibility: Planning and Building Department
Timeframe: On-going
Resources: General Fund

Implementation Program RCS-5.1.b: Recycled Products

Establish procurement policies that give price preferences to recycled or post-consumer products to increase the availability of recycled products.

Responsibility: Administrative Services Department
Timeframe: On-going
Resources: General Fund

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Implementation Program RCS-5.1.c: Waste Prevention

Coordinate with the Marin County Office of Waste Management to provide public education programs for waste prevention, composting, and becoming sustainable consumers by making changes that limit contribution to environmental deterioration. Distribute this information through the Town's newsletter, website and other means.

Responsibility: Administrative Services Department
Timeframe: On-going
Resources: General Fund

Implementation Program RCS-5.1.d: Source Reduction and Recycling

Continue to implement the Source Reduction and Recycling Element for Marin County and its cities.

Responsibility: Administrative Services Department
Timeframe: On-going
Resources: General Fund

Implementation Program RCS-5.1.e: Promote Green Businesses

Cooperate and partner with local and regional agencies, such as the Chamber of Commerce and Marin County, to promote "green businesses" that incorporate ecologically friendly products into their business operations, conserve natural resources, reduce waste, recycle, promote energy efficiency and renewable energy, and reduce hazardous wastes. Encourage local businesses to become members of the Marin County Green Business Program and other such programs that may evolve during the life of this General plan.

Responsibility: Planning and Building Department
Timeframe: On-going
Resources: General Fund

3.11 NATURAL AREA RESOURCE CONSERVATION

The environmental setting for the Town of Corte Madera can be divided into the following categories:

- ◆ Wetlands, including tidal wetlands and waters and freshwater wetlands and drainages
- ◆ Open Space, which includes hillsides and ridgelines
- ◆ Scenic Resources

WETLAND AND MARSHLAND RESOURCES

Since 1859, filling and construction along San Francisco Bay have destroyed over 75 percent of the original 300 square miles of marshlands bordering the Bay. As a result, remaining Bay wetlands are highly valued. Most marine life in the Bay either depends upon the marshes and mudflats either directly for sustenance or indirectly by feeding upon other marine life. Corte Madera contains some of these valued wetlands.



The majority of wetland habitat identified in the Town of Corte Madera occurs east of Highway 101, adjacent to San Francisco Bay. Wetland habitats in the Town include open waters such as the San Francisco Bay, San Clemente Creek, Corte Madera Channel, and various creeks and seasonal streams. Mudflats, tidal marshes and seasonally inundated freshwater wetlands are also present.

The Corte Madera wetlands, including intertidal mudflats, tidal and non-tidal wetlands, and adjacent uplands, are an important part of the San Francisco Bay wetlands system, providing habitat for many birds, including several rare and endangered species. The waters of Corte Madera Bay are particularly important for diving birds such as Scaup, Canvasback and Grebe. The San Francisco Bay tidal marshes and areas of undeveloped Bay frontage in the Town of Corte Madera take on greater regional significance as a result of the continual loss of such habitats to development in the Bay.

San Francisco Bay is part of the Pacific Flyway, the bi-annual route of migrating waterfowl. The marshes and mudflats of the San Francisco Bay in Corte Madera provide important feeding and roosting habitat for these migrating birds. In the fall, migrating waterfowl and shorebirds arrive from the north to rest and feed before resuming their flights southward to Mexico and Central and South America. In the spring, waves of these shorebirds return to the north. In addition, freshwater runoff in local streams creates a mix of freshwater and saline water that supports invertebrates and fish. The gradient between freshwater and saline Bay waters provides specialized niches for fish during specific life stages. The tidal marsh habitat and adjacent upland habitats support specialized plant communities, including several unique species that occur only in a few places throughout the state.

3.0 RESOURCE CONSERVATION AND SUSTAINABILITY

Tidal marsh habitats are those areas inundated with twice-daily tidal flows. Vegetation in tidal areas includes pickleweed (*Salicornia* sp.) and cord grass (*Spartina* sp.). An important component of tidal marsh habitat includes uplands associated with manmade levees, providing refuge for birds and mammals during high tide and storm events. Vegetation on the levees includes marsh gumplant (*Grindelia* sp.), sweet fennel (*Foeniculum vulgare*), and a number of non-native plants. Tidal marsh habitats support a variety of birds and mammals including several special status species. Northern harriers and other birds of prey forage in tidal marshes. Song sparrows, clapper rails and other bird species nest in tidal marshes. Small mammals such as the salt marsh harvest mouse also live in tidal marshes. Black-tailed jackrabbits (*Lepus californicus*) and garter snakes (*Thamnopsis* sp.) live in the adjacent levee vegetation; and the (non-native) Norway rat (*Rattus norvegicus*) is anticipated to occur in the tidal marshes.

Brackish marshes are those areas in which tidal waters and fresh waters mix. Brackish marshes support alkali bulrushes (*Scirpus robustus*), cattails (*Typha* sp.), and alkali heath (*Frankenia salina*), depending on the ratio of fresh water to tidal waters. Birds such as the mallard (*Anas platyrhynchos*), pintail (*Anas acuta*), and great blue heron (*Ardea herodias*) forage and roost in brackish marshes.

Mudflats are specialized wetlands that support thousands of shorebirds. Mudflats are intertidal habitats that are exposed at low tide, allowing shorebirds to prey on invertebrates and arthropods present in the mud. Mudflats are inundated during high tides, when they support diving birds and fish.

The following sites are shown in Figure 6.1 (Parks and Recreation) in Chapter 6.

Corte Madera State Ecological Reserve

The California Department of Fish and Game's ecological reserve is the largest contiguous piece of wetland habitat in Corte Madera. It covers approximately 200 acres of tidal salt marsh and mudflats between San Clemente Creek and the Greenbrae Boardwalk. The reserve is bordered to the west by the existing railroad levee that runs parallel to Highway 101. Ecological reserves are the most protective designations in the State's habitat protection system. They are established to provide protection for rare, threatened, or endangered native plants, wildlife, aquatic organisms and specialized terrestrial or aquatic habitat types. The Corte Madera State Ecological Reserve supports a number of special status species including the following:

Salt Marsh Harvest Mouse. The reserve is considered to be critical habitat for the salt marsh harvest mouse, a State and federally listed endangered species. This species is found in tidal marsh habitats, particularly within the transition zone between salt marsh and levees that provide refuge for these small mammals during high tide or storm events.

3.0 RESOURCE CONSERVATION AND SUSTAINABILITY

California Clapper Rail. California clapper rails are state and federally listed as endangered species. Tidal marshes, such as the Corte Madera State Ecological Reserve, support habitat for this species.

California Black Rail. This species is known to use the reserve, especially during the winter season. The black rail is listed as threatened under the California Endangered Species Act.

Harbor Seal. Although not listed under either the state or federal endangered Species Act, the harbor seal is protected under the Marine Mammal protection Act. Corte Madera State Ecological Reserve is one of 12 documented harbor seal haul-out locations in the San Francisco Bay.

The reserve can best be viewed from the Department of Fish and Game (DFG) parking lot adjacent to the Madera Bay Park site. The reserve is under the ownership and management of the DFG.

Golden Gate Bridge, Highway and Transportation District Site

The Golden Gate Bridge, Highway and Transportation District (GGBHTD) previously owned much of the Corte Madera State Ecological Reserve described above. When mitigation was required for the GGBHTD's dredging and filling activities associated with operations of the Larkspur Ferry, the Ecological Reserve was created and deeded to the DFG. However, in the 1970's GGBHTD used a 72-acre parcel within the Reserve for the deposition of dredge materials. The GGBHTD is proposing to restore 3.5 acres of new tidal wetlands and 1.9 acres of new seasonal wetlands on the 72-acre site to mitigate potential erosion impact from ferry operations.

Shorebird Marsh

Shorebird Marsh is owned by the Town of Corte Madera. It is located just north of The Village shopping center, this marsh can best be seen from the existing gravel parking lot north of the Village Shopping Center and east of Highway 101.

Triangle Marsh

Triangle Marsh, a 31acre parcel located west of Paradise Drive, was purchased by the Marin Audubon Society in 2000. The triangular-shaped parcel supports tidal mudflats and tidal marsh habitats, and has undergone restoration. The Triangle Marsh Restoration Plan, approved by the Town, restores approximately 1.4 acres of tidal marsh and 0.4 acre of wetland-upland transitional lands to increase the extent of habitat for marsh-dependent species. The Plan also improves public access to provide passive wildlife viewing while maintaining a buffer from the restored tidal marsh.

Freshwater Wetlands

In addition to the wetland sites identified above, areas that would meet the legal definition of wetlands occur adjacent to flood control channels and other places where freshwater runs off from the urban areas. A number of potential wetland sites occur west of Highway 101, including along shoreline locations at the Town's various lagoons. It is likely that a number of small size wetlands occur in isolated locations without hydrologic connections to subsurface flows.

Freshwater wetlands may support a large variety of riparian plants. These wetlands occur adjacent to open water habitats, along streams and storm water or flood control channels, or in low-lying areas that are seasonally inundated. Numerous birds use freshwater wetlands, which are a valuable resource for other wildlife as well.

Lagoons

Lagoons 1 and 2 in the Madera Gardens neighborhood are floodwater impoundments that are connected to Corte Madera Creek. The lagoons are allowed to flood with creek water in the dry season to maintain habitat values, especially for diving birds.

OPEN SPACE

Preservation and protection of open space and the natural environment have been a priority for Corte Madera for many years. Maintaining the natural terrain and vegetation of the community preserves the natural and scenic value of open space and wildlife habitat.

Hillsides and Ridgelines

Corte Madera's western regions consist of steeply sloping, heavily wooded hills and ravines that reach elevations of nearly 1,000 feet above sea level. These ridgelines physically and visually separate the Town from adjoining jurisdictions. Two primary ridges frame the Town: the Corte Madera Ridge and the Tiburon Peninsula Ridge. The Corte Madera Ridge runs from northwest to southeast and encompasses smaller ridges locally known as Meadowsweet Ridge, Chapman Hill, and Christmas Tree Hill. The Tiburon Peninsula Ridge lies adjacent to the southern end of Town, culminating in the Ring Mountain Open Space Preserve.

Large areas of the ridges are protected open space, either under the jurisdiction of the Marin County Open Space District, or privately owned. There are also upslope residential neighborhoods in the hilly portions of Town west of Highway 101, south of Tamalpais Drive on Chapman Hill and west of Corte Madera Avenue in the Christmas Tree Hill area.



Habitats

3.0 RESOURCE CONSERVATION AND SUSTAINABILITY

The western portions of Town support oak-bay woodland and annual grasslands, coastal scrub and coast redwood. Southern ridges support extensive grassland areas. Terrestrial habitats occur along the ridgelines and slopes and in the canyons. Oak-bay woodland is the dominant terrestrial habitat type and includes live oak (*Quercus agrifolia*) and the California bay (*Umbellularia Californica*). The Pacific Madrone and coast redwood also occur in the terrestrial habitats within Town boundaries

Many of the ridges support grasslands such as rattlesnake grass (*Briza* sp.), wild barley (*Hordeum* sp.) and rip-gut brome (*Bromus tectorum*). Abundant grasslands are found in the Ring Mountain Preserve, 72 acres of which occur within the Town of Corte Madera. Coastal scrub habitat also occurs along ridges and hillsides and includes shrub species such as Coyote brush (*Baccharis pilularis*), bush monkey flower (*Mimulus aurantiacus*) and Toyon (*Heteromeles arbutifolia*). The scrub habitat is distributed in dense concentrations along ridges, hillsides and other dry areas. This habitat type is often colonized by non-native species such as French broom (*Cytisus monspessulanus*) and Pampas grass (*Cortaderia seloana*).

SCENIC RESOURCES

Corte Madera is bordered on three sides by open space areas that weave into the Town as ridges, creeks, and wetlands. Town character is a blend of contrasts, from rolling hillsides to open waterways and marshlands of the adjoining San Francisco Bay. A significant portion of Corte Madera is in the floodplain. The Town is within hiking, biking and driving distance of some of the most beautiful vistas in the western United States.

Scenic resources are among the Town's important community assets. Scenic viewsheds include the open ridge tops of Mount Tamalpais and the bayside wetlands of the San Francisco Bay that surround and encompass the Town. View preservation has long been an important goal of the community. The balance between development and potential view impacts is discussed further in Chapter 5, Community Design. The Town's natural scenic beauty provides residents and visitors with a direct experience of the dramatic landforms that define the community's character.

3.12 GOALS, POLICIES, AND IMPLEMENTATION PROGRAMS FOR NATURAL AREA RESOURCE CONSERVATION

GOAL RCS-6

Sustainable resources management

POLICY RCS-6.1

Protect natural values of open space and habitat areas while promoting recreational and related uses that are compatible with resource protection.

Implementation Program RCS-6.1.a: Open Space Uses

Maintain open space areas in natural states, making open space recreational use secondary to protection of resources by implementing General Plan Land Use policies.

Responsibility: Planning and Building Department
Timeframe: On-going
Resources: Application Fees; General Fund

Implementation Program RCS-6.1.b: Management of Open Space

Continue supporting the protection of existing environmental and open space preserves. Coordinate management actions of these areas with adjoining cities and Marin County Open Space District.

Responsibility: Planning and Building Department
Timeframe: On-going
Resources: Application Fees; General Fund

POLICY RCS-6.2

Protect wetlands, essential habitat for special status species, habitat corridors, and sensitive natural communities.

Implementation Program RCS-6.2.a: Resource Protection

Protect sensitive biological resources and habitat corridors through environmental review of development applications in compliance with CEQA provisions, participation in comprehensive habitat management programs with other local and resource agencies, and continued acquisition and management of open space lands that provide for permanent protection of important natural habitats. Protect wetlands and other waters of the United States in accordance with the U.S. Army Corps of Engineers and other agencies.

Responsibility: Planning/Bldg & Public Works Departments

3.0 RESOURCE CONSERVATION AND SUSTAINABILITY

Timeframe: On-going
Resources: Application Fees; General Fund

Implementation Program RCS-6.2.b: Restoration Objectives

Where reasonably possible, restore lost or damaged habitat. Support restoration objectives for local habitat types identified by the California Department of Fish and Game and in other regional environmental planning documents.

Responsibility: Planning/Bldg & Public Works Departments
Timeframe: On-going
Resources: General Fund

POLICY RCS 6.3

Manage the development review process in compliance with CEQA provisions to promote resource conservation and sustainability.

Implementation Program RCS-6.3.a: Environmental Review

Continue to require environmental review of development applications pursuant to CEQA to assess the impact of proposed development on species and habitat diversity, particularly special-status species, sensitive natural communities, wetlands, and habitat connectivity. Require adequate mitigation measures for ensuring the protection of sensitive resources and achieving “no net loss” of sensitive habitat acreage, values and function.

Responsibility: Planning and Building Department
Timeframe: On-going
Resources: Application fees

Implementation Program RCS-6.3.b: Early Agency Consultation

Require early consultation with all trustee agencies and agencies with review authority pursuant to CEQA for projects in areas supporting special-status species, sensitive natural communities or wetlands that may be adversely affected by development.

Responsibility: Planning and Building Department
Timeframe: On-going
Resources: Application fees

POLICY RCS-6.4

Work in cooperation with Federal, State and local regulatory and trustee agencies to promote the long-term sustainability of local natural resources.

3.0 RESOURCE CONSERVATION AND SUSTAINABILITY

Implementation Program RCS-6.4.a: Funding Partnerships

Develop partnerships with other local jurisdictions and agencies, including the San Francisco Bay Conservation and Development Commission (BCDC) and the Coastal Conservancy, to further the goals of environmental enhancement for funding purposes.

Responsibility:	Planning and Building Department
Timeframe:	On-going
Resources:	General Fund

POLICY RCS-6.5

Develop local environmental awareness and educational programs to promote Corte Madera's valuable resource areas as community resources.

Implementation Program RCS-6.5.a: Bay Trail Completion

Cooperate with other local and regional agencies to ensure timely completion of the San Francisco Bay Trail.

Responsibility:	Parks/Rec & Public Works Departments
Timeframe:	On-going
Resources:	CIP Budget

Implementation Program RCS-6.5.b: Educational Trail

Working with the Marin County Open Space District, establish a Bay-Mountain Educational Trail that allows community members to experience the ecological gradient from the Bay to the hillside areas (focusing on Ring Mountain).

Responsibility:	Public Works Department
Timeframe:	On-going
Resources:	CIP Budget

Implementation Program RCS-6.5.c: Educational Programs

Work jointly with local schools to promote opportunities for use of Corte Madera's varied natural resources as an outdoor field laboratory. This may include working with the Parks and Recreation Department to implement classes focused on the Town's varied ecological systems.

Responsibility:	Parks and Recreation Department
Timeframe:	On-going
Resources:	General Fund

3.0 RESOURCE CONSERVATION AND SUSTAINABILITY

Implementation Program RCS-6.5.d: Volunteer and Stewardship Programs

Work jointly with local schools and organizations to promote opportunities for volunteers and stewardship programs to help to preserve and protect Corte Madera's natural resources. This may include working with the Parks and Recreation Department to implement programs within Town parks, trails, and open spaces.

Responsibility: Planning and Building Department
Timeframe: On-going
Resources: General Fund

POLICY RCS-6.6

Restore and enhance riparian corridors.

Implementation Program RCS-6.6a: Riparian Corridor Restoration

As a condition of approval for appropriately located development proposals require riparian corridor restoration. Restore riparian corridors as part of flood control and other public infrastructure projects as deemed appropriate.

Responsibility: Planning and Building Department; Public Works Department
Timeframe: On-going
Resources: Application Fees; General Fund

Implementation Program RCS-6.6.b: Riparian Corridor Plan

Cooperate with responsible agencies to plan and implement an integrated management Plan for the long-term conservation and restoration of riparian corridors within Town limits.

Responsibility: Planning and Building Department
Timeframe: On-going
Resources: General Plan Maintenance Fee

POLICY RCS-6.7

Protect migratory corridors.

Implementation Program RCS-6.7a: Migratory Corridors

Condition approval of development proposals to assure that movement corridors for migratory fish and wildlife species are maintained. Coordinate with Marin County and adjoining jurisdictions, and federal and state agencies such as CalTrans, to assure regional connectivity of open space and wildlife corridors.

Responsibility: Planning and Building Department
Timeframe: On-going
Resources: Application Fees; General Fund

GOAL RCS-7

Biodiversity and sustainable habitat

POLICY RCS-7.1

Conserve, restore and enhance areas containing important habitat, wetlands and special-status species.

Implementation Program RCS-7.1.a: Protect Biodiversity

Protect areas known to support a high degree of biological diversity and that may contain species known to be rare or protected under the State or Federal Endangered Species Acts. These include the Town's tidal wetlands, freshwater wetlands and hillside oak woodlands.

The Town will identify the location, habitat and buffer needs of species listed for protection. The Town will maintain, for public use, generalized maps showing known locations of listed species. Sensitive habitat areas to be mapped will include, but not be limited to, Coastal Oak Woodland, Redwood, Estuarine, Lacustrine, Saline Emergent, Fresh Water Emergent, Coastal Scrub, Coastal Grass Land, and Chaparral Mixed.

Include standards in the updated Zoning Ordinance limiting development within these areas, and limiting public access to particularly sensitive habitats that contain species known to be rare or protected.

Responsibility:	Planning and Building Department
Timeframe:	Two years
Resources:	General Plan Maintenance Fee

POLICY RCS- 7.2

Retain sensitive habitat areas and restore to their natural state, where possible, and protect from inappropriate development and landscaping.

Implementation Program RCS-7.2.a: Environmental Assessment

Require applicants to provide an environmental assessment in compliance with CEQA provisions for development proposed on sites that may contain sensitive biological or wetland resources. Require the assessment to be conducted by a qualified professional to determine the presence of any sensitive resources, to assess the potential impacts, and to identify measures for protecting the resource and surrounding habitat.

Responsibility:	Planning and Building Department
Timeframe:	On-going
Resources:	Application Fees

3.0 RESOURCE CONSERVATION AND SUSTAINABILITY

Implementation Program RCS- 7.2.b: Development Limitations

Amend the Zoning Ordinance to establish specific development limitations on land uses that may occur adjacent to habitats with sensitive biological or wetlands resources. Limitations may include restrictions on the amount of impervious surfaces or building construction within a specified distance from the sensitive habitat area, requirements for vegetative screening, and only allowing land uses that minimize noise or lighting disturbances.

Responsibility: Planning and Building Department
Timeframe: Two years
Resources: General Plan Maintenance fee

Implementation Program RCS-7.2.c: Limit Impacts

As part of the development review process, restrict or modify proposed development in areas that contain essential habitat for special-status species, sensitive natural communities or wetlands as necessary to ensure the continued health and survival of these species and sensitive areas. Development projects preferably shall be modified to avoid impacts on sensitive resources, or impacts shall be mitigated by providing on-site or (as a lowest priority) off-site replacement.

Responsibility: Planning and Building Department
Timeframe: On-going
Resources: General Plan Maintenance Fee

POLICY RCS- 7.3

Retain and, where possible, restore sensitive hillside and ridgeline habitat.

Implementation Program RCS-7.3.a: Hillside Construction

Establish standards in the Town Design Guidelines to minimize construction impacts to hillside and ridgeline sites that contain substantial habitat and natural values that contain species known to be rare or protected

Responsibility: Planning and Building Department
Timeframe: Three years
Resources: Application Fees; General Plan Maintenance Fee

Implementation Program RCS-7.3.b: Limit Ridgeline Construction

Discourage construction near ridgelines through implementation of the Design Guidelines. Where no alternative construction site is feasible, ensure that adequate tree canopy visually buffers buildings from lower vantages.

Responsibility: Planning and Building Department
Timeframe: On-going
Resources: Application Fees; General Plan Maintenance Fee

3.0 RESOURCE CONSERVATION AND SUSTAINABILITY

Implementation Program RCS-7.3.c: Hillside Habitat Restoration

Support efforts by the Marin County Open Space District and others to protect and restore habitat values in hillside and ridgeline public open space areas.

Responsibility:	Planning and Building Department; Public Works Department
Timeframe:	On-going
Resources:	General Plan Maintenance Fee

POLICY RCS- 7.4

Protect woodland and tree resources.

Implementation Program RCS-7.4.a: Tree Protection

Protect large native trees, trees with historical importance, oak woodlands, and forest habitats, and prevent the untimely removal of trees through implementation of standards in the Town's Municipal Code. Evaluate tree protection standards as part of the project to develop Design Guidelines and update the Tree Ordinance accordingly.

Responsibility:	Planning and Building Department
Timeframe:	On-going
Resources:	Application Fee; General Plan Maintenance Fee

POLICY RCS-7.5

Require use of native plant species in landscaping plans and reduce spread of invasive species.

Implementation Program RCS-7.5.a: Landscape Plans

Prepare lists of appropriate native landscape species and inappropriate invasive exotic species for use by property owners in developing landscape plans or enhancing existing landscaping, and include in the Design Guidelines. Prepare the lists with input from the California Department of Fish and Game, Agricultural Commissioner, University of California Cooperative Extension, California Native Plant Society, and other appropriate sources to verify suitability. Provide educational materials with information on how to care for plants included in the lists of appropriate native landscape species.

Responsibility:	Planning and Building Department
Timeframe:	Three years
Resources:	General Plan Implementation Fee

3.0 RESOURCE CONSERVATION AND SUSTAINABILITY

Implementation Program RCS-7.5.b: Landscaping Requirements

As part of the discretionary review of proposed development prohibit the use of highly invasive species in landscaping and require the removal of invasive exotic species. Require use of native or compatible nonnative plant species indigenous to the site vicinity as part of the discretionary review of project landscaping. Additionally, require that landscaping improvements for community parks, trails, and other public areas include the use of native plant materials and species that recognize and enhance the natural resource setting of the Town.

Responsibility: Planning/Bldg & Public Works Departments
Timeframe: On-going
Resources: Application Fees; General Plan Maintenance Fee

Implementation Program RCS-7.5.c: Invasive Species Removal

Work with public and private landowners to make attempts to contain and prevent the spread of highly invasive and noxious weeds. Cooperate with Marin Municipal Water District's vegetation control activities along the urban/wildland boundary.

Responsibility: Planning/Bldg & Public Works Departments
Timeframe: On-going
Resources: Application Fees

Implementation Program RCS-7.5.d: MMWD Plant Reduction Programs

Cooperate with Marin Municipal Water District's vegetation control activities along the urban/wildland boundary.

Responsibility: Fire & Public Works Departments
Timeframe: On-going
Resources: General Fund

Implementation Program RCS-7.5.e: Invasive Spartina Removal

Cooperate with the Coastal Conservancy's Invasive Spartina Program to eliminate invasive cordgrass from marshes.

Responsibility: Planning/Bldg & Public Works Departments
Timeframe: On-going
Resources: Volunteers, grants

POLICY RCS-7.6

Support vegetation disease management programs.

Implementation Program RCS-7.6.a: Vegetation Disease Management

Support agency programs and proven methods to control the spread of diseases harmful to native vegetation in Marin County.

Responsibility: Planning and Building Department

3.0 RESOURCE CONSERVATION AND SUSTAINABILITY

Timeframe: On-going
Resources: Application Fees

POLICY RCS-7.7

Control the use of herbicide, insecticides and similar materials.

Implementation Program RCS-7.7.a: Integrated Pest Management

Encourage the use of integrated pest management and organic practices to control pests with the least possible hazard to the environment. Restrict the use of insecticides, herbicides, or any toxic chemical substance in sensitive habitats, except when an emergency has been declared, the habitat itself is threatened, a substantial risk to public health and safety exists, including maintenance for flood control, or when such use is authorized pursuant to a permit issued by the Agricultural Commissioner. Encourage non-toxic strategies for pest control, such as habitat management using physical and biological controls, as an alternative to chemical treatment.

Responsibility: Planning/Bldg & Public Works Departments
Timeframe: On-going
Resources: Application Fees; General Fund

POLICY RCS-7.8

Limit utility placement in open space.

Implementation Program RCS-7.8.a: Utility Placement

Discourage placement of utilities in open space areas. Necessary utilities should be located and designed to minimize impacts to open space and habitat areas. Ensure that adequate tree canopy visually buffers utility facilities from lower vantages.

Responsibility: Planning and Building Department
Timeframe: On-going
Resources: Application Fees

GOAL RCS-8

Long-term sustainability of wetlands.

POLICY RCS-8.1

Protect wetlands through careful environmental review of proposed development applications. Recognize the U.S. Army Corps of Engineers as the designated permitting agency that regulates wetlands.

3.0 RESOURCE CONSERVATION AND SUSTAINABILITY

Implementation Program RCS 8.1.a: Wetland Data

Pursuant to CEQA, when sites with wetlands are proposed for development require detailed assessments to demonstrate compliance with State and Federal regulations. Assessments shall be conducted by a qualified professional retained by the Town to determine wetland boundaries and the presence of sensitive resources including endangered and special status species and their habitat, to assess the potential impacts, and to identify measures for protecting the resource and surrounding buffer habitat. Assessments will delineate and map waters of the United States, wetlands, open-water habitats, and upland habitats and will make recommendations for avoidance. Delineation studies shall be submitted to the U.S. Army Corps of Engineers to determine the boundaries of wetlands and waters of the United States.

Responsibility:	Planning and Building Department
Timeframe:	On-going
Resources:	Application Fees

Implementation Program RCS 8.1.b: Wetland Avoidance

Restrict or modify proposed development in areas that contain wetlands or other jurisdictional waters, as defined by U.S. Army Corps of Engineers delineations, as necessary to ensure the continued health and survival of special status species and sensitive areas. Development projects shall preferably be modified to avoid impacts on sensitive resources, or to adequately mitigate impacts by providing on-site replacement or (as a lowest priority) off-site replacement at a higher ratio.

Responsibility:	Planning and Building Department
Timeframe:	On-going
Resources:	Application Fees

Implementation Program RCS 8.1.c: Wetland Permits

The Town shall require the project proponent to obtain all necessary permits pertaining to affected waters of the United States, including wetland habitat and stream channel and pond habitat regulated by the California Department of Fish and Game and/or the San Francisco Bay Regional Water Quality Control Board prior to construction. Grading or other construction activities within streambeds or ponds may require streambed alteration agreements from the California Department of Fish and Game. Discharge of fill into waters of the United States will require a Clean Water Act Section 404 permit from the U.S. Army Corps of Engineers and Clean Water Act Section 401 certification from the San Francisco Bay Regional Water Quality Control Board. The permitting process will also require compensation for construction impacts.

Responsibility:	Planning and Building Department
Timeframe:	On-going
Resources:	Application Fees

3.0 RESOURCE CONSERVATION AND SUSTAINABILITY

Implementation Program RCS-8.1.d: Drainageway Setback Standards

Include provisions for drainageway setbacks in the Design Guidelines.

Responsibility:	Planning and Building Department
Timeframe:	Three years
Resources:	GPMF

Implementation Program RCS-8.1.e: Implement Drainageway Setbacks

Avoid wetlands development where possible. Establish appropriate setbacks for grading and structural development from drainageways through individual development application review, taking into account habitat values.

Responsibility:	Planning and Building Department
Timeframe:	On-going
Resources:	Application fees

POLICY RCS-8.2

Establish and implement criteria to mitigate wetland losses

Implementation Program RCS-8.2.a: Wetland Mitigation

Where complete avoidance of wetlands loss due to filling is not possible, require provision of replacement habitat on-site through restoration and/or habitat creation at a 2:1 ratio, provided that no net loss of wetland acreage, function, and habitat values occurs. Allow restoration of wetlands off-site only when an applicant has demonstrated that no net loss of wetlands would occur and that on-site restoration is not practical or would result in isolated wetlands of extremely limited value. Off-site wetland mitigation preferably will consist of the same habitat type as the wetland area that would be lost.

Responsibility:	Planning and Building Department
Timeframe:	On-going
Resources:	Application Fee

Implementation Program RCS-8.2.b: Wetlands Mitigation Standards

Amend the zoning ordinance to implement the following wetland mitigation standards:

- No net losses shall occur in wetland acreage, functions, and values. This should include both direct impacts on wetlands and essential buffers, and consideration of potential indirect effects of development due to changes in available surface water and non-point water quality degradation. Detailed review of the adequacy of a proposed mitigation plan shall be performed as part of environmental review of the proposed development project to allow for a thorough evaluation of both the anticipated loss and replacement acreage, functions and values.

3.0 RESOURCE CONSERVATION AND SUSTAINABILITY

- Mitigation should be implemented prior to and/or concurrently with the project activity causing the potential adverse impact to minimize any short-term loss and modification to wetlands.
- An area of adjacent upland habitat should be protected to provide an adequate buffer for wetland species that require such habitat. Setbacks should provide for minimum filtration functions to intercept sediments and prevent degradation of adjacent wetlands. Flexibility should be included in the criteria based on site constraints and opportunities to ensure the avoidance of sensitive wetlands, and associated resources such as special-status species, and the feasibility of alternative mitigation options for already developed properties. Minor redevelopment involving less than 25 percent of a structure on developed parcels that is already filled and at least 50 percent developed may be allowed without any additional buffer, provided that redevelopment occurs away from the wetland and no additional filling occurs.
- Mitigation sites should be permanently protected and managed for open space and wildlife habitat purposes.
- Restoration of wetlands is preferred to creation of new replacement wetlands, due to the greater likelihood of success.
- Mitigation projects should minimize the need for on-going maintenance and operational manipulation (dredging, artificial water level controls, etc.) to ensure long-term success. Self-sustaining projects with minimal maintenance requirements are encouraged.
- All plans to mitigate or minimize adverse impacts to wetland environments shall include provisions to monitor the success of the restoration project. The measures taken to avoid adverse impacts may be modified if the original plans prove unsuccessful. Performance bonds may be required.
- Mitigation must be commensurate with adverse impacts of the wetland alteration and consist of providing similar values and greater wetland acreage than those of the wetland area adversely affected. All restored or created wetlands shall be provided at a minimum 2:1 replacement ratio and shall have the same or increased habitat values as the wetland proposed to be destroyed.

Responsibility: Planning and Building Department
Timeframe: Two years
Resources: General Plan Fee

3.0 RESOURCE CONSERVATION AND SUSTAINABILITY

POLICY RCS-8.3

Use flood basins for seasonal habitat.

Implementation Program RCS-8.3.a: Flood Basins

Utilize natural or managed flood basins to provide seasonal habitat for waterfowl and shorebirds, and avoid development in these basins to protect habitat values.

Responsibility:	Planning and Building Department; Public Works Department
Timeframe:	On-going
Resources:	Application Fee

POLICY RCS-8.4

Work toward integrated management of tidal areas and drainages within the Town limits.

Implementation Program RCS-8.4.a: Drainage Management

As part of the review of discretionary applications, identify the overlapping governmental jurisdictions of existing marsh and tidal areas, including flood flow management areas, and design management approaches that limit maintenance requirements by integrating effective natural components of tidal and drainage systems.

Responsibility:	Planning and Building Department
Timeframe:	On-going
Resources:	Application Fees

Implementation Program RCS-8.4.b: Restore Waterway Function

Restore waterways' natural functions where possible. Keep drainageways open and daylight culverted drainageways whenever possible.

Responsibility:	Public Works Department
Timeframe:	On-going
Resources:	CIP Budget

POLICY RCS-8.5

Provide appropriate access to wetlands.

Implementation Program RCS-8.5.a: Wetlands access

Design public access to avoid or minimize disturbance to wetlands, necessary buffer areas, and associated wildlife habitat, while facilitating public use, enjoyment, and appreciation of wetlands.

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Responsibility: Planning/Building Department; Public Works Department
Timeframe: On-going
Resources: Application Fee; General Fund

Implementation Program RCS-8.5.b: Informational Signage

Establish interpretive and informational signage in marsh and tidal land areas that encourages low-impact, passive recreational and educational uses.

Responsibility: Public Works Departments
Timeframe: Three years
Resources: CIP Budget

3.13 WATER QUALITY

Water is an essential element of all life forms. Plants and animals are mostly composed of water and require water and the nutrients carried by water. An adequate and high quality water supply is necessary for continued human survival, development and use of the land, and the health of the entire natural environment. Due to its critical importance, water is legally considered a public resource and consequently the use and quality of water have long been regulated by government. An adequate and high-quality water supply is considered a basic human right. As water typically moves across jurisdictional boundaries, associated regulation is at the local, regional, state and federal levels. Local jurisdictions have legal authority over development and land use, and are therefore required to consider the adequacy of water supplies and how development affects the quantity and quality of water available for other beneficial uses.

As development has continued, the long-term adequacy of groundwater and surface water resources has become a major public concern. Water-related issues include lowered groundwater levels, increased storm water runoff, sediment and pollutants in runoff, water diversions into and out of watersheds, summer rationing in dry years, the water needs of fish and wildlife, the rates of water usage, conservation methods, water storage limitations, re-use of water and continuing changes in state and federal regulations.

Trees and other natural vegetation are dependent on water. Their presence also supports the long-term quality and quantity of water resources in several ways. The natural vegetation found in the vicinity of riparian areas benefits water quality by filtering out sediment and pollutants from runoff before it enters surface water bodies. Vegetation can also increase the retention of storm water, thereby recharging groundwater, absorbing pollutants, slowing and diminishing flood peak levels. Vegetation on stream banks reduces bank erosion as a source of sediment. Trees and shrubs provide shade which lowers the temperature of the water and thus increases its value as fishery habitat. Trees provide shade which cools the ground surface and reduces evaporation. Plants add moisture to the air through transpiration of water from their leaves.

WATER SUPPLY

The Town of Corte Madera obtains its water supply from the Marin Municipal Water District (MMWD), which serves central and southern Marin County. The MMWD provides the majority of water to users from reservoirs on Mt. Tamalpais and west Marin County which are typically filled by rainfall each year. Several watersheds on Mt. Tamalpais drain into Lagunitas Creek and its tributaries, which in turn flow into a series of reservoirs. The District protects 21,250 acres of watersheds lands and operates seven reservoirs.

The MMWD began importing water from the Russian River in the mid-1970s to supplement water supply. In 1992, a bond measure was approved to incrementally increase the quantity of water from the Russian River to improve the reliability of this water source. Marin

3.0 RESOURCE CONSERVATION AND SUSTAINABILITY

County planning projections indicate that the MMWD water sources, combined with Russian River water, will provide a sufficient water supply well into the 21st century.

WATER QUALITY PROTECTION

Local, regional and state agencies share a common mission to preserve, enhance and restore the quality of California's water resources, and ensure their proper allocation and efficient use for the benefit of present and future generations.

The task of protecting and enforcing the many uses of water, including the needs of residents, industry, agriculture, municipal districts, and the environment is an ongoing challenge for everyone.

Regional Water Quality Control Board

The State Water Resources Control Board (SWRCB) was created by the Legislature in 1967. The joint authority of water allocation and water quality protection enables the SWRCB to provide comprehensive protection for California's waters.

There are nine Regional Water Quality Control Boards (RWQCBs) within the State of California. The mission of the RWQCBs is to develop and enforce water quality objectives and implementation plans that will best protect the beneficial uses of the State's waters, recognizing local differences in climate, topography, geology, and hydrology.

Each RWQCB has nine part-time members appointed by the Governor and confirmed by the Senate. Regional Boards develop "basin plans" for their hydrologic areas, issue waste discharge requirements, take enforcement action against violators, and monitor water quality.

MCSTOPPP

MCSTOPPP is an acronym for the **Marin County Stormwater Pollution Prevention Program**. Formed in 1993, **MCSTOPPP** is a joint effort of Marin's cities, towns and unincorporated areas. Their goal is to:

- ◆ prevent stormwater pollution
- ◆ protect and enhance water quality in creeks and wetlands
- ◆ preserve beneficial uses of local waterways
- ◆ comply with State and Federal regulations

Though the County and each of the eleven cities and towns carry out their own individual stormwater pollution prevention programs, MCSTOPPP provides for the coordination and consistency of approaches between the individual participants and documents their efforts

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in annual reports. These reports include information on illegal discharges, street cleaning efforts, creek maintenance, new development, and other issues of concern.

MCSTOPPP was originally funded by the cities, towns and unincorporated areas whose watersheds drain to San Francisco Bay and San Pablo Bay. Later, it was expanded to include all Marin watersheds.

MCSTOPPP is administered by the Marin County Flood Control and Water Conservation District with staffing provided by the Marin County Department of Public Works. A Citizen's Advisory Committee provides review and advice.

3.14 GOALS, POLICIES, AND IMPLEMENTATION PROGRAMS FOR WATER QUALITY

GOAL RCS – 9

Protect, restore and enhance the quality of surface and groundwater resources to meet the needs of all beneficial uses.

POLICY RCS –9.1

Continue to comply with local, state, and federal standards for water quality.

Implementation Program RCS - 9.1.a: Countywide Stormwater Program

Continue to participate in the Marin County Stormwater Pollution Prevention Program and comply with its performance standards. Continue to control pollutant discharges from municipal maintenance activities through the implementation of Municipal Stormwater Ordinance 9.33 and in compliance with MCSTOPPP.

Responsibility:	Planning and Building Department; Public Works Department
Timeframe:	On-going
Resource:	General Fund; permit fees

Implementation Program RCS - 9.1.b: Stormwater Runoff Measures

Continue to incorporate measures for stormwater runoff control and management in construction sites.

Responsibility:	Planning and Building Department; Public Works Department
Timeframe:	On-going
Resource:	General Fund; permit fees

Implementation Program RCS - 9.1.c: Water Quality Improvements in Waterways

Support water quality improvement efforts in creeks and drainages in accordance with standards of the Regional Water Quality Control Board or any agencies with jurisdiction.

Responsibility:	Planning and Building Department
Timeframe:	On-going
Resource:	General Fund

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POLICY RCS -9.2

Continue to address non-point source pollution and protect receiving waters from pollutants discharged into the storm drain system by requiring Best Management Practices.

Implementation Program RCS-9.2a: Alternatives to Impervious Surfaces

Support alternatives to impervious surfaces in new development, redevelopment, or public improvement projects to reduce urban runoff into drain systems, creeks and other drainages.

Responsibility:	Planning and Building Department; Public Works Department
Timeframe:	On-going
Resource:	General Fund; Permit Fees

Implementation Program RCS -9.2b: Reduce Grading

Require that site designs work with natural topography and drainages to the extent practicable to reduce the amount of grading necessary and limit disturbance to natural water bodies and natural drainage systems.

Responsibility:	Planning and Building Department; Public Works Department
Timeframe:	On-going
Resource:	General Fund; Permit Fees

Implementation Program RCS -9.2c: Natural Filters

Where feasible, use vegetation to absorb and filter fertilizers, pesticides, and other pollutants.

Responsibility:	Planning and Building Department; Public Works Department
Timeframe:	On-going
Resource:	General Fund; Permit Fees

Implementation Program RCS - 9.2.d: Proper Disposal of Pollutants

Continue to promote proper disposal of pollutants to the sanitary sewer or hazardous waste facilities rather than to the storm drainage systems.

Responsibility:	Planning and Building Department; Public Works Department
Timeframe:	On-going
Resource:	General Fund; Permit Fees

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Implementation Program RCS - 9.2.e: Compliance by Contractors

Continue to require contractors to comply with accepted stormwater pollution prevention planning practices for all projects subject to erosion potential. Also, continue to require the proper use, storage and disposal of on-site materials.

Responsibility: Planning and Building Department; Public Works Department
Timeframe: On-going
Resource: General Fund; Permit Fees

Implementation Program RCS - 9.2.f: System Improvements

Continue to improve storm drainage performance by constructing new system improvements to minimize the introduction of pollutants into natural systems. Evaluate stormwater volumes when replacing undersized or otherwise inadequate lines with larger or parallel lines.

Responsibility: Public Works Department
Timeframe: On-going
Resource: General Fund

Implementation Program RCS - 9.2.g: Pesticide and Fertilizer Management

On Town property, avoid the use of pesticides and non-organic fertilizers. Ensure that the application of pesticides on Town property is accomplished in accordance with all applicable rules and regulations. Continue to implement the Integrated Pest management program on Town property.

Responsibility: Public Works Department
Timeframe: On-going
Resource: General Fund

POLICY RCS -9.3

Establish development guidelines to protect areas that are particularly susceptible to erosion and sediment loss.

See Implementation Programs for Geologic Hazards, Section 8.10

POLICY RCS -9.4

Continue to inform the public about the effects of water pollution in order to encourage participation in pollution prevention programs.

Implementation Program RCS - 9.4.a: Stenciling of Storm Drains

Continue the efforts to identify and stencil storm drain locations so that people understand the consequences of pollutant run-off.

Responsibility: Public Works Department

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Timeframe: On-going
Resource: General Fund

Implementation Program RCS - 9.4.b: Outreach

Continue to work with Marin County Stormwater Pollution Prevention Program (MCSTOPPP) in educational outreach and public participation in water pollution reduction methods that, for example, address the impacts of indirect pollution sources such as fertilization, pesticides, and pet waste.

Responsibility: Planning and Building Department; Public Works Department
Timeframe: On-going
Resource: General Fund

Implementation Program RCS - 9.4.c: Car Wash Facilities

Require the use of recycled water at new commercial car washing facilities.

Responsibility: Planning and Building Department
Timeframe: On-going
Resource: Fees

3.15 AIR QUALITY

AIR QUALITY CLIMATOLOGY

Corte Madera is located in eastern Marin County, which is part of the nine-county San Francisco Bay Air Basin. Marin County is bounded on the west by the Pacific Ocean, on the east by San Pablo Bay and San Francisco Bay, on the south by the Golden Gate and on the north by the Petaluma Gap. Corte Madera is partially sheltered from prevailing northwesterly winds off the Pacific Ocean by elevated terrain. Temperatures in Corte Madera are moderated by the cooling effect of the San Francisco Bay in summer and the warming effect of the Bay in winter.

As a result of these climatological and topographic conditions, eastern Marin County (the greater Corte Madera area) has a greater potential for air quality problems compared to the rest of the County. Air pollution potential is a function of climate alone and not indicative of actual air pollution levels. High air pollution potential means that the sheltering terrain and relatively light winds often limit the atmosphere's ability to transport and dilute pollutants. Marin County does not have many polluting industries and is located on the up-wind edge of the air basin, so current air quality is good despite a high climatological pollution potential.

HISTORICAL BACKGROUND AND AIR QUALITY PROGRAMS

Efforts to combat air pollution began in the Bay Area in 1955 with the formation of the Bay Area Air Pollution Control District (currently the Bay Area Air Quality Management District [BAAQMD]). The Bay Area was initially classified as a federal non-attainment area (standards are not attained) for carbon monoxide and ozone, and a State non-attainment area for carbon monoxide, ozone and PM₁₀. The entire Bay Area is currently designated as a federal and State attainment area for carbon monoxide, but remains an ozone non-attainment area.

Passing of the California Clean Air Act in 1988 recognized the relative intractability of the PM₁₀ problem and excluded it from the basic planning requirements of the Act.

AIR POLLUTANTS OF CONCERN IN THE BAY AREA AND CORTE MADERA

The federal ambient air quality standards are met in Marin County, but the more stringent State standards for ozone and PM₁₀ are exceeded. The following is a description of problem pollutants in Corte Madera and the greater Bay Area.

Ozone

Ground level ozone, often referred to as smog, is not emitted directly, but is formed in the atmosphere through complex chemical reactions between nitrogen oxides (NO_x) and reactive organic gases (ROG) in the presence of sunlight. The principal sources of NO_x and

3.0 RESOURCE CONSERVATION AND SUSTAINABILITY

ROG, often termed ozone precursors, are combustion processes (including automobiles) and evaporation of solvents, paints and fuels. Motor vehicles are the single largest source of ozone precursors emissions in the Bay Area. Exposure to ozone can cause eye irritation, aggravate respiratory diseases and damage lung tissue, as well as damage vegetation and reduce visibility.

Carbon Monoxide

Carbon monoxide (CO) is an odorless, colorless gas that is formed by the incomplete combustion of fuels. Motor vehicles are by far the single largest source of CO in the Bay Area. In Corte Madera, vehicles traveling along Highway 101 contribute carbon monoxide to the local air quality conditions. At high concentrations, CO reduces the oxygen carrying capacity of blood and can cause headaches, dizziness, unconsciousness, and even death. CO is currently a minor concern in the Bay Area. While violations of the ambient air quality standards were recorded in all years prior to 1991, concentrations of this pollutant have been steadily declining, and the region has been designated an attainment area for both the state and federal ambient air quality standards.

Particulate Matter

Suspended particulate matter (PM) is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size, and chemical composition and can be made up of many different materials such as metals, soot, soil, and dust. "Inhalable" PM consists of particles less than 10 microns in diameter, and is defined as "suspended particulate matter" or PM10. Fine particles are less than 2.5 microns in diameter (PM2.5). PM2.5, by definition, is included in PM10.

Particulate matter (PM) includes a wide range of solid or liquid particles, including smoke, dust, aerosols and metallic oxides. There are many sources of PM emissions, including combustion, industrial processes, grading and construction, and motor vehicles. Of the PM emissions associated with motor vehicle use, some are tailpipe and tire wear emissions, but greater quantities are generated by re suspended road dust. Consequently, improvements in motor vehicle engines and fuels have not reduced PM emissions as significantly as they have reduced emissions of other pollutants. Reductions in motor vehicle use are needed to significantly reduce PM emissions from re suspended road dust.

Particulate matter is a concern because it can bypass the body's natural filtration system more easily than larger particles, and can lodge deep in the lungs. Health effects of PM vary depending on a number of factors, including the type and size of the particle. Research has shown a correlation between high PM10, concentrations and increased mortality rates. Elevated levels can also aggravate chronic respiratory illness such as bronchitis and asthma.

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Wood Smoke

Wood burning in fireplaces and stoves is a significant source of PM, particularly during episodes when PM10 levels are highest. Wood smoke has long been identified as a significant source of pollutants in urban and suburban areas as it contributes to particulate matter and carbon monoxide concentrations, reduces visibility and contains numerous Toxic Air Contaminants. Present controls on this source include the adoption of emission standards for wood stoves and fireplace inserts. Interest in wood smoke regulation is likely to increase in communities that experience substantial use of wood burning as a heating source.

Toxic Air Contaminants

In addition to the criteria pollutants discussed above, toxic air contaminants (TACs) are another group of pollutants of concern in the Bay Area. Unlike criteria pollutants, no safe levels of exposure to TACs can be established. There are many different types of TACs, with varying degrees of toxicity. Sources of TACs include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Public exposure to TACs can result from emissions of normal operations, as well as accidental releases of hazardous materials during upset conditions. The health effects of TACs include cancer, birth defects, neurological damage and death.

Diesel Exhaust

In 1988, the California Air Resources Board identified diesel engine particulate matter as a toxic air contaminant and human carcinogen. The exhaust from diesel engines contains hundreds of different gaseous and particulate components, many of which are toxic and capable of penetrating deep into the lungs. Diesel exhaust is the most dangerous and ubiquitous TAC in the Bay Area, with high concentrations near heavily traveled highways and intersections.

Greenhouse Gas Emissions

The increasing amount of GHG emissions and criteria air pollutants stemming primarily from the burning of fossil fuels is negatively impacting air quality in the atmosphere as well as contributing to global climate change. GHGs include carbon dioxide, methane, nitrous oxide, and sulfur hexafluoride, among others. Warmer temperatures associated with climate change lead to conditions that are conducive to air pollution formation, including higher ozone levels, causing increased asthma and respiratory illness.

Other Air Quality Issues

Other air quality issues of concern in the Bay Area include nuisance impacts of odors and dust. The BAAQMD has enacted an odorous substances control program as part of its effort

3.0 RESOURCE CONSERVATION AND SUSTAINABILITY

to control the use and emission of odorous substances and nuisance dust within the Bay Area.

Sensitive Receptors and Pollution Sources

The BAAQMD defines sensitive receptors as facilities where sensitive receptor population groups (children, the elderly, the acutely ill and the chronically ill) are likely to be located. These land uses include schools, retirement homes, convalescent homes, hospitals and medical clinics. Such sensitive receptors are spread through most parts of Corte Madera.

The BAAQMD inventory lists no major emitting facilities for criteria pollutants in Corte Madera. The current inventory does, however, identify numerous dry cleaners as sources of TACs spread over the commercial areas of Corte Madera. None of the sources of TACs in Corte Madera are considered as facilities with health risks requiring public notification under the Air Toxics Hot Spots Program.

Relevance to General Plan

There are currently no federal, state or local air quality related constraints on cities in the Bay Area. The BAAQMD has developed guidelines and thresholds of significance for local plans that affect CEQA documentation for the Corte Madera General Plan. Inconsistency with the most recently adopted Clean Air Plan (CAP) is considered a significant impact. According to the BAAQMD, the following criteria must be satisfied for a local plan to be determined consistent with the CAP and not have a significant air quality impact:

- ◆ The local plan should be consistent with the CAP population and Vehicle Miles Traveled (VMT) assumptions. This is demonstrated if the population growth over the planning period will not exceed the values included in the current CAP, and
- ◆ The local plan demonstrates reasonable efforts to implement the Transportation Control Measures (TCMs) included in the CAP that identify cities as implementing agencies.

Of particular importance is mitigation of air quality impacts from projects that might result in sensitive receptors' exposure to high levels of diesel exhaust. The design, layout and orientation of high-density housing, for example, will need to minimize exposure of residents to diesel exhaust. The BAAQMD (together with five other regional agencies) encourages compact, in fill development near public transit. High density development with a transit orientation is considered "smart growth" as a means of combating the increasing use of automobiles in the region.

3.16 GOALS, POLICIES, AND IMPLEMENTATION PROGRAMS FOR AIR QUALITY

GOAL RCS – 10

Attainment of Air Quality standards in the San Francisco Bay Air Basin.

POLICY RCS – 10.1

Reduce the potential for air quality impact of new development and redevelopment by requiring pedestrian, bicycle, and transit oriented features.

Implementation Program RCS – 10.1.a: Air Quality Improvements

Require developers to implement strategies to reduce or avoid potential air quality impacts, including:

- Encouraging or providing incentives for use of public transportation and carpooling.
- Locating residential or mixed-use development in proximity to public transit, employment centers and shopping.

Responsibility:	Planning and Building Department
Timeframe:	On-going
Resource:	Application Fees

POLICY RCS – 10.2

Encourage new development and redevelopment of existing sites that will locate mixed land uses near employment and commercial service centers in order to reduce vehicular air pollution.

Implementation Program RCS – 10.2.a: Mixed Use, Infill Development

Amend the Zoning Ordinance to allow infill development, with a focus on mixed uses of residential, commercial and employment. Encourage mixed-use development in the San Clemente/Paradise Drive, Fifer Avenue/Tamal Vista Boulevard, Tamalpais Drive / Casa Buena Drive and Old Corte Madera Square Community Plans.

Responsibility:	Planning and Building Department
Timeframe:	Two years
Resource:	General Plan Maintenance fees

POLICY RCS – 10.3

Require the incorporation of air quality mitigation measures for development projects.

Implementation Program RCS – 10.3.a: Emission Controls

Through the development review process and in amendments to the Zoning Ordinance, require new uses that generate significant air emissions or odors include adequate buffer zones, setbacks or other site planning approaches to protect existing or future sensitive receptors.

Responsibility:	Planning and Building Department
Timeframe:	On-going
Resource:	Application Fees

Implementation Program RCS – 10.3.b: Tree Planting Mitigation

Consider tree planting as mitigation for GHG emissions and other environmental impacts of development projects as appropriate.

Responsibility:	Planning and Building Department
Timeframe:	On-going
Resource:	Application Fees

Implementation Program RCS – 10.3.c: Construction Dust Control

As a condition of approval for discretionary projects, require dust control measures consistent with the “Feasible Control Measures for Construction Emissions of PM₁₀” of the BAAQMD CEQA Guidelines or its successor document.

Responsibility:	Planning and Building Department; Public Works Department
Timeframe:	On-going
Resource:	Application Fees

Implementation Program RCS – 10.3.d: Demolition Air Contaminants Control

As a condition of approval of demolition permits, require applicants to demonstrate compliance with applicable BAAQMD standards and procedures for mitigating the risk of exposure to lead paint and asbestos.

Responsibility:	Planning and Building Department
Timeframe:	On-going
Resource:	Application Fees

Implementation Program RCS – 10.3.e: Construction Equipment Control

As a condition of approval, require emission control measures for construction equipment that are appropriate to the specifics of the project and as recommended by the BAAQMD. Considerations in determining appropriate control measures may include factors including but not limited to length of time of construction and proximity to sensitive receptors.

3.0 RESOURCE CONSERVATION AND SUSTAINABILITY

Responsibility: Planning and Building Department; Public Works Department
Timeframe: On-going
Resource: Application Fees

Implementation Program RCS - 10.3.f: Odor Emission Control

As a condition of approval for new development that would be a source of odors near residences or sensitive receptors, or as a condition of approval of new residential development or other sensitive receptors near existing sources of odor, require adequate buffer distances (based on recommendations and requirements of the California Air Resources Board and BAAQMD) or filters or other equipment or solutions to reduce exposure to acceptable levels. Coordinate odor emission control conditions of approval with permit conditions required by BAAQMD.

Responsibility: Planning and Building Department
Timeframe: On-going
Resource: Application Fees

Implementation Program RCS - 10.3.g: Toxic Air Contaminants Control

As a condition of approval for new development that would be a source of Toxic Air Contaminants (TAC's) near residences or sensitive receptors, or as a condition of approval of new residential development or other sensitive receptors near existing sources of odor, require adequate buffer distances (based on recommendations and requirements of the California Air Resources Board and BAAQMD) or filters or other equipment or solutions to reduce exposure to acceptable levels. Coordinate odor emission control conditions of approval with permit conditions required by BAAQMD.

Responsibility: Planning and Building Department
Timeframe: On-going
Resource: Application Fees

POLICY RCS - 10.4

Reduce PM10 emissions from fireplaces and wood stoves.

Implementation Program RCS - 10.4.a: Natural Gas Fireplaces

Amend the Municipal Code to prohibit wood burning devices other than EPA certified appliances or equivalent in new construction and require conversion to natural gas fireplaces or EPA certified appliances in remodeling projects that include the replacement of wood burning devices.

Responsibility: Planning and Building Department
Timeframe: Two years
Resource: General Plan Maintenance Fee; Application Fees

POLICY RCS – 10.5

Contribute towards regional efforts by participating with neighboring jurisdictions in sub-regional planning activities to improve air quality.

Implementation Program RCS – 10.5.a: Program Implementation

Participate in and implement strategies of the Metropolitan Transportation Commission’s “Smart Growth Initiative” and “Transportation for Livable Communities Program.”

Responsibility:	Planning and Building Department
Timeframe:	On-going
Resource:	General Fund

POLICY RCS – 10.6

Support the Bay Area Air Quality Management District in monitoring air pollutants of concern, the Governor’s Office of Planning and Research (OPR) in developing CEQA guidelines related to GHG emissions and energy for all projects, and in meeting federal and State air quality standards.

Implementation Program RCS – 10.6.a: Development Review

Refer larger development projects, or those with potential to generate substantial dust or air pollution, to the BAAQMD for review. Incorporate appropriate mitigation measures in project conditions.

Responsibility:	Planning and Building Department
Timeframe:	On-going
Resource:	Application Fees

Implementation Program RCS – 10.6.b: Air Quality Education Programs

Support and participate in the air quality education programs of the BAAQMD, such as “Spare the Air” days. Provide information through the Town’s website and newsletters.

Responsibility:	Planning and Building Department
Timeframe:	On-going
Resource:	General Fund

Implementation Program RCS – 10.6.c: Air Quality Regulations for GHG Emissions

The Town shall implement any regulations issued by the California Air Resources Board or other regulatory agency regarding greenhouse gas emissions. The Town will enforce CEQA Guidelines developed by the Governor’s Office of Planning and Research that seek to analyze and mitigate GHG emissions and energy use (See RCS Policy 3.1a).

3.0 RESOURCE CONSERVATION AND SUSTAINABILITY

Responsibility: Planning and Building Department
Timeframe: Three years
Resource: General Fund

Implementation Program RCS - 10.6.d: Demonstration Projects

Participate in demonstration projects that may be offered by the BAAQMD to reduce mobile source emissions as part of the districts 2005 Ozone Strategy or successor programs. The extent of participation will depend on the appropriateness of the demonstration program in terms of the Town's needs and resources.

Responsibility: Planning and Building Department
Timeframe: On-going
Resource: Capital Improvement Budget

Implementation Program RCS - 10.6.e: Traffic Calming

Implement traffic calming techniques on residential and arterial streets where needed and when feasible to reduce mobile source emissions.

Responsibility: Public Works Department
Timeframe: On-going
Resource: Capital Improvement Budget

3.17 CULTURAL AND HISTORIC RESOURCES

Numerous prehistoric archaeological sites have been identified near former or existing marsh boundaries, watercourses, the base of foothills, and near vegetation throughout the Bay Area, including Corte Madera. The California Archaeological Inventory has identified eight recorded prehistoric archaeological sites within the Town of Corte Madera and two adjacent archaeological sites within the Ring Mountain Preserve. Areas that have not been part of a project environmental review (this includes ninety percent of the Town) have never been studied, so there is a high probability of potentially unrecognized prehistoric and historic cultural resources within Corte Madera.

The earliest archaeological sites in the San Francisco Bay region date from approximately 4,000 to 7,000 years ago, when populations occupied areas near bayshore and marsh habitats. Archaeological sites dating between 1,500 to 1,700 years ago display an increasing complexity in artifact style. The Coast Miwok occupied the area now known as Corte Madera. Local prehistoric site findings include shell midden, petroglyphs, bedrock mortar, and other evidence of occupation. Indigenous populations within Corte Madera, disrupted by the Spanish Mission System, would most likely have been incorporated into the missions established in San Rafael, San Francisco, or Sonoma.

Under State guidelines (State Office of Historic Preservation), any building constructed more than 45 years ago could possibly be identified as an historic structure. According to the State Office of Historic Preservation's Historic Property Data File for Marin County, several historic properties within Corte Madera are listed in State and Federal inventories. Several of these identified historic resources are located within the Old Corte Madera Square area, including Holy Innocents Church, Moore's Hall, and Parkside Hotel.

3.18 GOALS, POLICIES, AND IMPLEMENTATION PROGRAMS FOR CULTURAL AND HISTORIC RESOURCES

GOAL RCS -11

Preservation and enhancement of historic resources within the community.

POLICY RCS-11.1

Preserve Corte Madera's historic resources through historic preservation programs.

Implementation Program RCS-11.1.a: Inventory Historic Resources

Develop an historic resources inventory, identifying buildings, sites, and other resources in the community.

Responsibility:	Planning and Building Department
Timeframe:	Four years
Resources:	General Plan Maintenance Fee

POLICY RCS-11.2

Protect historic sites and archaeological resources for their aesthetic, scientific, educational, and cultural values.

Implementation Program RCS-11.2.a: Development Project Review

Cultural resource studies (i.e., archaeological and historical investigations) shall be required for all applicable discretionary projects, in accordance with CEQA regulations, for areas not previously surveyed and/or that are sensitive for cultural resources. The studies should identify cultural resources, (prehistoric sites, historic sites, and historic buildings/structures) in the a project area, determine their eligibility for inclusion in the California Register of Historical Resources, and provide feasible and appropriate measures for the protection of any historical resources or unique archaeological resources to maximum extent feasible. Cultural resources studies should be completed by a professional archaeologist or architectural historian that meets the Secretary of the Interior's Professional Qualifications standards in archaeology.

Responsibility:	Planning and Building Department
Timeframe:	On-going
Resources:	Application Fees

3.0 RESOURCE CONSERVATION AND SUSTAINABILITY

Implementation Program RCS-11.2.b: Native American Cultural Resources

When initial review of proposed development projects indicates that known or potential undiscovered Native American cultural resources exist at the project site, consult with California Native American Tribes that have been identified by the Native American Heritage Commission per Government Code §65352.3. Consider recommendations from the Tribes regarding the location of cultural places, appropriate conservation measures, and the qualifications of archaeologists to conduct further investigations when additional research is required.

Where historic and cultural such resources are identified, measures shall be identified to avoid impact to the resource, where feasible. Where avoidance is not practical, mitigations shall identify how the impact may be minimized.

Responsibility:	Planning and Building Department
Timeframe:	On-going
Resources:	Application Fees

Implementation Program RCS-11.2.c: Native American Human Remains

When an initial study identifies the existence or likelihood of Native American remains within a project, the Town shall consult with the appropriate Native Americans as identified by the Native American Heritage Commission as provided in Public Resources Code §5097.98. The project applicant may develop an agreement with the appropriate Native Americans, as identified by the Native American Heritage Commission, for treating or disposing of, with appropriate dignity, the human remains and any items associated with Native American burials. In the event of the accidental discovery or recognition of human remains in a location other than a dedicated cemetery, procedures described in CEQA Guidelines section 15064.5(e) shall be followed including, when applicable, assisting the most likely Native American descendent in consultations with the landowner or other responsible person regarding the treatment or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code §5097.98.

Responsibility:	Planning and Building Department
Timeframe:	On-going
Resources:	Application Fees

Implementation Program RCS-11.2.d: Historic Integrity

Ensure the integrity of historic structures and the parcels on which they are located are preserved through the implementation of applicable design, building and fire codes.

Responsibility:	Planning and Building Department
Timeframe:	On-going
Resources:	Application Fees

3.0 RESOURCE CONSERVATION AND SUSTAINABILITY

Implementation Program RCS-11.2.e: Tax Relief for Cultural Resources

Utilize tax relief programs, such as the Mills Act, to encourage preservation of cultural resources.

Responsibility: Planning/Building & Finance Departments
Timeframe: On-going
Resources: General Fund

Implementation Program RCS-11.2.f: Native American Cultural Awareness

In consultation with the appropriate Native Americans as identified by the Native American Heritage Commission as provided in Public Resources Code §5097.98, prepare a brochure explaining property owners rights and responsibilities regarding Native American historic and cultural resources that may be discovered in the development process. Distribute the brochure to development applicants.

Responsibility: Planning & Building Department
Timeframe: On-going
Resources: General Fund

POLICY RCS-11.3

Protect paleontological resources

Implementation Program RCS-11.3.a: Paleontological Resources

Should any potentially unique paleontological resources (fossils) be encountered during development activities, work shall be halted immediately within 50 feet of the discovery, the Town of Corte Madera Planning Department shall be immediately notified, and a qualified paleontologist shall be retained to determine the significance of the discovery. Based on the significance of the discovery, the qualified paleontologist shall present options to the Town for protecting the resources. Appropriate action may include avoidance, preservation in place, excavation, documentation, and/or data recovery, and shall always include preparation of a written report documenting the find and describing steps taken to evaluate and protect significant resources. The Town will implement feasible and appropriate recommendations and mitigation measures of the qualified paleontologist for any unanticipated discoveries. Such measures may include avoidance, preservation in place, excavation, documentation, curation, data recovery or other appropriate measures.

Responsibility: Planning & Building Department
Timeframe: On-going
Resources: Application Fees