
5.0 – CUMULATIVE IMPACTS SUMMARY

This section summarizes the cumulative impacts associated with the proposed project using the same environmental issue areas as Section 4.0. Cumulative impacts are the result of combining the potential effects of the project (i.e., the General Plan Update) with other planned and foreseeable development projects.

5.1 INTRODUCTION

The California Environmental Quality Act (CEQA) requires that an Environmental Impact Report (EIR) contain an assessment of the cumulative impacts that could be associated with the proposed project. According to State CEQA Guidelines Section 15130(a), "an EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable." "Cumulatively considerable" means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects (as defined by Section 15130). As defined in State CEQA Guidelines Section 15355, a cumulative impact consists of an impact that is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts. A cumulative impact occurs from:

...the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

In addition, Section 15130(b) identifies that the following elements are necessary for an adequate cumulative analysis:

- 1) *Either:*
 - (A) *A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency; or,*
 - (B) *A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact. Any such planning document shall be referenced and made available to the public at a location specified by the lead agency.*
- 2) *A definition of the geographic scope of the area affected by the cumulative effect and a reasonable explanation for the geographic limitation used;*
- 3) *A summary of the expected environmental effects to be produced by those projects with specific reference to additional information stating where that information is available; and*
- 4) *A reasonable analysis of the cumulative impacts of the relevant projects. An EIR shall examine reasonable, feasible options for mitigating or avoiding the project's contribution to any significant cumulative effects.*

Where a lead agency is examining a project with an incremental effect that is not "cumulatively considerable," a lead agency need not consider that effect significant, but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable.

5.0 CUMULATIVE IMPACTS

5.2 CUMULATIVE SETTING

A general description of the cumulative setting is provided in Section 4.0 (Introduction to the Environmental Analysis and Assumptions Used) as well as **Table 4.0-1** and **Figure 4.0-1**. In addition, each environmental issue area evaluated in the Draft EIR identifies its own cumulative setting (see Sections 4.1 through 4.12).

5.3 CUMULATIVE IMPACTS ANALYSIS

Identified below is a summary of the cumulative impacts from Sections 4.1 through 4.12 that would result from the implementation of the project and future development in the vicinity. The reader is referred to Sections 4.1 through 4.12 for a further discussion of these cumulative impacts.

SECTION 4.1 LAND USE

Consistency with Relevant Planning Documents/Land Use Conflicts

Impact 4.1.3 Implementation of the proposed General Plan could impact land use plans or study areas outside of the city limits, but within the Planning Area. This is a **less than cumulatively considerable** impact.

Unincorporated areas of Marin County are regulated by the Marin Countywide Plan. The Corte Madera Sphere of Influence encompasses portions of unincorporated Marin County in the Ring Mountain area at the southern boundary of the Town. The General Plan Update does not propose any development within Ring Mountain, but rather designates the area as open space, thereby maintaining consistency with the Countywide Plan. In addition, areas located adjacent to the Town boundaries would remain as open space or residential, compatible with adjacent uses in neighboring Mill Valley, Larkspur, and Tiburon. Likewise, cumulative development in these communities would not cause land use conflicts with the proposed General Plan Update as proposed projects (see Table 4.0-1) are not located near the Corte Madera Town limits nor would they cause significant land use changes. Therefore, conflicts created by the implementation of the proposed General Plan Update would be **less than cumulatively considerable**.

SECTION 4.2 POPULATION AND HOUSING

Cumulative Population and Housing Increases

Impact 4.2.3 Buildout under the proposed General Plan Land Use Map would include population and housing increases which would not exceed ABAG projections for the Plan area. This is considered a **less than cumulatively considerable** impact.

Implementation of the General Plan Update would allow for an increase in population and housing units in the Town of Corte Madera. General Plan policies and associated implementation programs would aid in the reduction of impacts to the environment. Additionally, implementation of the General Plan Update would not allow for substantial increase in housing above ABAG growth and population projections. Therefore, this impact is considered **less than cumulatively considerable**.

SECTION 4.3 HUMAN HEALTH/RISK OF UPSET

Cumulative Hazard Impacts

Impact 4.3.4 Land use and infill development under the proposed General Plan would not result in cumulative hazardous materials and human health risk impacts. This would be **less than cumulatively considerable**.

With the exception of wildland fire hazards, potential exposure or generation of hazardous conditions in the Town is site-specific rather than associated with the combination of other hazards in the region to result in a significant effect. Implementation of policies and mitigation measures identified under Impacts 4.3.1 through 4.3.3 would address site-specific hazards associated site-specific hazards, and emergency access and operation. Anticipated development projects (e.g., residential, commercial, park, and recreational land uses) that would occur under the proposed General Plan and the Community Plan areas, would include, but not be limited to, public and utility extension projects, roadway widenings, intersection improvements, and trail extensions. These proposed land uses would not significantly increase human health or safety risks. This impact is considered **less than cumulatively considerable** with the implementation of General Plan policy provisions and mitigation measures identified for fire hazards, emergency operations, and identification of hazardous materials and contamination before site development.

SECTION 4.4 TRANSPORTATION AND CIRCULATION

Cumulative Traffic Impacts on Freeway Operations

Impact 4.4.5 Implementation of the proposed General Plan would result in increased motor vehicle traffic, which would result in unacceptable level of service (LOS) on Highway 101. This impact is considered **cumulatively considerable**.

Widening of northbound Highway 101 from three to four mixed flow lanes (in addition to one HOV lane) from the Tamalpais Drive to Sir Francis Drake Boulevard interchanges would expand roadway capacity from 7,700 to 9,900 vehicles per hour between Tamalpais Drive and Industrial Way and from 8,800 to 11,000 vehicles per hour north of Industrial Way, thus providing acceptable operations. However, this roadway improvement is neither planned nor funded. Though a number of General Plan policies and programs would help reduce traffic congestion on Highway 101, they would not reduce this impact to a less-than-significant level. Therefore, this impact is considered **cumulatively considerable** and **significant and unavoidable**.

SECTION 4.5 AIR QUALITY

Potential Increase in Long-Term Atmospheric Greenhouse Gas Emissions

Impact 4.5.5 Implementation of the proposed General Plan Update would contribute to an increase in greenhouse gas (GHG) emissions from vehicle transportation and building energy use and may contribute to increases in atmospheric GHG

5.0 CUMULATIVE IMPACTS

concentrations. Higher concentrations of GHGs have been linked to the phenomenon of climate change. This impact would be **cumulatively considerable**.

While implementation of General Plan Update Resource Conservation policy provisions would provide feasible measures to reduce greenhouse gas emissions, there are no measures currently available to fully offset greenhouse gas emissions. Thus, this impact is considered **cumulatively considerable** and a **significant and unavoidable** impact.

Regional Air Plan Impacts

Impact 4.5.6 Implementation of the proposed General Plan would exacerbate existing regional problems with ozone and particulate matter and could conflict with BAAQMD air quality improvement efforts (e.g., Clean Air Plan, BAAQMD thresholds). This would be a **cumulatively considerable** regional air quality impact.

Implementation of the Resource Conservation Element policy provisions and the policy provisions used under Impact 4.4.1 in Draft EIR Section 4.4, Transportation and Circulation, that provide transportation control measures generally consistent with the BAAQMD CAP would assist in reducing emissions from growth in the Town and would ensure that all relevant and feasible TCMs from the 2005 Ozone Strategy are implemented. Mitigation measure MM 4.5.6 provides for the adoption of additional policies to support the implementation of TCMs #17, 18, and 20. However, these mitigation measures are not expected to completely offset anticipated increases in vehicle miles traveled or air pollutant emissions from the proposed General Plan Update. Thus, this impact is considered **cumulatively considerable** and **significant and unavoidable significant** for the proposed General Plan Update. No additional feasible mitigation is available to completely mitigate this impact.

SECTION 4.6 NOISE

Cumulative Traffic Noise Conflicts

Impact 4.6.4 Implementation of the proposed General Plan along with potential development of the Planning Area could result in increased traffic noise conflicts. This impact would be considered **cumulatively considerable**.

Implementation of the above policy provisions would assist in reducing traffic noise exposure impacts. However, the placement of noise barriers in residential areas (e.g., walls and berming) may be considered inconsistent and infeasible with the fundamental principles of the General Plan Update. Also, there are areas in the Town where residential lots front the roadway (e.g., Tamalpais Drive – see **Table 4.6-7** in Section 4.6, Noise, of this DEIR) and make it infeasible to provide an effective noise barrier given the need to maintain driveway access. Therefore, despite the proposed policy provisions described in this section, potential traffic noise increases would be considered **significant and unavoidable**, and the project's contribution would be considered **cumulatively considerable**.

SECTION 4.7 GEOLOGY

Impact 4.7.8 Implementation of the proposed General Plan along with potential development in the region could result in cumulative impacts to geologic and seismic hazards. This impact is considered **less than cumulatively considerable**.

Implementation of above policy provisions, in addition to the provisions of the UBC and CBC, would reduce the potential hazards associated with seismic ground shaking and ground failure. During small and moderate seismic events, the impacts of seismic ground shaking would be reduced to **less than cumulatively considerable** for new development and redevelopment consistent with the General Plan Update. These measures would require specific standards for the location and development of residential and other uses that are in close proximity to known active seismic faults.

SECTION 4.8 HYDROLOGY

Cumulative Water Quality Impacts

Impact 4.8.3 Land uses and growth under the proposed General Plan Update, in combination with current land uses in the surrounding Cities of Larkspur and Mill Valley and the Town of Tiburon and land use activities and development of the cities and other agencies in the County, could introduce additional non-point source pollutants to surface waters. This impact would be **cumulatively considerable**.

Implementation of policy provisions and mitigation measures under mitigation measure MM 4.8.1, as well as compliance with the Town's Grading and Drainage Ordinance would reduce the Town's contribution to cumulative water quality impact to a **less than cumulatively considerable** level. This impact is mitigated through the use of effective BMPs that include site preparation, runoff control, sediment retention, and other similar features. The effectiveness of BMPs has been recognized in the California Stormwater Quality Association, California Stormwater Best Management Practice Handbooks.

Cumulative Flood Hazards

Impact 4.8.4 Implementation of the proposed General Plan Update could increase impervious surfaces and alter drainage conditions and rates in the Planning Area, which could contribute to cumulative flood conditions in the Corte Madera Creek and San Clemente Creek. This impact is considered **cumulatively considerable**.

Implementation of various General Plan policy provisions and their associated implementation programs and mitigation measures from Impact 4.8.2 would help to reduce flood, tidal inundation, sea level rise, and drainage impacts in Corte Madera. The proposed policy provisions for flooding and tidal inundation would require new development and remodeling proposals in areas subject to flooding to provide a minimum flood protection level equal to a 100-year storm event, aggressively pursue sources of state and federal

5.0 CUMULATIVE IMPACTS

funding, and establish and maintain an effective emergency response program that anticipates the potential for disasters. Thus, implementation of the proposed General Plan Update policy provisions and mitigation measures and continued implementation of Municipal Code standards for flood protection would reduce this impact to **less than cumulatively considerable**.

SECTION 4.9 BIOLOGY

Cumulative Impacts on Biological Resources

Impact 4.9.5 The proposed project in combination with other reasonably foreseeable projects would result in direct mortality and loss of habitat for special-status species, wetlands, and waters of the U.S. Therefore, this impact is considered **cumulatively considerable**.

Implementation of the General Plan policies and mitigation measures under Impacts 4.9.1 through 4.9.4 associated with the impacts described above will result in a **less than cumulatively considerable** contribution to the cumulative impacts by mitigating the Town's contribution to impacts to special-status species and sensitive habitats. The Town is largely built out and remaining development potential would not constitute substantial conversion of natural habitat conditions.

SECTION 4.10 CULTURAL AND PALEONTOLOGICAL RESOURCES

Cumulative Impacts on Prehistoric Resources, Historic Resources, and Human Remains

Impact 4.10.4 Implementation of the proposed project, in addition to existing, approved, proposed, and foreseeable development in the region, could result in cumulative impacts to cultural resources in the region. This would be **cumulatively considerable**.

Implementation of the proposed project, in combination with cumulative development in the Town of Corte Madera and the surrounding region would increase the potential to disturb known and undiscovered cultural resources. Implementation of mitigation measures MM 4.10.1 and MM 4.10.3 and policy provisions would reduce the project's contribution to cumulative impacts to cultural resources (i.e., prehistoric sites, historic sites, and isolated artifacts and features) and human remains to **less than cumulatively considerable**.

Cumulative Impacts on Paleontological Resources

Impact 4.10.5 Implementation of the proposed project, in addition to existing, approved, proposed and reasonably foreseeable development in the region, could result in cumulative impacts to paleontological resources in the region. This would be **cumulatively considerable**.

Implementation of mitigation measure MM 4.10.3 would reduce the proposed project's contribution to cumulative impacts to paleontological resources to a **less than cumulatively considerable** level.

SECTION 4.11 PUBLIC SERVICES

Cumulative Fire Protection and Emergency Medical Services

Impact 4.12.1.2 Implementation of the proposed General Plan Update along with potential development in the surrounding area could contribute to the cumulative demand for fire protection and emergency medical services. This impact is considered **less than cumulatively considerable**.

Implementation of General Plan policy provisions, which include mutual aid agreements with surrounding communities, and the continued funding from property taxes, developer fees, and other alternative sources of funding would provide sufficient resources to serve the projected needs of the Corte Madera Fire Department under buildout conditions, including future development within the Community Plan areas. Individual development projects would be subject to Corte Madera Fire Department review and approval. Therefore, the cumulative fire protection and emergency medical services demand increases in the Town would be offset and would result in a **less than cumulatively considerable** impact.

Cumulative Law Enforcement Impacts

Impact 4.12.2.2 Implementation of the proposed General Plan Update along with potential development in the surrounding area could result in the increase of the demand for cumulative law enforcement services. This is considered a **less than cumulatively considerable** impact.

Implementation of Land Use policy provisions in the proposed General Plan would ensure that adequate response times and high-quality law enforcement services are maintained within the Town of Corte Madera. The Twin Cities Police Authority receives funding from the General Fund, which is expected to grow as a result of further development in the Town. In addition, Marin County has established an Emergency Operations Plan in compliance with the State OES SEMS program to address regional emergency disasters. As such, cumulative development would provide additional funding sources for the provision of law enforcement services. Individual development projects would be subject to Twin Cities Police Authority review and approval. Therefore, the cumulative law enforcement impact would be **less than cumulatively considerable**.

Cumulative Public School Impacts

Impact 4.12.3.2 Implementation of the proposed General Plan Update as well as potential development in the surrounding area could result in cumulative public school impacts. This impact is considered **less than cumulatively considerable**.

Implementation of General Plan Land Use policies and payment of required impact fees would ensure that long-term facility needs and funding for future school facilities would be maintained for the three school districts serving the Town of Corte Madera. Therefore, the cumulative public school impact would be **less than cumulatively considerable**.

5.0 CUMULATIVE IMPACTS

Cumulative Effects of Increased Water Demand

Impact 4.11.4.2 Implementation of the proposed General Plan Update along with growth in the MMWD service area would result in cumulative waste supply impacts. This impact would be **cumulatively considerable**.

Implementation of General Plan policy provisions and mitigation measures under Impact 4.11.4.1 would require verification of adequate water supply and utilization of conservation measures, and encourage the use of recycled water and drought-resistant landscaping to reduce water supply impacts. The Marin Municipal Water District currently has water supply shortages for multiple dry years for Marin County. Several projects are under consideration for mitigating these shortfalls, including the desalination plant. However, not all of these projects have been approved or fully developed to ensure a reliable water source for future drought years. As noted in Section 4.12 (Public Services), the proposed MMWD desalination project would result in significant and unavoidable environmental effects associated with visual resources and construction noise.

In addition, implementation of mitigation measure MM 4.11.4.1 could curtail further development in the Town. The environmental effects of a curtailment of development in the Town could result in the reduction of anticipated property and sales tax revenues that could impact Town services that rely on the General Fund. Such curtailment could also result in potential conflicts for the Town in meeting state-required affordable housing provisions. In addition, the scarcity of water supply could result in the curtailment of development in Marin County and associated cities that receive water supplies from the District. These communities may also see indirect environmental effects from reduced revenue sources on planned infrastructure improvements from reduced development, as well as potential conflicts with meeting state-required affordable housing provisions. Thus, this impact would be considered **significant and unavoidable**.

Cumulative Wastewater Demands

Impact 4.11.4.2 Implementation of the proposed General Plan Update along with growth in the Sanitary District #2 and the CMSA service area would result in cumulative wastewater impacts. This is considered a **less than cumulatively considerable** impact.

Implementation of proposed General Plan Update Land Use policy provisions would reduce any potential cumulative wastewater treatment impacts to a **less than cumulatively considerable** level..

Cumulative Solid Waste Impacts

Impact 4.12.6.2 Implementation of the proposed General Plan Update along with potential development in surrounding communities would result in cumulative solid waste impacts. This impact is considered **less than cumulatively considerable**.

Implementation of Resource Conservation and Sustainability policy provisions proposed in the General Plan Update would reduce any potential cumulative solid waste impacts to a **less than cumulatively considerable** level.

Cumulative Electrical, Telephone and Natural Gas Impacts

Impact 4.12.7.2 Implementation of the proposed General Plan Update along with potential development in the surrounding region would result in cumulative electric, telephone, and natural gas service impacts. This impact is considered **less than cumulatively considerable**.

Implementation of proposed General Plan Update policy provisions would reduce any potential cumulative utility services impacts to a **less than cumulatively considerable** level.

Cumulative Parks and Recreation Demands

Impact 4.12.6.2 Implementation of the proposed General Plan Update along with potential development in the surrounding region would result in cumulative park and recreation impacts. These impacts are considered **less than cumulatively considerable**.

With the implementation of the Quimby Act, the dedication of parkland acres for larger project, payment of in-lieu fees, and implementation of related policy provisions would reduce the cumulative parks and recreation impacts to **less than cumulatively considerable**.

SECTION 4.12 VISUAL AND AESTHETICS

Cumulative Impacts to Visual Resources

Impact 4.12.4 Implementation of the proposed General Plan Update would not result in the significant conversion of the Town's open space and visual resources. This is considered a **less than cumulatively considerable** impact.

Implementation of policies and mitigation measures identified under Impacts 4.12.1 through 4.12.2 would ensure that land use activities under the proposed General Plan Update would avoid significant impacts to visual resources and alteration of visual character. This is considered a **less than cumulatively considerable** impact.