

CHAPTER 8

Environmental and Air Quality Review

Transportation investments have the potential to impact the environment both positively and negatively. The 2040 RTP is extensively evaluated for its potential impacts as part of the required California Environmental Quality Act (CEQA) environmental review. The evaluation provides an understanding of the tradeoffs between transportation and environmental impacts. This comprehensive analysis not only reflects the RTC's diligence in meeting state requirements, but also the long standing interest from the Santa Cruz County community in preserving natural resources.

CEQA Required Environmental Review

Environmental review of the 2040 Regional Transportation Plan (RTP) evaluates the potential environmental effects of implementing the 2040 RTP, including alternative transportation investment scenarios, and identifies potential mitigation measures. Recognizing an opportunity to achieve efficiencies, the Santa Cruz County Regional Transportation Commission, the Association of Monterey Bay Area Governments (AMBAG), the Transportation Agency for Monterey County, and the San Benito County Council of Governments decided to merge their environmental analysis for their respective RTPs and the Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS). The potential environmental impacts of each plan are collectively detailed in one Environmental Impact Report (EIR) for the 2040 MTP/SCS, which encompasses the three RTPs (Santa Cruz, Monterey and San Benito Counties). The EIR can be found on AMBAG's website (<http://www.ambag.org>).

As a programmatic document, the 2040 MTP-SCS Environmental Impact Report presents a region-wide assessment of the impacts of the proposed 2040 MTP-SCS. The intent of a program-level EIR is to focus, in general terms, on the probable regional environmental effects that can be identified at this point in time that are associated with the implementation of the plans. The 2040 MTP-SCS EIR does not analyze impacts of individual projects. Projects will undergo a separate environmental review process, conducted by the agency sponsor, once the project is ready to be implemented.

AMBAG, as the lead agency for the 2040 MTP/SCS EIR, which includes environmental review of the Santa Cruz County 2040 RTP, will hold a 55-day public review period to receive comments on the draft EIR. The EIR is widely circulated and reviewed by RTC advisory committees representing project sponsors and transportation stakeholders; representatives of State and Federal governmental agencies; representatives of special interest groups; representatives of the private business sector; and residents of Santa Cruz County consistent with the region's public participation plan.

Biological and Natural Resources

Santa Cruz County is home to a diverse mix of habitats and species including coastal oak woodland, second growth redwood, coastal scrubs, Central California Coast coho salmon, Central California Coast steelhead and California red-legged frog. The rivers, watershed and drainages within Santa Cruz County, including the San Lorenzo River and the Pajaro River, drain into the Monterey Bay National Marine Sanctuary and are of biological importance as they provide valuable habitat for a variety of species and local water supplies. Farmlands, rangelands and timberlands made-up of fruit crops, nursery crops, vegetable crops, field crops, livestock and timber, are important natural resources located in Santa Cruz County and are economic generators. The transportation system can support access to these unique resources and transportation investments can benefit and/or create challenges for biological and natural resources. The 2040 RTP goals and policies consider how well transportation investments benefit the natural environment. A detailed description of biological resources and natural resources and potential impacts is described in detail in the 2040 MTP/SCS EIR.

Cultural Resources

Prehistoric, paleontological and other historical resources and landscapes with significance to a group of people generally make up the cultural resources present in Santa Cruz County. Cultural resources in Santa Cruz County include, but are not limited to fossils, indigenous people sites, trees and historic structures such as residences, villas, businesses, and churches. Many cultural resources in Santa Cruz County are known and identified as National Register listings, California State Landmarks or as Points of Historical Interest. It is also possible that other cultural resources have not yet been identified. Cultural resources are non-renewable and recognition of these resources supports a greater understanding of Santa Cruz County's past. Transportation planning efforts can avoid conflict with cultural resources through recognition of their importance. New transportation investments are subject to laws and regulations related to cultural resources. A detailed description of cultural and potential impacts is described in detail in the 2040 MTP/SCS EIR.

Environmental Mitigation



In order to minimize the impacts of transportation projects on the environment, mitigation activities may be necessary to avoid, minimize or compensate for potential impacts to environmental resources. As appropriate, mitigation measures will be identified for potential environmental impacts and described in detail in the 2040 MTP-SCS EIR, which encompasses the three RTPs (Santa Cruz, Monterey and San Benito Counties). Mitigation measures may include, requiring

project sponsors to: survey a project site to determine the presence of environmental resources;

development of an environmental resource management plans for the impacted area; include specific project elements or design features such as landscaping, construction of sound walls or the location of ground disturbance and setbacks; include specific construction activities such as watering active construction areas, fencing off designated areas and use of alternative fuel or electric construction vehicles; limit construction time periods by month, time of day or weather conditions; include compensatory measures such as tree or plant replacement at a defined ratio for replanting and removal.

Regional Mitigation

Regional mitigation efforts, rather than the traditional project-specific mitigation, can improve the quantity and quality of habitat by conserving larger, scarce, multi-resource ecosystems and increase habitat connectivity. Whereas traditional project-specific mitigation typically prioritizes on-site mitigation, regional mitigation prioritizes improvements by overall effectiveness, which can lead to compensatory off-site mitigation. Furthermore, regional mitigation programs frequently result in a coordinated effort to protect larger areas as opposed to buying land in small pieces to satisfy mitigation requirements project by project. Regional mitigation can be particularly effective in developing and maintaining wildlife corridors. Wildlife corridors connect like habitats in order to facilitate the movement of certain species to allow the exchange between individual populations and reestablishment after changes to a specific geographic area.

Habitat Conservation Plans and other conservation planning efforts, such as the Conservation Blueprint, developed by the Land Trust of Santa Cruz County, and the Wildlife Habitat Connectivity GIS database, developed by Caltrans and partner agencies, support regional mitigation and can serve as a resource for future mitigation plans in Santa Cruz County. These resources can be used to determine where future mitigation efforts associated with transportation projects identified in the RTP may be required and potential areas for regional mitigation. The Conservation Blueprint identifies Priority Multi-Benefit Areas, which are areas within Santa Cruz County that are most likely to provide benefits across vital aspects of conservation—biodiversity, water resources, working lands, recreation and healthy communities and Conservation Land Networks which collectively safeguards the county’s biodiversity. The Priority Multi-Benefit Areas are locations which may be considered in future regional mitigation planning programs.

In 2011, the Santa Cruz County Regional Transportation Commission participated in a regional mitigation effort to restore and improve critical wetland habitat in Watsonville Sloughs. The RTC funded restoration of 1.5 acres of wetlands as part of a larger effort by City of Watsonville, the Resource Conservation District of Santa Cruz County, and Federal, State and local natural resource agencies to restore and conserve habitat for a variety of rare local wildlife and plant species.

Advanced Mitigation

A key piece of regional mitigation efforts as identified by the Federal Transportation Act, is determining the locations of ecological importance and other environmental features in advance of pursuing transportation projects. Knowing in advance locations where impacts to species, habitat types, and other important ecological functions could be best offset within the region and establishing a range of mitigation options, should mitigation be necessary, facilitates regional mitigation. Advance planning is an effective way for incorporating natural resource considerations into transportation planning by facilitating early coordination and consultation with resource agencies, and increasing opportunities for identifying specific sensitive areas, and effective regional mitigation measures. In partnership with multiple federal, state, and local resource agencies, Caltrans, the Resource Conservation District, Santa

Cruz County, and the Santa Cruz County Regional Transportation Commission, a Memorandum of Understanding has been executed which will create an advance mitigation planning framework for transportation projects countywide. The advance mitigation process is designed to encourage broader stakeholder participation, expedite delivery of transportation projects, provide more cost-effective use of public funds, and focus on addressing critical conservation priorities.

The RTC is pioneering improved ways for early planning of mitigation for transportation improvements. This can be demonstrated by recent efforts to provide \$5 million in funds through Measure D for construction of a wildlife crossing under Highway 17. The Highway 17 wildlife crossing is a partnership between Caltrans, the Land Trust of Santa Cruz County and the Santa Cruz County Regional Transportation Commission. Caltrans will be constructing a wildlife undercrossing under Highway 17 near Laurel Curve to allow safe passage for wildlife. The wildlife crossing connects two core habitat areas that the Land Trust has protected from development. The Land Trust has solicited donations for land acquisition and construction of this project. Mitigation credits will be generated by the Highway 17 Wildlife Connectivity Project that can be used by future transportation projects for specified mitigation purposes.

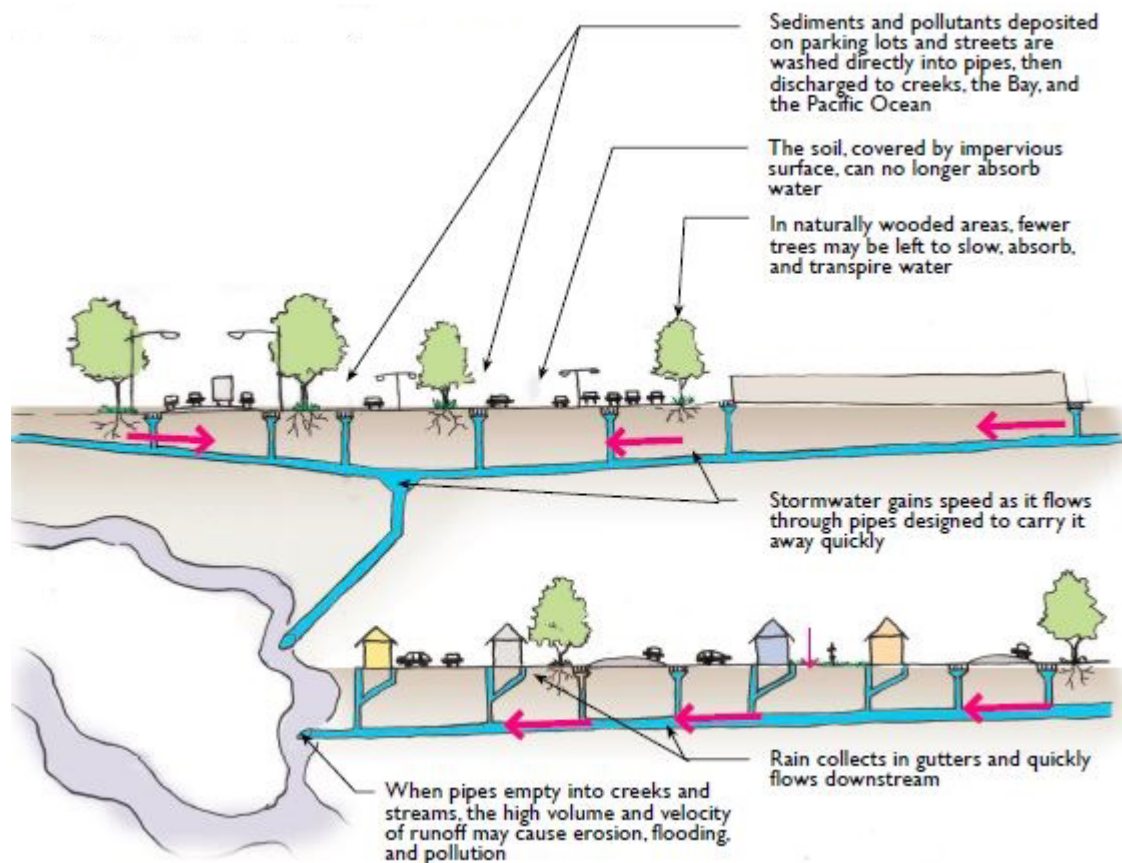
The RTC is also working closely with Caltrans, the Resource Conservation District, County of Santa Cruz and natural resource agencies on the Scott Creek Lagoon Restoration and bridge replacement project. While Caltrans has slated the Scott Creek Bridge for replacement, natural resource and permitting agencies have expressed a need for substantial habitat restoration at the site. In 2013, Caltrans, the Regional Transportation Commission, the County of Santa Cruz, and the Resource Conservation District entered into an agreement to consider lagoon restoration and bridge design options. A technical advisory committee made-up of United States Army Corps of Engineers, National Marine Fisheries Service, United States Fish and Wildlife Service, National Oceanographic and Atmospheric Administration, Regional Water Quality Control Board, California Coastal Commission, the California Coastal Conservancy and the Nature Conservancy has been established to provide input on design concepts. By collaborating at an early stage of the project, participants can work together to identify the best options for transportation, environmental benefits and cost, and identify potential funding sources for the project.

Mitigation banking, in-lieu of fees program, and conservation banking are strategies that allow for advanced, regional and/or multiple-project mitigation to occur in a designated area. For example, agencies may acquire, in coordination with resource agencies and local jurisdictions, resource conservation areas as a bank for off-site mitigation of RTP transportation projects. Zayante Sandhill's conservation bank is the only conservation bank established in Santa Cruz County. The region may consider supporting the development of additional site specific mitigation banks or developing an umbrella mitigation bank which could include multiple bank sites. The 2040 RTP addresses the need for advanced mitigation with inclusion of an Environmental Mitigation Program (EMP) which is intended to make funds available to protect, preserve, and restore native habitat that are disturbed by construction of transportation projects listed in RTC's RTP. EMP funds could be for uses such as, purchasing land prior to project development to bank for future mitigation needs, funding habitat improvements in advance of project development to leverage and enhance investments by partner agencies.

Stormwater

Impervious surfaces in developed areas, such as pavement, prevent precipitation from naturally soaking into the ground. Instead, the rainwater washes into storm drains that lead directly to streams, rivers and coastal areas. The most significant impacts of this traditional design are pollutants that are washed

directly into water bodies; a greater degree of erosion and flooding occur as a result of increased water volumes and flow speeds if there is no mechanism to slow or divert water; and groundwater aquifers are not replenished from storm water runoff.



Addressing stormwater requirements associated with transportation projects can be very costly and can range between 2%-55% of project costs. Jurisdictions are developing systems to improve tracking of stormwater requirement related costs to provide more accurate cost estimates.

Design features intended to manage rainfall and mitigate stormwater impacts are commonly referred to as “low impact design”. The goals of low impact design include improved filtration and reductions in flow and volume by mimicking the natural hydrologic function of healthy ecosystems in street landscapes. Examples of design features which reduce flow, volume and increase filtration include vegetated swales, infiltration and flow through planters, rain gardens, landscaped areas, streets trees, pervious pavement, infiltration trenches and dry wells, and vegetated buffer strips.

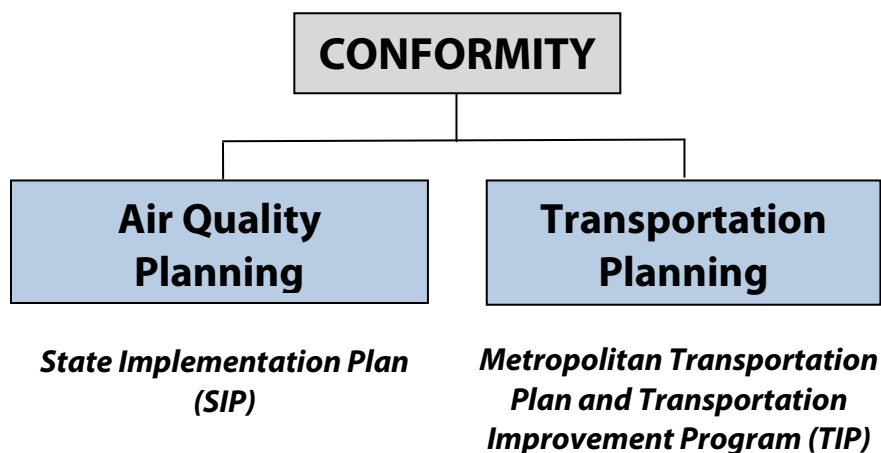
In the future, water quality and stormwater flows may be incorporated into the RTP’s analysis of a sustainable transportation system. The Sustainable Transportation Analysis and Rating System (STARS) tool utilized by the RTC in development of the goals, policies and targets of the 2040 RTP is structured to allow for measures of water quality and stormwater runoff as indicators of ecological function.

Greenhouse Gas Emissions

The Santa Cruz County Regional Transportation Commission is taking a proactive approach towards identifying strategies for reducing greenhouse gases in the 2040 RTP. In addition to the analysis of greenhouse gas emission impacts included in the 2040 MTP/SCS EIR, the Santa Cruz County RTC voluntarily incorporated greenhouse gas emission reduction targets into the performance analysis of the RTP. Please refer to Chapter 7 for a more detailed discussion of the GHG performance analysis of the 2040 RTP.

Air Quality Conformity

The North Central Coast Air Basin (NCCAB) is made up of Santa Cruz, Monterey, and San Benito Counties. The NCCAB is defined as a federal air quality “maintenance area” because it currently meets federal air quality requirements, but previously did not. Federal air quality rules set forth by the Clean Air Act require that transportation activities are consistent with federally mandated air quality plans pertaining to on-road mobile sources (i.e. cars, trucks, buses, commuter rail, and motorcycles) as defined in the State Implementation Plan. As the designated Metropolitan Planning Organization within the region, the Association of Monterey Bay Area Governments (AMBAG) is responsible for conformity findings for transportation plans covering areas within the NCCAB.



The three county region (or NCCAB) has achieved federal-air quality conformity since 2005 for all criteria pollutants including carbon monoxide (CO), nitrogen dioxide (NO₂), particulate matter (PM), lead (Pb), and sulfur dioxide (SO₂), in addition to ozone (O₃). For the RTP to be in conformity, the total emissions projected for the RTP are within the on-road mobile source emissions limits (“budgets”) established by the State Implementation Plan. Since the region now qualifies as being in attainment, the region is no longer beholden to conformity analysis of its plans and programs and as such is no longer eligible to receive federal Congestion Mitigation and Air Quality (CMAQ) Improvement Program funds. However, several projects in the 2040 RTP implement the Air District’s approved Transportation Control Measures (TCM’s) for the region, which are developed to reduce transportation-related emissions by reducing vehicle use or improving traffic flow.