4.2.1 INTRODUCTION

This section evaluates potential air quality effects associated with implementation of PLAN Hermosa.

NOP Comments: In response to the Notice of Preparation (NOP), one comment relevant to air quality was received from the South Coast Air Quality Management District (SCAQMD) (see **Appendix B**). The comment was focused on ensuring that the air quality analysis for PLAN Hermosa uses region-specific and up-to-date air quality modeling methodologies to evaluate the plan's impact on air quality. These comments and the SCAQMD's guidelines for analyzing air quality impacts have been incorporated in this analysis.

Reference Information: Information for this resource chapter is based on numerous sources, including the Air Quality Technical Background Report (TBR), transportation analysis of existing conditions and modeling of future conditions, and other publicly available documents. The TBR is attached as **Appendix C-4**.

4.2.2 ENVIRONMENTAL SETTING

Appendix C-4 describes the natural factors (i.e., topography, climate, and meteorology) that affect air quality in the region; current regional air quality conditions in the project area; and the federal, state, and local air quality regulatory framework. A summary of that information is included below.

NATURAL FACTORS

Hermosa Beach is a beachfront city located in the South Coast Air Basin, and the SCAQMD is the air pollution control district responsible for comprehensive air pollution control in the basin. The basin lies in the semi-permanent high-pressure zone of the eastern Pacific Ocean, resulting in a mild climate tempered by cool sea breezes with light average wind speeds. The usually mild climatological pattern is interrupted occasionally by periods of extremely hot weather, winter storms, or Santa Ana winds. Winds in the planning area are usually driven by the dominant land/sea breeze circulation system. Vertical dispersion of air pollutants in the air basin is hampered by the presence of persistent temperature inversions, which restrict the vertical dispersion of air pollutants released into the marine layer and, together with strong sunlight, can produce worst-case conditions for the formation of photochemical smog.

CRITERIA AIR POLLUTANTS

The California Air Resources Board (CARB) and the US Environmental Protection Agency (EPA) currently focus on the following criteria air pollutants as indicators of ambient air quality: ozone, particulate matter (PM_{10} and $PM_{2.5}$), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and lead.

Ozone is a photochemical oxidant and the primary component of smog. It is formed through complex chemical reactions between precursor emissions of reactive organic gases (ROG) and oxides of nitrogen (NO_x) in the presence of sunlight. Elevated levels of ozone can cause irritation to lungs and breathing passages, as well as coughing and pain in the chest and throat, thereby increasing susceptibility to respiratory infections and reducing the ability to exercise. Effects are more severe in people with asthma and other respiratory ailments. Long-term exposure may lead to scarring of lung tissue and may lower lung efficiency. Hermosa Beach is located in both a federal and state nonattainment area for ozone, as local air quality conditions exceed the federal 8-hour ozone standard and the state 1-hour and 8-hour ozone standards.

CURRENT REGIONAL AIR QUALITY CONDITIONS

Hermosa Beach is located in both a federal and state nonattainment area for $PM_{2.5}$ and a state nonattainment area for PM_{10}. The human body naturally prevents the entry of larger particles into the body. However, small particles, with an aerodynamic diameter equal to or less than 10 microns (i.e., PM_{10}) and even smaller particles with an aerodynamic diameter equal to or less than 2.5 microns (i.e., $PM_{2.5}$), can enter the body and are trapped in the nose, throat, and upper respiratory tract. These small particulates could potentially aggravate existing heart and lung diseases, change the body's defenses against inhaled materials, and damage lung tissue. The elderly, children, and those with chronic lung or heart disease are most sensitive to PM_{10} and $PM_{2.5}$. Lung impairment can persist for several weeks after exposure to high levels of particulate matter. Some types of particulates could become toxic after inhalation due to the presence of certain chemicals on or mixed with the particulates and the chemicals' reaction with internal body fluids.

The city is located in an area that meets both federal and state CO standards as well as federal and state SO_2 standards. However, Hermosa Beach is located in a federal nonattainment area for NO_2. Nitrogen dioxide acts as an acute irritant and, in equal concentrations, is more injurious than nitric oxide.

Diesel particulate matter (diesel PM) emissions are estimated to be 11,074 tons per year for the South Coast Air Basin. In Los Angeles County, the estimated health risk from diesel PM was 951 excess cancer cases per million people in 2005. Sources of diesel PM in the planning area include freeways, arterial roadways, and railways, as well as minor sources such as off-road construction equipment, portable and backup diesel generators and pumps, and other heavy- and light-duty equipment. Other toxic air contaminant (TAC) sources in Hermosa Beach include gasoline stations, auto body shops, restaurants, dry cleaners, and some commercial and light industrial uses. The city does not contain any major sources of air pollutants that will result in unacceptable air quality impacts to residents.

The city does not contain any large sources of odors. Minor sources such as paint booths, auto body repair, and other light industrial sources may exist in Hermosa Beach. Other temporary sources of odors may include construction activities such as painting and asphalt paving.

4.2.3 REGULATORY SETTING

Federal, state, and local plans, policies, laws, and regulations provide a framework for addressing aspects of air quality that would be affected by implementation of PLAN Hermosa. The regulatory setting for air quality is discussed in detail in **Appendix C-4**. A summary of that information as it relates to the impact analysis is provided below.

- **Fugitive Dust:** The SCAQMD requires all projects in the air basin to implement Rule 403 (Fugitive Dust), Rule 401 (Visible Dust), and Rule 1113 (Architectural Coatings) during construction activities.
- **Nuisance:** The SCAQMD requires all projects to comply with Rule 402 (Nuisance) during both construction and operational activities.
- **CAAQS:** The region is nonattainment for California ambient air quality standards (CAAQS) for ozone, particulate matter with aerodynamic diameter less than 10 microns (PM_{10}), particulate matter with aerodynamic diameter less than 2.5 microns ($PM_{2.5}$), and nitrogen dioxide (NO_2). The region is nonattainment for national ambient air quality standards (NAAQS) for ozone, PM_{10}, and $PM_{2.5}$.

- **Land Use:** CARB (2005) developed the *Air Quality and Land Use Handbook: A Community Health Perspective* to guide the siting and design of new land uses in order to avoid exposing sensitive receptors to toxic air contaminant emissions. Sensitive receptors are people that have an increased sensitivity to air pollution or environmental contaminants. Sensitive receptor locations include schools, parks and playgrounds, day care centers, nursing homes, hospitals, and residential dwelling unit(s).

4.2.4 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

For the purposes of this EIR, impacts on air quality are considered significant if adoption and implementation of PLAN Hermosa would:

1) Conflict with or obstruct implementation of the regional air quality management plan.
2) Violate any air quality standard or contribute substantially to an existing or projected air quality violation.
3) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).
4) Expose sensitive receptors to substantial concentrations.
5) Create objectionable odors affecting a substantial number of people.

The City of Hermosa Beach uses significance criteria established by the SCAQMD to evaluate air quality impacts. According to these criteria, implementation of PLAN Hermosa would be considered significant if it would exceed any of thresholds shown in **Table 4.2-1 (Mass Daily Thresholds)**.

TABLE 4.2-1
MASS DAILY THRESHOLDS [A]

Pollutant	Construction [a]	Operation [b]
VOC	75 lbs/day	55 lbs/day
NOx	100 lbs/day	55 lbs/day
CO	550 lbs/day	550 lbs/day
SOx	150 lbs/day	150 lbs/day
PM_{10}	150 lbs/day	150 lbs/day
$PM_{2.5}$	55 lbs/day	55 lbs/day
Lead	3 lbs/day	3 lbs/day
Toxic Air Contaminants (TACs) and Odor Thresholds		
TACs (including carcinogens and noncarcinogens)	Maximum Incremental Cancer Risk ≥10 in 1 million Cancer Burden >0.5 excess cancer cases (in areas ≥1 in 1 million) Hazard Index ≥1.0 (project increment)	
Odor	Project creates an odor nuisance (defined as six or more complainants) pursuant to SCAQMD Rule 402	
Ambient Air Quality for Criteria Pollutants [c]		
NO_2 1-hour average annual average	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 0.18 ppm (state) 0.03 ppm (state)	
PM_{10} 24-hour average annual average	10.4 μg/m^3 (construction)[d] & 2.5 μg/m^3 (operation) 1.0 μg/m^3	
$PM_{2.5}$ 24-hour average	10.4 μg/m^3 (construction)[d] & 2.5 μg/m^3 (operation)	
Sulfate 24-hour average	1 μg/m^3	
CO 1-hour average 8-hour average	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 20 ppm (state) 9.0 ppm (state/federal)	

Source: SCAQMD 2015
Notes:
a. *Construction thresholds apply to both the South Coast Air Basin and Coachella Valley (Salton Sea Air Basin and Mojave Desert Air Basin).*
b. *The mass daily thresholds for operation are the same as the construction thresholds.*
c. *Ambient air quality thresholds for criteria pollutants are based on SCAQMD Rule 1303, Table A-2 unless otherwise stated.*
d. *Ambient air quality threshold is based on SCAQMD Rule 403.*
e. *lbs/day = pounds per day; ppm = parts per million; μg/m3 = micrograms per cubic meter; ≥ greater than or equal to*

ANALYSIS APPROACH

The analysis of impacts is based on the likely consequences of adoption and implementation of PLAN Hermosa compared to existing conditions. The following analyses of impacts on air quality

are both qualitative and quantitative and are based on available air quality information for the planning area along with a review of regional information. The analysis assumes that all future and existing development in the planning area complies with applicable laws, regulations, design standards, and plans. The cumulative impact analysis uses qualitative information for the planning area and the air basin. Operational emissions associated with future land uses anticipated by PLAN Hermosa were modeled using the California Emissions Estimator Model (CalEEMod) Version 2013.2.2 and CARB's on-road emissions inventory model, EMFAC2014. Model inputs such as land use types and sizes, vehicle miles traveled, and speed bins were obtained from the traffic study prepared for PLAN Hermosa (Fehr & Peers 2015).

DRAFT PLAN HERMOSA POLICIES AND IMPLEMENTATION ACTIONS

PLAN Hermosa includes several elements, including Governance, Land Use + Design, Mobility, Sustainability + Conservation, and Infrastructure. In these elements, policies and implementation actions that directly and indirectly relate to air quality include the following:

Policies

Governance Element

- **7.5 Evaluation and disclosure.** Require an evaluation and disclosure (e.g., health checklists, health impact assessments) of health impacts or benefits for all discretionary projects.

Land Use + Design Element

- **1.3 Access to daily activities.** Strive to create development patterns such that the majority of residents are within one-half mile walking distance to a variety of neighborhood goods and services, such as supermarkets, restaurants, churches, cafes, dry cleaners, laundromats, farmers markets, banks, personal services, pharmacies, and similar uses.
- **1.7 Compatibility of uses.** Ensure the placement of new uses does not create or exacerbate nuisances between different types of land uses.
- **4.7 Access to transit.** Support the location of transit stations and enhanced stops near the intersection of Aviation Blvd. and PCH, and adjacent to Gateway Commercial uses to facilitate and take advantage of transit service, reduce vehicle trips and allow residents without private vehicles to access services.
- **6.3 Green infrastructure network.** Establish an interconnected green infrastructure network throughout Hermosa Beach that serves as a network for active transportation, recreation and scenic beauty and connects all areas of the city. In particular, connections should be made between the beach, parks, the Downtown, neighborhoods, and other destinations within the city. Consider the following components when designing and implementing the green/open space network:
  - Preserved open space areas such as the beach and the Greenbelt,
  - Living streets with significant landscaping and pedestrian and bicycle amenities,
  - Community and neighborhood parks, and schools.
- **6.7 Pedestrian oriented design.** Eliminate urban form conditions that reduce walkability by discouraging surface parking and parking structures along walkways, long blank walls along walkways, and garage-dominated building facades.

- **9.1 Ocean-based energy resources.** Encourage and support research and responsible development of renewable ocean-based energy sources. Renewable energy sources appropriate to Hermosa Beach shall be limited to wave, tidal, solar, and wind sources that meet the region's and state's need for affordable sources of renewable energy.
- **9.2 Renewable energy facilities.** To reduce or avoid conflicts, communicate and collaborate with affected ocean users; coastal residents and businesses; and applicants seeking state or federal authorization for the siting, development, and operation of renewable energy facilities.
- **9.4 Adaptive management.** Require renewable energy facility operators to rectify or mitigate adverse effects that occur during the lifetime of the project by monitoring and taking appropriate corrective measures through adaptive management.
- **9.5 Reclamation.** Require renewable energy facility operators to restore the natural characteristics of a site to the extent practicable when a project is decommissioned and removed.

Mobility Element

- **3.1 Repurpose public right-of-ways.** Require repurposing public right-of-ways enhancing connectivity for pedestrians, bicyclists, and public transit.
- **3.2 Invest in sidewalks.** Prioritize investment in designated priority sidewalks to ensure a complete network of sidewalks and pedestrian-friendly amenities that enhances pedestrian safety, access opportunities and connectivity to destinations.
- **3.3 Active transportation.** Require that all development or redevelopment projects accommodate active transportation through providing necessary connections to existing and planned pedestrian and bicycle networks and incorporate people-oriented design practices.
- **3.4 Access opportunities.** Provide enhanced mobility and access opportunities for local transportation and transit services in areas of the City with sufficient density and intensity of uses, mix of appropriate uses, and supportive bicycle and pedestrian network connections that can reduce vehicle trips within the City's busiest corridors.
- **3.5 Incentivize other modes.** Incentivize local shuttle/trolley services, rideshare and car share programs, and developing infrastructure that support low speed, low carbon (e.g. electric) vehicles.
- **3.6 Complete bicycle network.** Provide a complete bicycle network along all designated roadways while creating connections to other modes of travel including walking and transit.
- **4.5 Sufficient bicycle parking.** Require a sufficient supply of bicycle parking to be provided in conjunction with new vehicle parking facilities by both public and private developments.
- **4.6 Priority parking.** Provide priority parking and charging stations to accommodate the use of electric vehicles (EVs), including smaller short-distance neighborhood electric vehicles.
- **4.9 Encourage TDM strategies**. Encourage use of transportation demand management strategies and programs such as carpooling, ride hailing, and alternative transportation modes as a way to reduce demand for additional parking supply.

- **5.1 Prioritize development of infrastructure.** Prioritize the development of roadway and parking infrastructure that accommodates and encourages private electric and other low carbon vehicle ownership and use throughout the City.
- **5.2 Local transit system.** Develop a local transit system that facilitates efficient transport of residents, hotel guests, and beachgoers between activity centers and to Downtown businesses and the beach.
- **5.3 Incentivize TDM strategies.** Incentivize the use of Transportation Demand Management (TDM) strategies as a cost effective method for maximizing existing transportation infrastructure to accommodate mobility demands without significant expansion to infrastructure.
- **5.4 Evaluate projects.** Ensure the evaluation of projects for transportation and traffic impacts under CEQA consider local and statewide goals related to infill development, the promotion of healthy and active lifestyles through active transportation, and the reduction of greenhouse gases, in addition to traditional congestion management impacts.
- **5.5 Encourage smart growth.** Encourage smart growth land use policies in development projects to ensure more compact, mixed, connected, and multimodal development supports reduced trip generation, trip lengths, and greater ability to utilize alternative modes.
- **6.1 Regional network.** Work with government agencies and private sector companies to develop a comprehensive, regionally integrated transportation network that connects the community to surrounding cities.
- **6.2 Consider travel patterns.** Require considering regional travel patterns when collaborating on regional transit and transportation projects to ensure investments facilitate greater mobility and access for residents, businesses, and visitors to and from Hermosa Beach.
- **6.3 Support programs.** Facilitate greater local and regional mobility through access to shared equipment or transportation options such as car sharing and bike sharing.
- **6.4 Coordinate with agencies.** Coordinate with regional transportation agencies and surrounding cities to improve local access and connections to region-wide public transit services.
- **6.5 Coordinate with surrounding cities.** Coordinate with surrounding cities to prioritize non-motorized and pedestrian connections to regional facilities and surrounding cities.
- **6.6 Greater utilization.** Consider exploring opportunities for greater utilization of the Beach Cities Transit system for improved mobility along major corridors and as a potential means of improved regional transit connections.
- **8.1 Minimize truck impacts.** Establish a system of truck routes on specified arterial streets to minimize the negative impacts of trucking through the City.
- **8.2 Prohibit excessive idling.** Discourage commercial vehicles from excessive idling during deliveries and while parked.
- **8.3 Reduce traffic conditions.** Encourage businesses to provide commercial loading zones in the public right-of-way at a time and in a manner that balances the needs of businesses with the impact on traffic conditions.

- **8.5 Utilize technology.** Encourage operators of commercial vehicles doing business in Hermosa Beach to utilize technologies that minimize air pollution, fuel use, and greenhouse gas emissions.
- **8.6 Prohibit mobile advertising.** Consider prohibiting mobile advertising to avoid unnecessary traffic congestion and air pollution.

Sustainability + Conservation Element

- **2.4 Land use and transportation investments.** Promote land use and transportation investments that support greater transportation choice, greater local economic opportunity, and reduced number and length of automobile trips.
- **2.7 Discretionary projects.** Require discretionary projects to substantially mitigate all feasible greenhouse gas emissions, and offset the remainder of greenhouse gas emissions produced to meet annual thresholds
- **3.1 Stationary and mobile sources.** Seek to improve overall respiratory health for residents through regulation of stationary and mobile sources of air pollution, as feasible.
- **3.2 Mobile source reductions.** Support land use and transportation strategies to reduce vehicle miles traveled and emissions, including pollution from commercial and passenger vehicles.
- **3.3 Fuel efficient fleets.** Promote fuel efficiency and cleaner fuels for vehicles as well as construction and maintenance equipment by requesting that City contractors provide cleaner fleets.
- **3.4 Two-stroke engines.** Discourage the use of equipment with two-stroke engines and publicize the benefits and importance of alternative technologies.
- **3.5 Clean fuels.** Support increased local access to cleaner fuels and cleaner energy by encouraging fueling stations that provide cleaner fuels and energy to the community.
- **3.6 Healthy Air Hermosa**. Maintain high quality outdoor and public spaces in Hermosa Beach through the Healthy Air Hermosa program.
- **3.7 Regional air quality.** When possible, collaborate with other agencies within the region to improve air quality and meet or exceed state and federal air quality standards through regional efforts to reduce air pollution from mobile sources, including trucks and passenger vehicles.
- **4.1 Renewable energy generation.** Require, promote, and facilitate the installation of renewable energy projects on homes and businesses.
- **4.2 Building energy disclosure.** Require large buildings to report their energy and water use on a regular basis.
- **4.3 Retrofit program.** Provide an energy retrofit program to assist home and building owners to make efficiency improvements.
- **7.2 Soil erosion.** Minimize soil erosion by ensuring best practices are used in grading and construction.

Infrastructure Element

- **2.5 Active transportation dedications**. Require new development and redevelopment projects to provide land or infrastructure necessary to accommodate active transportation, such as sidewalks, bike racks, and bus stops.

- **6.1 Utility maintenance permitting.** Allow efficient and streamlined permitting for the maintenance, repair, improvement, and expansion of utility facilities and infrastructure.
- **6.2 Below ground utilities.** Phase out and replace overhead electric lines with subsurface lines to reduce visual blight and the need for utility poles which can impede sidewalk accessibility.
- **6.3 Environmental compatibility.** Ensure that utility facilities and infrastructure cause minimal damage to the environment and that utility service providers are responsible for costs associated with damage caused to the environment and public right-of-way so that providers will seek to minimize those costs.
- **6.4 Innovative and renewable technology.** Encourage the exploration and establishment of innovative and renewable utility service technologies. Allow the testing of new alternative energy sources that are consistent with the goals and policies of PLAN Hermosa and comply with all relevant regulations.
- **6.5 Renewable energy facilities.** Unless a renewable energy facility would cause an unmitigatable impact to health or safety, allow them by right.
- **6.6 Community choice aggregation.** Collaborate with nearby local and regional agencies to develop a community choice aggregation system that provides greater renewable energy choices to the community.

Implementation Actions

- LAND USE-13. Create a checklist and resource guide comprising local, state, and federal requirements for the development of offshore renewable energy facilities to streamline permitting requirements and improve public awareness.
- MOBILITY-6. Install traffic calming devices in areas appropriate to mitigate an identified and documented traffic concern, as determined by the City Public Works Director or designee. Potential traffic calming applications include clearly marked and/or protected bike and pedestrian zones, bike boulevards, bulb outs, median islands, speed humps, traffic circles, speed tables, raised crosswalks, signalized crosswalks, chicanes, chokers, raised intersections, realigned intersections, and textured pavements, among other effective enhancements.
- MOBILITY-12. Maintain and periodically update the Transportation Demand Management (TDM) Ordinance with activities that will reduce auto trips associated with new development.
- MOBILITY-13. Install and maintain transportation amenities such as bicycle parking and electric vehicle charging stations so that they are available at each commercial district or corridor, park, and public facility.
- MOBILITY-14. Facilitate the operation of bicycle rental concessions in the Coastal Zone.
- MOBILITY-18. Develop congestion management performance measures and significant impact thresholds that are in accordance with the California Environmental Quality Act (CEQA) and Senate Bill 743 (SB 743) requirements for roadway segments and intersections.
- SUSTAINABILITY-1. Establish a local greenhouse gas impact fee for projects to offset their fair share of greenhouse gas emissions generated, by providing funding for implementation of local GHG reduction projects.

- SUSTAINABILITY-2. Establish greenhouse gas emissions thresholds of significance and standardize potential mitigation measures for both discretionary and ministerial actions.
- SUSTAINABILITY-6. Implement the City's clean fleet policy through the purchase or lease of vehicles and equipment that reduce greenhouse gas emissions and improve air quality.
- SUSTAINABILITY-7. Concurrent with new State Building Code adoptions, periodically update or amend Green Building Standards and conduct cost effectiveness studies to incorporate additional energy-efficient features.
- SUSTAINABILITY-8. Develop and market a program to offer incentives such as rebates, fee waivers, or permit streamlining to facilitate the installation of renewable energy, energy efficient, or water conservation equipment.
- SUSTAINABILITY-16. Revise the Municipal Code as necessary to ensure it reflects up-to-date practices to reduce potential for soil erosion and ways to minimize or eliminate the effects of grading on the loss of topsoil.
- SUSTAINABILITY-17. Develop a citywide expansive and corrosive soils screening tool to reduce the need for site-specific soil reports.
- SUSTAINABILITY-18. Where feasible, new development or redevelopment shall be sited and designed to minimize alteration of natural landforms by conforming to the local topography; preventing substantial grading or reconfiguration of the project site; requiring that man-made contours mimic natural contours; ensuring that graded slopes blend with the existing terrain of the site and surrounding areas; and clustering structures to minimize site disturbance and to minimize development area.
- PARKS-22. Amend the Local Implementation Plan/Zoning Code to require applicants for summer events occurring on weekends or holidays between Memorial Day and Labor Day with greater than 1,000 participants to provide and advertise predetermined shuttle services and bicycle corrals.
- SAFETY-17. Provide information, opportunities, and incentives to the community for the proper disposal of toxic materials to avoid environmental degradation to the air, soil, and water resources from toxic materials contamination.
- INFRASTRUCTURE-23. Develop a process for identifying sites deemed appropriate for alternative renewable energy power generation facilities, and provide such information to utility providers and potential developers.
- INFRASTRUCTURE-24. Continue to implement energy-efficient lighting throughout City facilities.

IMPACTS AND MITIGATION MEASURES

IMPACT 4.2-1 ***Would PLAN Hermosa Conflict with or Obstruct Implementation of the Applicable Air Quality Plan?*** *Implementation of PLAN Hermosa would guide future development in the city in a manner that could result in air pollution emissions. Compliance with existing federal and state regulations and implementation of PLAN Hermosa policies would reduce conflicts with air quality plans to a* ***less than significant*** *level.*

Regional air quality plans are developed to attain and maintain ambient air quality standards. As summarized in the Environmental Setting subsection above and shown in Table 1 of **Appendix C-4**, the region is nonattainment for the state and federal ozone, PM_{10}, and $PM_{2.5}$ standards and

is nonattainment for the state NO_2 standard. As noted above, these pollutants cause public health issues involving asthma and other respiratory ailments as well as aggravate existing heart and lung diseases. In order for the region to attain and maintain air quality standards and protect public health, a concerted effort from all cities and counties in the air basin is required to reduce emissions from a variety of sources. Air quality plans model emission contributions from sources within the air basin (and outside the air basin for transport of emissions) using planned land uses and reduction measure assumptions. This type of modeling demonstrates how the air quality plan can or cannot attain air quality standards by certain dates. Therefore, if a city in the air basin would not be consistent with the assumptions and emission reduction strategies contained in an air quality plan, this could conflict with or obstruct the region's ability to attain an ambient air quality standard.

By focusing planning and improvement efforts toward designing complete streets, promoting economic diversity, and enhancing communitywide mobility, PLAN Hermosa is anticipated to reduce vehicle miles traveled (VMT) within the city. Mobility Element Goal 3 would encourage multimodal and people-oriented transportation, which could minimize or eliminate certain mobile vehicle trips (see Section 4.14, Transportation, of this EIR for an analysis of anticipated vehicle miles traveled under PLAN Hermosa). Land Use + Design Element Goal 1 would promote a diverse mix of uses, which would reduce vehicle trips between residential uses and retail or employment uses. Land Use + Design Element Goal 4 would increase the accessibility of public transit to nearby residential uses, thus reducing vehicle miles traveled. Mobility Element Policy 5.5 encourages smart growth in land use policies to ensure more compact, mixed, connected, and multimodal development supports reduced trip generation, trip lengths, and greater ability to utilize alternative modes. Implementing these policies and programs would strengthen Hermosa Beach's efforts to reduce air quality emissions from VMT, area sources, construction, and other miscellaneous sources beyond that of the existing General Plan,[1] which is the basis for the existing regional air quality plan (i.e., 2012 Air Quality Management Plan [AQMP]).

Sustainability + Conservation Element Policy 3.1 seeks to improve overall respiratory health for residents through regulation of stationary and mobile sources of air pollution. Policy 3.2 encourages support for land use and transportation strategies to reduce vehicle miles traveled and emissions, including pollution from commercial and passenger vehicles. Policy 3.3 would promote fuel efficiency and cleaner fuels for vehicles as well as construction and maintenance equipment by requesting that City contractors provide cleaner fleets. Policy 3.7 would ensure that future projects consider impacts on regional air quality planning efforts. Policy 7.2 would require construction projects to control emissions, particularly soil disturbance, which is a source of PM_{10} and $PM_{2.5}$ emissions.

As stated in the 2012 AQMP, the plan is aimed at controlling pollution from all man-made sources, including stationary sources, on-road and off-road mobile sources, and area sources (SCAQMD 2013). Therefore, the emission reductions that could be achieved through implementation of PLAN Hermosa are anticipated to exceed those currently planned for in the regional air quality plan and would be consistent with the 2012 AQMP. Although the SCAQMD is currently developing a 2016 Air Quality Management Plan, it is anticipated that the 2016 AQMP would target the same types of emission sources and would require further reductions from all jurisdictions because of the nonattainment status of the air basin with respect to state ozone,

[1] The existing General Plan is identified as the No Project Alternative in Section 6.0, Alternatives to the Proposed Project, of this EIR. Table 6-1 of Chapter 6 and Table 4-1 of Appendix C-4 to this EIR identify vehicle travel as the main contributor to ozone precursors (ROG and NO_x).

NO_x, $PM_{2.5}$, and PM_{10} standards. Both the 2012 adopted and 2016 proposed AQMPs rely on the growth projections and vehicle travel patterns modeled in the Southern California Association of Governments' Regional Transportation Plan (Section 4.9, Land Use and Planning, of this EIR evaluates PLAN Hermosa's consistency with the Regional Transportation Plan).

As discussed in Section 4.14, Transportation, many PLAN Hermosa goals and policies are aimed at reducing VMT. Fehr & Peers used the TDM+ model to quantify potential reductions in trip generation and VMT that could occur by 2040 with full buildout and implementation of PLAN Hermosa. Fehr & Peers worked with the California Air Pollution Control Officers Association (CAPCOA) to develop the transportation section of the report titled Quantifying Greenhouse Gas Mitigation Measures. This report is now used as a set of guidelines for quantifying the environmental benefits of mitigation measures. The CAPCOA guidelines were developed by conducting a comprehensive literature review of studies documenting the effects of land use planning and transportation demand management (TDM) strategies on reducing VMT. Using the results of this study, Fehr & Peers developed TDM+, a quick response tool that demonstrates trip reductions from commonly used TDM strategies. The tool also accounts for the interaction among different measures in various categories to avoid double counting. As described in Section 4.14, numerous PLAN Hermosa land use and mobility strategies were modeled to demonstrate reductions in VMT, including but not limited to land use strategies such as development of mixed-use and urban infill sites with transit proximity and a density, scale, and design that can facilitate walking, biking, and other alternative travel options.

PLAN Hermosa policies include numerous measures that support transportation demand and accessibility management. Specifically, Sustainability + Conservation Element Policy 3.2 directs the City to support land use and transportation strategies to reduce vehicle miles traveled and emissions, including pollution from commercial and passenger vehicles. Policy 3.7 directs the City to consult with other agencies to improve air quality through regional efforts to reduce air pollution from mobile sources. PLAN Hermosa would promote land use and transportation investments that support greater transportation choice, greater local economic opportunity, and reduced number and length of automobile trips.

These and other policies support region-wide traffic and air quality management strategies that support achievement of AQMP goals. PLAN Hermosa would not conflict with or obstruct implementation of the regional air quality plan; therefore, the impact would be **less than significant**.

Mitigation Measures

None required.

IMPACT 4.2-2 ***Would PLAN Hermosa Generate Short-Term Construction Emissions That Would Violate Any Air Quality Standard or Contribute Substantially to an Existing or Projected Air Quality Violation?*** *Implementation of PLAN Hermosa would guide future development in the city in a manner that could generate air pollutant emissions from short-term construction. Although PLAN Hermosa policies and programs and enforcement of current SCAQMD rules and regulations would help reduce short-term emissions, construction emissions would result in a* ***potentially significant*** *impact.*

The SCAQMD has established quantitative daily thresholds of significance for construction emissions, as identified in **Table 4.2-1**. Development associated with the implementation of PLAN Hermosa would result in construction emissions that would be evaluated using the SCAQMD thresholds of significance on a project-by-project basis. However, at the program level, it would

be speculative to accurately model construction emissions associated with implementation of PLAN Hermosa because it is unknown at this time what projects specifically would be constructed under the plan, what construction equipment would be used for each project, and what each project's construction phasing would be. Therefore, construction air quality impacts are evaluated qualitatively.

Construction of PLAN Hermosa's proposed land uses would generate short-term criteria air pollutant and ozone precursor emissions from sources such as heavy-duty construction equipment, material delivery trucks, soil disturbance activities, construction worker vehicles, and architectural coatings, among other activities. The daily amounts of pollutants generated would vary depending on the intensity of the construction activities and types of construction equipment used. Smaller projects with a more compact schedule, though they may involve less overall development, could generate daily emissions that exceed those of a large project with a drawn-out schedule. CalEEMod is an emissions model developed by the South Coast Air Quality Management District to calculate construction emissions for CEQA projects. Within CalEEMod, smaller projects such as single-family residences or commercial or industrial uses which are less than 150,000 square feet and that have minimal or no overlapping construction activities would not likely exceed the SCAQMD's CEQA significance thresholds for construction. Most of the development activity in the city is not expected to exceed 150,000 square feet given the city's developed condition and the limited number of large or contiguous parcels that are vacant and underutilized and therefore more likely to redevelop. However, larger projects or projects which are more complex (large quantities of grading, accelerated schedule, overlapping activities) may have the potential to exceed significance thresholds. Current examples of projects that may be under 150,000 square feet, but involve grading or excavation, include the proposed Skechers Design Center and Executive Office Project and the proposed Strand and Pier Hotel Project. Therefore, it is difficult to estimate construction emissions by simply evaluating the number of units or square feet of space to be developed. However, there is potential that construction of some future projects pursuant to PLAN Hermosa would generate short-term construction emissions that could exceed the SCAQMD's thresholds of significance.

A number of PLAN Hermosa policies, along with required SCAQMD rules and regulations, would help reduce short-term construction emissions. All construction projects in the city would be subject to SCAQMD Rule 403 (Fugitive Dust) to minimize fugitive particulate matter (PM) dust emissions during construction. In addition, Sustainability + Conservation Element Policy 7.2 would require future projects to minimize PM_{10} and $PM_{2.5}$ emissions by promoting best practices for controlling fugitive dust. Implementation actions SUSTAINABILITY-16, 17, and 18 aim to control soil erosion during grading and other construction activities. Furthermore, Sustainability + Conservation Element Policy 2.7 would require all discretionary projects to substantially mitigate all feasible greenhouse gas emissions, which would also affect the emissions of ozone precursors, PM_{10}, and $PM_{2.5}$ in the city.

Although the SCAQMD would require compliance with Rule 403, and implementation of multiple PLAN Hermosa policies would reduce construction emissions, there is potential that a number of future projects will continue to generate emissions which exceed the SCAQMD construction thresholds of significance.

Because most construction projects are performed by private parties, the City would have little control over construction equipment and truck emissions. However, EPA emissions standards require strict emissions controls for construction equipment and trucks that are phased in over time. As older construction equipment is phased out and replaced with newer equipment, emissions from the average construction fleet would be lower. With time, the construction fleet would eventually meet EPA Tier 4 emissions standards, which are currently the most stringent standards. Construction-related impacts would be **potentially significant**. To reduce

construction-related emissions, mitigation measures **MM 4.2-2a** through **MM 4.2-2e** would be required.

Mitigation Measures

MM 4.2-2a Construction projects within the city shall demonstrate compliance with all applicable standards of the Southern California Air Quality Management District, including the following provisions of District Rule 403:

- All unpaved demolition and construction areas shall be wetted at least twice daily during excavation and construction, and temporary dust covers shall be used to reduce dust emissions and meet SCAQMD Rule 403. Wetting could reduce fugitive dust by as much as 50 percent.
- The construction area shall be kept sufficiently dampened to control dust caused by grading and hauling, and at all times provide reasonable control of dust caused by wind.
- All clearing, earth moving, or excavation activities shall be discontinued during periods of high winds (i.e., greater than 15 mph), so as to prevent excessive amounts of dust.
- All dirt/soil loads shall be secured by trimming, watering, or other appropriate means to prevent spillage and dust.
- All dirt/soil materials transported off-site shall be required to cover their loads as required by California Vehicle Code Section 23114 to prevent excessive amount of dust.
- General contractors shall maintain and operate construction equipment so as to minimize exhaust emissions.
- Trucks having no current hauling activity shall not idle but shall be turned off.

MM 4.2-2b In accordance with Section 2485 in Title 13 of the California Code of Regulations, the idling of all diesel-fueled commercial vehicles (weighing over 10,000 pounds) during construction shall be limited to 5 minutes at any location.

MM 4.2-2c Construction projects within the city shall comply with South Coast Air Quality Management District Rule 1113 limiting the volatile organic compound content of architectural coatings.

MM 4.2-2d Construction projects within the city shall install odor-reducing equipment in accordance with South Coast Air Quality Management District Rule 1138.

MM 4.2-2e Project applicants shall identify all measures to reduce air pollutant emissions below SCAQMD thresholds prior to the issuance of building permits. Should attainment of SCAQMD thresholds be determined to be infeasible, construction contractors shall provide evidence of this to the City and will be encouraged to apply for SCAQMD SOON funds.

Significance After Mitigation

Even with the implementation of mitigation measures **MM 4.2-2a** through **MM 4.2-2e**, SCAQMD Rule 403, and PLAN Hermosa policies, it is still anticipated that some projects would have the

potential to generate daily construction emissions that exceed the SCAQMD thresholds of significance. Because the intensity and schedule of construction activities cannot be determined at the time of this program-level analysis, it would be speculative to conclude that any level of mitigation would reduce daily construction emissions below the SCAQMD thresholds of significance. Incentives could be provided for those construction contractors who apply for SCAQMD SOON funds. The SOON program provides funds to accelerate cleanup of off-road diesel vehicles, such as heavy-duty construction equipment.

In many cases, because of the amount of construction required for a project, even if all feasible mitigation is implemented, daily emissions could still exceed the significance thresholds. Therefore, this impact would be **significant and unavoidable**.

IMPACT 4.2-3 ***Would PLAN Hermosa Generate Long-Term Operational Emissions That Would Violate Any Air Quality Standard or Contribute Substantially to an Existing or Projected Air Quality Violation?*** *Subsequent development associated with the implementation of PLAN Hermosa could generate air pollutant emissions from long-term operation. PLAN Hermosa policies and programs and enforcement of current SCAQMD rules and regulations would help reduce long-term emissions. Daily operational emissions from long-term operation of PLAN Hermosa would result in a* ***less than significant*** *impact.*

Long-term operational emissions are generated from stationary, area, and mobile sources. **Table 4.2-2 (Summary of Modeled Operational Emissions of Criteria Air Pollutants and Precursors)** summarizes the daily long-term operational emissions of criteria air pollutants and precursors for existing and new development that could occur under the full buildout potential by 2040. The daily operational area, energy, and mobile source emissions were modeled using CalEEMod (Version 2013.2.2) computer model EMFAC2014 and vehicle miles traveled (VMT) data in the traffic study prepared by Fehr & Peers (2015).

TABLE 4.2-2
SUMMARY OF MODELED OPERATIONAL EMISSIONS OF CRITERIA AIR POLLUTANTS AND PRECURSORS

	Emissions (lbs/day)[a]					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Existing Conditions						
Area Sources	1,128	18	1,674	<1	129	129
Energy	5	46	20	<1	4	4
Mobile Sources	157	472	1,933	5	309	87
Total	1,290	536	3,627	5	442	220
Development Potential Under PLAN Hermosa						
Nonresidential						
Area Sources	25	<1	25	<1	<1	<1
Energy	1	13	11	<1	1	1
Residential						
Area Sources	17	<1	<1	<1	<1	<1
Energy	1	12	10	<1	<1	<1
Mobile Sources	(15)	(30)	(123)	(0)	(3)	(1)
Total Daily Operational Emissions – PLAN Hermosa Development Potential	30	(5)	(77)	(0)	(0)	1
Project-Based SCAQMD Significance Threshold	55	55	550	150	150	55
Exceeds Project Threshold?	No	No	No	No	No	No
Plan Hermosa Development Potential Plus Existing Conditions	1,320	531	3,550	5	442	221

Source: Appendix D; existing conditions modeled by Michael Baker International 2016.

SCAQMD = South Coast Air Quality Management District; lbs/day = pounds per day; CO = carbon monoxide; NOx = oxides of nitrogen; PM_{10} = particulate matter less than or equal to 10 microns in diameter; $PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter; ROG = reactive organic gases.

Emissions modeled using the CalEEMod (Version 2013.2.2) computer model and EMFAC2014, based on daily vehicle miles traveled, daily trips, and land uses obtained from the traffic analysis prepared for this project, which estimates a reduction of 2,500 daily vehicle trips under PLAN Hermosa as compared to existing conditions.

Note: The total emissions estimates shown are the highest values that would occur in the summer or winter season. Totals may not add up to individual values since the highest emissions for a pollutant from both area and mobile sources may not occur in the same season.

*Refer to **Appendix D** for detailed assumptions and modeling output files.*

The SCAQMD's thresholds are established for individual projects and are not readily applied to a 25-year program such as PLAN Hermosa. Although the City will apply the SCAQMD's thresholds to individual projects as they are brought forward, the total emissions in the city and the planning area will still exceed these project-based thresholds.

As shown in **Table 4.2-2**, area sources contribute to most of the ROG, CO, and PM operational emissions in the city. With regard to mobile source emissions, PLAN Hermosa policies would result in a reduction of vehicle miles traveled within the city. As a result, mobile source emissions would be reduced compared to existing conditions. Heavy-commercial or industrial land uses are more likely to involve stationary sources, while retail and residential land uses would involve more area source emissions (e.g., natural gas water and space heating, consumer products, landscape maintenance). Similar to construction emissions, the SCAQMD has developed daily thresholds of

significance for operational activities. Project-level analysis of future projects would evaluate daily emissions against the SCAQMD operational thresholds of significance.

PLAN Hermosa includes numerous goals, policies, and programs that would impact future emissions associated with land use operations. Mobility Element Policies 3.6, 5.2, and 5.3 would provide new and existing land uses with greater accessibility to alternate modes of transportation and supporting amenities, some of which would be emissions-free (e.g., walking, biking). Therefore, implementation of PLAN Hermosa would provide convenient alternatives to driving and reduce trip distances through infill development in the city.

In addition, Mobility Element Policies 3.4 and 5.2 would use public transit to link employment and residential centers to provide realistic alternatives to single-occupant vehicles for a variety of trip types (e.g., home to work, home to shopping). Mobility Element Policies 3.2 and 3.3 would require new development to add pedestrian infrastructure and provide necessary connections to transit and alternate transit modes, respectively. Mobility Element Policy 5.5 and Land Use + Design Element Policy 1.3 would require that more compact, connected, and multimodal development supports reduced trip generation, trip lengths, and greater ability to utilize alternative modes and that safe and convenient complete streets (i.e., designed for all modes of transportation) be implemented throughout the city and connect residential and amenities for feasible day-to-day use.

Increasing bicycle mode share is a major goal to reduce mobile source emissions. Implementation actions MOBILITY-6 and 14 would strategically expand the city's bicycle infrastructure to provide practical and safe connections between land uses. Therefore, PLAN Hermosa would supply alternative modes of transportation through city infrastructure as well as provide incentives to maximize the effectiveness of these developments.

The PLAN Hermosa goals, programs, and policies discussed above would reduce mobile source operational emissions throughout the city. As a result, total emissions associated with daily operational activities would remain below SCAQMD thresholds of significance, as shown in **Table 4.2-2**. Therefore, PLAN Hermosa's operational emissions would be considered **less than significant**. As discussed above, emissions presented in **Table 4.2-2** take into account policies which would reduce vehicle traffic and related emissions within the city. With regard to stationary (non-mobile) sources, new projects would be required to comply with the California Green Building Standards (CALGreen) Code, which would increase energy efficiency and reduce water usage. As a result, emissions resulting from energy and water usage would be reduced.

Mitigation Measures

None required.

IMPACT 4.2-4 ***Would PLAN Hermosa Create or Contribute to CO Hot Spots That Could Result in a Cumulatively Considerable Net Increase of Any Criteria Pollutant for Which the Region Is Nonattainment?*** *Implementation of PLAN Hermosa would guide future development and reuse projects in the city in a manner that would reduce vehicle traffic to existing roadways, which could reduce the potential for CO hot spots. Traffic volumes anticipated at intersections throughout the city with implementation of PLAN Hermosa would not be large enough to cause a CO hot spot, resulting in a* ***less than significant*** *impact.*

Carbon monoxide concentration is a direct function of motor vehicle activity (e.g., idling time and traffic flow conditions), particularly during peak commute hours, and meteorological conditions. Under specific meteorological conditions (e.g., stable conditions that result in poor

dispersion), CO concentrations may reach unhealthy levels at local sensitive land uses such as residential areas, schools, and hospitals. As a result, the SCAQMD recommends analyzing carbon monoxide emissions at a local as well as a regional level.

A CO hot spot is an area of localized carbon monoxide pollution that is caused by severe vehicle congestion on major roadways, typically near intersections. The SCAQMD requires a microscale CO hot-spot analysis against the 1-hour and 8-hour ambient air quality standards for carbon monoxide when a project increases the volume-to-capacity ratio by 2 percent for any intersection with an existing level of service (LOS) D or worse. The PLAN Hermosa traffic analysis (see Section 4.14, Transportation) indicates that one signalized intersection would operate at LOS E in 2040. Therefore, further investigation of potential CO impacts is warranted.

A detailed CO analysis was conducted during the preparation of the SCAQMD's 2003 Air Quality Management Plan. The locations selected for microscale modeling in the 2003 AQMP included high average daily traffic (ADT) intersections in the air basin, those which would be expected to experience the highest CO concentrations. The highest CO concentration observed was at the intersection of Wilshire Boulevard and Veteran Avenue on the west side of Los Angeles near Interstate 405. The concentration of CO at this intersection was 4.6 parts per million (ppm), which is well below the 35-ppm 1-hour CO federal standard. The Wilshire Boulevard/Veteran Avenue intersection has an ADT of approximately 100,000 vehicles per day.

The PLAN Hermosa traffic analysis demonstrates that three of the studied intersections would operate at LOS E in 2040. However, only one of these intersections is signalized. The highest total intersection ADT for any of these intersections would be about 35,700 vehicles at the intersection of Pacific Coast Highway and Aviation Boulevard, which is less than 100,000 vehicles per day. Furthermore, due to stricter vehicle emissions standards in newer cars, new technology, and increased fuel economy, CARB has indicated that future CO emission factors under future land use conditions (year 2040) would be lower than those under existing conditions. Thus, project-generated local mobile-source CO emissions would not result in or substantially contribute to concentrations that exceed the 1-hour or 8-hour ambient air quality standards for carbon monoxide. Because the number of vehicles traveling through the Pacific Coast Highway/Aviation Boulevard intersection is less than 100,000 vehicles per day, local mobile-source CO emissions would not exceed the 1-hour or 8-hour CO standard. As a result, this impact would be **less than significant**.

Mitigation Measures

None required.

IMPACT 4.2-5 ***Would PLAN Hermosa Expose Sensitive Receptors to Substantial Pollutant Concentrations?*** *Implementation of PLAN Hermosa would guide future development and reuse projects in Hermosa Beach in a manner that would potentially generate additional diesel vehicle traffic and diesel stationary sources within the city. This impact would be* ***less than significant****.*

Subsequent land use activities associated with implementation of PLAN Hermosa could potentially include short-term construction sources and long-term operational sources of TACs, including stationary and mobile sources.

Short-Term Construction Sources

Implementation of PLAN Hermosa would result in the potential construction of a variety of projects. This construction would result in short-term emissions of diesel PM, which CARB identifies as a toxic air contaminant. Construction would result in the generation of diesel PM emissions

from the use of off-road diesel equipment required for site grading and excavation, paving, and other construction activities. The amount to which the receptors are exposed (a function of concentration and duration of exposure) is the primary factor used to determine health risk (i.e., potential exposure to TAC emission levels that exceed applicable standards). Health-related risks associated with diesel-exhaust emissions are primarily linked to long-term exposure and the associated risk of contracting cancer. The calculation of cancer risk associated with exposure to TACs is typically based on a 70-year period of exposure. The use of diesel-powered construction equipment, however, would be temporary and episodic and would occur over a relatively large area. For these reasons, diesel PM generated by construction activities, in and of itself, would not be expected to create conditions where the probability of contracting cancer is greater than 10 in 1 million for nearby receptors.

Nevertheless, construction emissions are regulated by the SCAQMD, which has developed localized significance thresholds (LSTs) for several emissions generated at construction sites (see subsection 4.2.2, Environmental Setting), including $PM_{2.5}$, produced when diesel fuel is burned. LSTs represent the maximum emissions at a construction site that are not expected to cause or contribute to an exceedance of the most stringent national or state ambient air quality standards. LSTs are based on the ambient concentrations of that pollutant within the project source receptor area (SRA), as demarcated by the SCAQMD, and the distance to the nearest sensitive receptor. LST analysis for construction is applicable for all projects that disturb 5 acres of land and less in a single day. Future construction activities under PLAN Hermosa would be required to meet SCAQMD thresholds or to implement mitigation. Examples of feasible mitigation to address short-term construction sources of TACs include, but are not limited to, the requirement to keep all construction equipment in proper tune in accordance with manufacturers' specifications, the use of late-model heavy-duty diesel-powered equipment during construction to the extent that it is readily available, the use of diesel-powered equipment that has been retrofitted with after-treatment products (e.g., engine catalysts), and the use of alternative-fuel construction equipment (i.e., compressed natural gas, liquid petroleum gas, and unleaded gasoline) to the extent that the equipment is readily available.

Long-Term Mobile Sources

In April 2005, CARB released the *Air Quality and Land Use Handbook: A Community Health Perspective*, which offers guidance on siting sensitive land uses in proximity to sources of air toxics. Sensitive land uses identified in the handbook include residential communities, schools and schoolyards, day-care centers, parks and playgrounds, hospitals, and medical facilities. In terms of mobile source emissions of toxic air contaminants, CARB has provided guidelines to help determine appropriate land uses near heavily traveled roadways. The CARB guidelines indicate that siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicle trips per day (VTD), or rural roads with 50,000 VTD should be avoided when possible. None of the roadways in the city would exceed these daily vehicle trips. As shown in Table 4.14-13 in Section 4.14, Transportation, the roadway with the highest existing daily vehicle trips is Pacific Coast Highway at 51,437 VTD. In Hermosa Beach, Pacific Coast Highway is considered an urban arterial roadway which, based on CARB guidelines, would need 100,000 VTD to exceed the TAC threshold. In any case, new sources of toxic air contaminants and/or other criteria air pollutants would be mitigated to the maximum extent possible. Governance Element Policy 7.5 requires the evaluation and disclosure (e.g., health checklists, health impact assessments) of health impacts or benefits for all discretionary projects. Most of the pollutant emissions in the Hermosa Beach area are attributable to mobile sources (construction and on-road) such as major roadways like Pacific Coast Highway and Artesia Boulevard located along the northern boundary.

Furthermore, mobile sources of TACs in the city would be reduced through various PLAN Hermosa Mobility Element and Land Use + Design Element policies, including minimizing truck impacts through the city (Mobility Element Policy 8.1), discouraging excessive idling by commercial vehicles (Mobility Element Policy 8.2), and a consideration to prohibit mobile advertising (Mobility Element Policy 8.6). In addition, the policies described above in Impact 4.2-2 to reduce mobile source emissions and construction emissions would reduce diesel PM emissions from PLAN Hermosa's planned land uses. Furthermore, statewide efforts such as CARB's On-Road Heavy-Duty Diesel Vehicles (In Use) Regulation requires diesel trucks and buses that operate in California to be upgraded to reduce emissions. Heavier trucks were required to be retrofitted with particulate matter filters beginning January 1, 2012, and the State requires replacement of older trucks, starting January 1, 2015. By January 1, 2023, nearly all trucks and buses will need to have 2010 model year engines or equivalent. The regulation applies to nearly all privately and federally owned diesel-fueled trucks and buses, as well as to privately and publicly owned school buses with a gross vehicle weight rating greater than 14,000 pounds. Because of these types of regulations, including additional EPA-mandated controls (cleaner vehicles, cleaner fuels, and cleaner engines), mobile source air toxics (MSATs), which are the primary source of TACs, are now predicted by the Federal Highway Administration (2012) to decrease by 83 percent from 2010 to 2050 (2012).

Long-Term Stationary Sources

Based on the PLAN Hermosa Land Use Map, only two areas of the city, Creative Light Industrial and Service Commercial, are designated for uses that could contain new or expanded stationary TAC sources, including gasoline dispensing stations. Gasoline dispensing stations are a source of gasoline vapors, which include TACs such as benzene, methyl tertiary-butyl ether, toluene, and xylene. Benzene is the primary TAC associated with gas stations. Gasoline vapors are released during the filling of stationary underground storage tanks and during the transfer from those underground tanks to individual vehicles.

The SCAQMD has stringent requirements for the control of gasoline vapor emissions from gasoline-dispensing facilities. SCAQMD Rule 461 (Gasoline Transfer and Dispensing) limits emissions of organic compounds from gasoline dispensing facilities. Rule 461 prohibits the transfer or allowance of the transfer of gasoline into stationary tanks at a gasoline dispensing facility unless a CARB-certified Phase I vapor recovery system is used, and further prohibits the transfer or allowance of the transfer of gasoline from stationary tanks into motor vehicle fuel tanks at a gasoline dispensing facility unless a CARB-certified Phase II vapor recovery system is used during each transfer. Vapor recovery systems collect gasoline vapors that would otherwise escape into the air during bulk fuel delivery (Phase I) or fuel storage and vehicle refueling (Phase II). Phase I vapor recovery system components include the couplers that connect tanker trucks to the underground tanks, spill containment drain valves, overfill prevention devices, and vent pressure/vacuum valves. Phase II vapor recovery system components include gasoline dispensers, nozzles, piping, breakaway hoses, faceplates, vapor processors, and system monitors. Rule 461 also requires fuel storage tanks to be equipped with a permanent submerged fill pipe tank that prevents the escape of gasoline vapors. In addition, all gasoline must be stored underground with valves installed on the tank vent pipes to further control gasoline emissions.

Gasoline dispensing facilities are also regulated by SCAQMD Rule 1401 (New Source Review of Toxic Air Contaminants), which provides for the review of TAC emissions in order to evaluate potential public exposure and health risk, to mitigate potentially significant health risks resulting from these exposures, and to provide net health risk benefits by improving the level of control when existing sources are modified or replaced. Pursuant to SCAQMD Rule 1401, stationary sources having the potential to emit TACs, including gas stations, are required to obtain permits

from the SCAQMD. Permits may be granted to these operations provided they are operated in accordance with applicable SCAQMD rules and regulations. The SCAQMD's permitting procedures require substantial control of emissions, and permits are not issued unless TAC risk screening or TAC risk assessment can show that risks are not significant. The SCAQMD may impose limits on annual throughput to ensure risks are within acceptable limits. (In addition, California has statewide limits on the benzene content in gasoline, which greatly reduces the toxic potential of gasoline emissions.) Under Rule 1401, the following requirements must be met before a permit is granted to the proposed gasoline station component of a project:

- The cumulative increase from all TACs emitted from a single piece of equipment in maximum individual cancer risk (MICR) shall not exceed:
  - One in one million (1×10^{-6}) if Best Available Control Technology for Toxics (T-BACT) is not used; or
  - Ten in one million (10×10^{-6}) if T-BACT is used.
- The cumulative cancer burden from all TACs emitted from a single piece of equipment (increase in cancer cases in the population) shall not exceed 0.5.
- Neither the chronic hazard index (HIC), the 8-hour chronic hazard index (HIC8), nor the total acute hazard index (HIA) from all TACs emitted from a single piece of equipment shall exceed 1.0 for any target organ system, or an alternate hazard index level deemed to be safe.

According to the SCAQMD (2014), there are currently about 3,140 retail gasoline stations in the South Coast Air Basin. The SCAQMD has conducted an industry-wide health risk assessment for these retail gasoline stations using dispersion modeling. According to this assessment, 91 percent of the gasoline stations were demonstrated to generate a health risk within the acceptable threshold and 9 percent of the stations have risks above the threshold. Approximately half of the 9 percent of gasoline stations in the South Coast Air Basin with risks above the health risk threshold were established prior to SCAQMD Rule 1401, adopted in 1990, and thus were not subject to the TAC limitations required by this rule (SCAQMD 2014).

The SCAQMD has developed screening health risk tables for a generic retail gasoline service station. The modeled stations are assumed to have Phase I and Phase II vapor recovery systems and calculate for cancer risk accounting for the meteorological conditions of different locations throughout the South Coast Air Basin. Cancer risks from any future proposed gasoline service station in Hermosa Beach can be estimated from the SCAQMD screening tables.

The issuance of SCAQMD air quality permits and compliance with all SCAQMD, state, and federal regulations regarding stationary TACs, including gasoline dispensing stations and other stationary sources, reduce potential stationary sources of TAC emissions such that sensitive receptors in the city would not be exposed to substantial air pollutant concentrations. The SCAQMD limits public exposure to toxic air contaminants through a number of programs. The SCAQMD reviews the potential for TAC emissions from new and modified stationary sources through the SCAQMD permitting process for stationary sources. TAC emissions from existing stationary sources are limited by:

1) SCAQMD Rule 1401, which requires that construction or reconstruction of a major stationary source emitting hazardous air pollutants listed in Section 112(b) of the Clean Air Act be constructed with Best Available Control Technology and comply with all other applicable requirements.

2) Implementation of the Air Toxics "Hot Spot" (AB 2588) program as described in the Regulatory Setting subsection above.

3) Implementation of the federal Title III Toxics program.

Facilities and equipment that require permits from the SCAQMD are screened from risks from toxic emissions and can be required to install Toxic Best Available Control Technology (T-BACT) to reduce the risks to below significant if deemed necessary by the SCAQMD. T-BACTs are the most up-to-date methods, systems, techniques, and production processes available to achieve the greatest feasible emission reductions for toxic air contaminants.

In addition to these requirements, PLAN Hermosa contains several policies that protect city residents from toxic air pollution. Governance Element Policy 7.5 requires an evaluation and disclosure (e.g., health checklists, health impact assessments) of health impacts or benefits for all discretionary projects. Land Use and Design Element Policy 1.7 ensures the placement of new uses does not create or exacerbate nuisances between different types of land uses, and Sustainability + Conservation Element Policy 3.1 seeks to improve overall respiratory health for residents through regulation of stationary and mobile sources of air pollution, as feasible.

Therefore, this impact would be **less than significant**.

Mitigation Measures

None required.

IMPACT 4.2-6 ***Would PLAN Hermosa Create Objectionable Odors Affecting a Substantial Number of People?*** *Implementation of PLAN Hermosa would guide future development and reuse projects in the city in a manner that could generate odors or expose existing receptors to odors. However, PLAN Hermosa policies and programs and compliance with SCAQMD rules and regulations would result in a* ***less than significant*** *impact.*

The occurrence and severity of odor impacts depends on numerous factors including the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of the receptors. While offensive odors rarely cause physical harm, they can be very unpleasant, leading to considerable distress among the public and often generating complaints to local governments and regulatory agencies. Projects with the potential to frequently expose individuals to objectionable odors would be deemed to have a significant impact. Typical facilities that generate odors include wastewater treatment facilities, sanitary landfills, composting facilities, petroleum refineries, chemical manufacturing plants, and food processing facilities, among others. However, food service, retail, and/or or residential land uses could also generate substantial odor sources from improper garbage disposal.

Hermosa Beach does not contain any large sources of odors. SCAQMD Rule 402 (Nuisance) would prohibit any land use (except agricultural land uses) from generating odors that "endanger the comfort, repose, health or safety of any such persons of the public" (SCAQMD 1976). Agricultural land uses are not permitted within the incorporated city and therefore would not generate substantial odors in Hermosa Beach. Therefore, implementation of PLAN Hermosa and compliance with SCAQMD rules and regulations would ensure that a substantial number of receptors are not exposed to substantial odor emissions. Therefore, this impact would be **less than significant**.

Mitigation Measures

None required.

CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

Although air quality emissions associated with PLAN Hermosa would be compared with SCAQMD thresholds of significance on a project-by-project basis, these emissions also cumulatively contribute to the air quality in the basin. Therefore, the cumulative context for air quality is the South Coast Air Basin. Certain localized pollutants such as CO, PM_{10}, $PM_{2.5}$, and TACs have a cumulative context of the surrounding land uses and emission sources where they would be emitted. The localized cumulative effect of these localized pollutants is important to consider when evaluating impacts on sensitive receptors.

IMPACT 4.2-7 ***Would PLAN Hermosa Contribute to Cumulative Air Quality Impacts?*** *Implementation of PLAN Hermosa in addition to anticipated growth in the South Coast Air Basin would increase the amount of air quality emissions occurring within the basin and affect the region's ability to attain ambient air quality standards. This would result in a* ***cumulatively considerable*** *impact.*

Construction Emissions

As discussed previously, construction air quality emissions would result in a significant and unavoidable impact. This, in combination with other new construction projects in the SCAQMD region, would add to a cumulative effect on air quality pollutant levels in the area. While construction air quality emissions are generally short term, as they only occur during the construction of a project, because the intensity and schedule of construction activities cannot be determined, it would be speculative to conclude that any level of mitigation would reduce daily construction emissions below the SCAQMD thresholds of significance. Implementation of mitigation measures **MM 4.2-2a** through **MM 4.2-2e** would reduce the potential for air quality impacts. However, as stated previously, in many cases, because of the amount of construction required for a project, even if all feasible mitigation is implemented, daily emissions could still exceed the significance thresholds. In addition, the City would not have control over projects outside its boundaries and therefore could not require mitigation for air quality impacts for these projects. Because it has been determined that implementation of mitigation measures **MM 4.2-2a** through **MM 4.2-2e** would not reduce construction-related air quality impacts to a less than significant level, the various future projects would add to the cumulative air quality emissions from construction in the SCAQMD region. As such, this impact would be **cumulatively considerable** and **significant and unavoidable.**

Operational Emissions

Implementation of PLAN Hermosa would generate long-term operational emissions from a variety of proposed land uses. Implementation of PLAN Hermosa Sustainability + Conservation Element, Mobility Element, and Land Use + Design Element policies and programs would reduce mobile and area source emissions associated with operation of future land uses. Because these policies and programs affect a wide range of land use and transportation factors (e.g., accessibility to transit, parking availability, bicycle and pedestrian infrastructure, distance from residential to commercial and employment uses), mobile source emissions could be substantially reduced. Daily operational emissions associated with the proposed land uses would remain below the SCAQMD's operational thresholds of significance. As shown in **Table 4.2-2**, daily operational emissions associated with PLAN Hermosa land uses would not exceed SCAQMD thresholds of significance.

As discussed in Impact 4.2-4, the PLAN Hermosa traffic analysis (see Section 4.14, Transportation) indicates that one signalized intersection in the city would operate at LOS E in 2040, and similar conditions would be expected at other intersections throughout the region. No area in the

SCAQMD region has exceeded the NAAQS for carbon monoxide since 2003 (City of Hermosa Beach 2014). Furthermore, emissions in the future would decrease due to the turnover in vehicle fleets and emissions technology, which is documented in the CARB mobile source emissions model EMFAC2014. Considering this information, it is not anticipated that implementation of PLAN Hermosa would cause a cumulatively considerable contribution to potential CO hot spots in the city or the region.

Implementation of PLAN Hermosa would contribute TAC emissions in the city from mobile, area, and stationary sources associated with proposed land uses. PLAN Hermosa focuses on infill projects and siting residential and commercial land use in proximity to each other to allow non-motorized trips for shopping, work, and recreational trips. Implementation of PLAN Hermosa Mobility Element Policies 8.1, 8.2, 8.5, and 8.6 would reduce TAC emissions from commercial vehicles by limiting idling and consider a prohibition on mobile advertising while encouraging better fuel efficiency and the use of technology that reduces air pollution. As discussed in Impact 4.2-5, CARB's Air Quality and Land Use Handbook identifies acceptable distances at which to place sensitive receptors from TAC sources. Therefore, implementation of PLAN Hermosa would reduce future TAC emissions and avoid siting sensitive receptors near substantial TAC sources. For these reasons, it is not anticipated that PLAN Hermosa would cause a cumulatively considerable contribution to the exposure of sensitive receptors to TAC emissions. Therefore, impacts from operational air quality emissions would be **less than cumulatively considerable**.

Mitigation Measures

Implement mitigation measures **MM 4.2-2a** through **MM 4.2-2e.**

Significance After Mitigation

Even with the implementation of mitigation measures **MM 4.2-2a** through **MM 4.2-2e**, SCAQMD Rule 403, and PLAN Hermosa policies, it is still anticipated that future construction projects, in combination with other construction in the SCAQMD area, would have the potential to generate daily construction emissions that exceed the SCAQMD thresholds of significance. As such, construction-related cumulative air quality impacts would be **cumulatively considerable** and **significant and unavoidable**.

4.2.5 REFERENCES

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