CHAPTER 3

ENVIRONMENTAL SETTING

3.0 ENVIRONMENTAL SETTING

3.1 INTRODUCTION

CEQA Guidelines §15125 requires that an EIR include a description of the environment within the vicinity of a proposed project as it exists at the time the NOP/IS is published, or if no NOP/IS is published, at the time the environmental analyses commences, from both a local and regional perspective. This chapter presents the existing environmental setting for the proposed project against which potential impacts of the projects have been evaluated. This chapter also describes the existing environment around the Refinery, including both the Wilmington Plant and Carson Plant, as applicable that could be adversely affected by the proposed project. This EIR is focused only on the environmental topics identified in the NOP/IS (see Appendix A) that could be significantly adversely affected by the proposed projects. The reader is referred to the NOP/IS for discussion of environmental topics not considered in this EIR, and the rationale for inclusion or exclusion of each environmental topic. The environmental topics identified in this chapter include both a regional and local setting.

3.2 AESTHETICS

3.2.1 AESTHETICS ENVIRONMENTAL SETTING

The NOP/IS (see Appendix A) determined the aesthetic impacts of the proposed project at the ConocoPhillips Carson Plant were less than significant. However, the aesthetic impacts associated with the installation of the WGS at the Wilmington Plant were determined to be potentially significant. Therefore, the aesthetics setting at the ConocoPhillips Los Angeles Refinery Wilmington Plant, and the surrounding areas, are presented in this section.

The ConocoPhillips Wilmington Plant consists of approximately 400 acres and is located in Los Angeles County at 1660 West Anaheim Street, Wilmington, California. The eastern part of the Wilmington Plant borders a residential area, a roofing materials plant, and a portion of the Harbor 110 Freeway. The northern portion of the site borders Harbor Lake Park, Harbor College, Harbor Golf Course, and a small residential area. The western part of the site borders Gaffey Street adjacent to a firing range, vacant fields, recreational fields, and a U.S. Navy fuel storage facility. Finally, the southern portion of the site shares a border with warehouse facilities.

The proposed modifications to the Wilmington Plant will be developed entirely within the existing property boundaries. The Wilmington Plant property has a land use designated as M3 by the City of Los Angeles, which is heavy industrial zoning. The Wilmington Plant is located on the eastern side of the Palos Verdes Peninsula, with the slope of the surrounding topography rising from east to west. To the west of the facility, residential areas located on the hillsides above the facility have unobstructed views overlooking the Wilmington Plant, port areas, and other portions of the Wilmington and Long Beach areas. The Wilmington Plant is made up of equipment that includes numerous above ground storage tanks, columns, and stacks up to approximately 200 feet in height used in the refining process.

Views of the Wilmington Plant from Anaheim Street include the main gate and administration buildings, various refinery units and storage tanks. The primary views of the Wilmington Plant from Gaffey Street are mainly of storage tanks. From the 110 Freeway, the Wilmington Plant is highly visible and dominant features include storage tanks, refinery units, columns and stacks. There is essentially no southern view of the facility as the Wilmington Plant is bordered with a warehouse facilities, but storage tanks exist all along the southern perimeter of the property. Existing views of the Wilmington Plant are shown in Figure 3-1. A number of refinery structures are visible including steam associated with the existing cooling towers.

FIGURE 3-1

View of Wilmington Plant
(near the intersection of Gaffey and Anaheim Street)

3.2.2 REGULATORY SETTING

Recognizing the value of scenic areas and the value of views from roads in such areas, the State Legislature established the California Scenic Highway Program in 1963. This legislation sees scenic highways as "a vital part of the all encompassing effort . . . to protect and enhance California's beauty, amenity and quality of life." Under this program, a number of State highways have been designated as eligible for inclusion as scenic routes. Interstate highways, state highways, and county roads may be designated as scenic under the program. The Master Plan of State Highways Eligible for Official Scenic Highway Designation maps designated highway segments, as well as those that are eligible for designation. Changes to the map require an act of the legislature. There are no designated scenic highways in the vicinity of the Wilmington Plant.

As noted, a corridor protection program must be adopted by the local governments with land use jurisdiction through which the roadway passes as the first step in moving a road from "eligible" to "designated" status. Each designated corridor is monitored by the State and designation may be revoked if a local government fails to enforce the provisions of the corridor protection program.

Counties and municipalities also have scenic route components within their individual general plans. Policies usually encourage the designation of these roadways as scenic corridors, either by local actions or through the State program. Counties and municipalities may also establish regulatory programs or recommend corridor studies to determine the appropriate regulatory program to preserve scenic quality.

In addition to establishing provisions for scenic roads, city and county general plans may include policies for protection of scenic resources, such as hillsides, natural areas, and historic districts. Such policies may restrict new development in areas that maintain scenic vistas.

The Wilmington-Harbor City Community Plan, which is part of the City of Los Angeles General Plan, is made up of neighborhoods with distinctive characteristics. The Community Plan lays out policies and standards for multiple residential, commercial and industrial projects, and for community design. The Community Plan identifies general Design Standards directed at individual projects. In addition, there is a Community Design and Landscaping section that is directed at the community's use of streetscape improvements and landscaping in public spaces and rights-of-way.

The Design Policies in the Community Plan that apply to industrial development are summarized below. The purpose is to create attractive buffers along street frontages of industrial sites, and to serve such practical purposes as security, sound attenuation, the separation of functional areas, and the screening of unsightly nuisances, by:

- Designing the site and building(s) to convey visual interest and to be visually compatible with adjacent uses.

- Treating large expanses of blank walls and tilt-up concrete walls visible from the public right-of-way with contrasting complementary colors, building plane variation, murals, planters and/or other landscape elements to create visual interest.

- Screening of mechanical and electrical equipment from public view.
- Screening of all rooftop equipment and building appurtenances from public view.
- Requiring the enclosure of trash areas for all projects.
- Screening of open storage areas from public view.
- Requiring freestanding walls to use articulations, surface perforations or other elements, and to include plantings of vines or tall shrubs of trees on exterior faces, to relieve long monotonous expanses and mitigate graffiti.
- Using landscaping effectively to screen parking and loading areas form roadways, as a surface treatment adjacent to building walls, and to screen from public view storage areas, trash containers and utility equipment.
- Locating loading facilities at the rear of industrial sites, or alternately, in areas where they can function efficiently yet be screened from the street (or adjacent non-industrial uses) by landscaping and offsite from driveway and access ways.
- Providing on-site parking in areas not interfering with other site activities and which are screened from public view by landscaping, berms, fencing and/or walls.
- New and/or expanded industrial sites have the capability of handling all parking needs, including having adequate on-site areas for trucks awaiting loading or unloading of goods, where applicable, in order to prevent the use of public street for such proposed.
- Integrating exterior lighting with site design and directing exterior lighting onto the project site and locating flood lighting so as not to impact any surrounding residential uses.

3.3 AIR QUALITY

The current air quality setting at the ConocoPhillips Los Angeles Refinery and the surrounding areas are presented in this section.

The ConocoPhillips Los Angeles Refinery is located within the SCAQMD jurisdiction (referred to hereafter as the district). The district consists of the four-county South Coast Air Basin (Basin), that includes Orange, and the non-desert portions of Los Angles, Riverside, and San Bernardino counties, the Riverside County portions of the Salton Sea Air Basin (SSAB), and the Mojave Desert Air Basin (MDAB). The Basin is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto mountains to the north and east.

3.3.1 METEOROLOGICAL CONDITIONS

The climate in the Basin generally is characterized by sparse winter rainfall and hot summers tempered by cool ocean breezes. A temperature inversion, a warm layer of air that traps the cool marine air layer underneath it and prevents vertical mixing, is the prime factor that allows contaminants to accumulate in the Basin. The mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, and Santa Ana winds. The climate of the area is not unique, but the high concentration of mobile and stationary sources of air contaminants in the western portion of the Basin, in addition to the mountains, which surround the perimeter of the Basin, contribute to poor air quality in the region.

3.3.2 TEMPERATURE AND RAINFALL

Temperature affects the air quality of the region in several ways. Local winds are the result of temperature differences between the relatively stable ocean air and the uneven heating and cooling that takes place in the Basin due to a wide variation in topography. Temperature also has a major effect on vertical mixing height and affects chemical and photochemical reaction times. The annual average temperatures vary little throughout the Basin, averaging 75^{o}F. The coastal areas show little variation in temperature on a year round basis due to the moderating effect of the marine influence. On average, August is the warmest month while January is the coolest month. Most of the annual rainfall in the Basin falls between November and April. Annual average rainfall varies from nine inches in Riverside to 14 inches in downtown Los Angeles.

3.3.3 WIND FLOW PATTERNS

Wind flow patterns play an important role in the transport of air pollutants in the Basin. The winds flow from offshore and blow eastward during the daytime hours. In summer, the sea breeze starts in mid-morning, peaks at 10-15 miles per hour, and subsides after sundown. There is a calm period until about midnight. At that time, the land breeze begins from the northwest, typically becoming calm again about sunrise. In winter, the same general wind flow patterns exist except that summer wind speeds average slightly higher than winter wind speeds. This pattern of low wind speeds is a major factor that allows the pollutants to accumulate in the Basin.

The normal wind patterns in the Basin are interrupted by the unstable air accompanying the passing storms during the winter and infrequent strong northeasterly Santa Ana wind flows from the mountains and deserts north of the Basin.

3.3.4 EXISTING AIR QUALITY

Local air quality in the Basin is monitored by the SCAQMD, which operates a network of monitoring stations throughout the Basin. CARB operates additional monitoring stations.

3.3.4.1 Criteria Pollutants

The sources of air contaminants in the Basin vary by pollutant but generally include on-road mobile sources (e.g., automobiles, trucks and buses), other off-road mobile sources (e.g., airplanes, ships, trains, construction equipment, etc.), residential/commercial sources, and industrial/manufacturing sources. Mobile sources are responsible for a large portion of the total Basin emissions of several pollutants.

Mobile sources account for approximately 69 percent of VOC emissions, 92 percent of the NOx emissions, 59 percent of the sulfur dioxide (SO_2) emissions, 98 percent of the carbon monoxide (CO) emissions, and 41 percent of the particulate matter less than ten microns (PM10) emissions (or about 61 percent of the total PM10 emissions when entrained road dust is included) in the Basin (SCAQMD, 2006).

Criteria air pollutants are those pollutants for which the federal and state governments have established ambient air quality standards or criteria for outdoor concentrations in order to protect public health with a margin of safety (see Table 3-1). National Ambient Air Quality Standards (NAAQS) were first authorized by the federal Clean Air Act of 1970 and have been set by the U.S. EPA. California Ambient Air Quality Standards were authorized by the state legislature in 1967 and have been set by CARB. Air quality of a region is considered to be in attainment of the standards if the measured concentrations of air pollutants are continuously equal to or less than the air quality standards over the previous three-year period.

Health-based air quality standards have been established by the U.S. EPA and the CARB for ozone, CO, NOx, PM10, particulate matter less than 2.5 microns in diameter (PM2.5), SOx, and lead. The California standards are more stringent than the federal air quality standards. California also has established standards for sulfate, visibility, hydrogen sulfide, and vinyl chloride. Hydrogen sulfide and vinyl chloride currently are not monitored in the Basin because they are not a regional air quality problem, but are generally associated with localized emission sources. The Basin is currently designated as non-attainment for CO, PM10, PM2.5, and ozone for both state and federal standards, although the Basin has met the federal CO standards and the SCAQMD has applied for re-designation, but it has not been officially re-designated in attainment. The Basin, including the project area, is classified as attainment for both the state and federal standards for NOx, SOx, sulfates, and lead.

3.3.4.2 Regional Air Quality

The SCAQMD monitors levels of various criteria pollutants at 30 monitoring stations. In 2005, the maximum ozone, PM10 and PM2.5 concentrations continued to exceed federal standards by wide margins. Maximum one-hour and eight-hour average ozone concentrations (0.182 ppm and 0.145 ppm, both recorded in the central San Bernardino Mountain area) were 146 and 171 percent of the federal standard, respectively. The central San Bernardino Mountain area has remained as the most affect area in terms of the number of days exceeding the eight-hour federal ozone standard in recent years (SCAQMD, 2005a), with 69 days in 2005, followed by the Santa Clarita Valley with 47 days in 2005 (SCAQMD, 2005a). Other areas that exceeded the state ozone standards included the San Gabriel Valley, San Fernando Valley and Riverside County including the Coachella Valley (SCAQMD, 2005a).

TABLE 3-1
Federal and State Ambient Air Quality Standards

	STATE STANDARD	FEDERAL PRIMARY STANDARD	MOST RELEVANT EFFECTS
AIR POLLUTANT	CONCENTRATION/ AVERAGING TIME	CONCENTRATION/ AVERAGING TIME	
Ozone	0.09 ppm, 1-hr. avg. > 0.070 ppm, 8-hr	0.08 ppm, 8-hr avg>	(a) Short-term exposures: (1) Pulmonary function decrements and localized lung edema (2) Risk to public health implied by alterations in pulmonary morphology and host defense in animals; (b) Long-term exposures: Risk to public health implied by altered connective tissue metabolism and pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans; (c) Vegetation damage; (d) Property damage
Carbon Monoxide	9.0 ppm, 8-hr avg. > 20 ppm, 1-hr avg. >	9 ppm, 8-hr avg.> 35 ppm, 1-hr avg.>	(a) Aggravation of angina pectoris and other aspects of coronary heart disease; (b) Decreased exercise tolerance in persons with peripheral vascular disease and lung disease; (c) Impairment of central nervous system functions; (d) Possible increased risk to fetuses
Nitrogen Dioxide	0.25 ppm, 1-hr avg. >	0.053 ppm, ann. avg.>	(a) Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; (b) Risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; (c) Contribution to atmospheric discoloration
Sulfur Dioxide	0.04 ppm, 24-hr avg.> 0.25 ppm, 1-hr. avg. >	0.03 ppm, ann. avg.> 0.14 ppm, 24-hr avg.>	Bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma
Suspended Particulate Matter (PM10)	20 $\mu g/m^3$, ann. arithmetic mean > 50 $\mu g/m^3$, 24-hr average>	Annual standard revoked in 2006 arithmetic mean > 150 $\mu g/m^3$, 24-hr avg.>	(a) Excess deaths from short-term exposures and exacerbation of symptoms in sensitive patients with respiratory disease; (b) Excess seasonal declines in pulmonary function, especially in children
Suspended Particulate Matter (PM2.5)	12 $\mu g/m^3$, ann. Arithmetic mean	15 $\mu g/m^3$, annual arithmetic mean> 35 $\mu g/m^3$, 24-hour average>[1]	Decreased lung function from exposures and exacerbation of symptoms in sensitive patients with respiratory disease; elderly; children.
Sulfates	25 $\mu g/m^3$, 24-hr avg. >=		(a) Decrease in ventilatory function; (b) Aggravation of asthmatic symptoms; (c) Aggravation of cardio-pulmonary disease; (d) Vegetation damage; (e) Degradation of visibility; (f) Property damage
Lead	1.5 $\mu g/m^3$, 30-day avg. >=	1.5 $\mu g/m^3$, calendar quarter>	(a) Increased body burden; (b) Impairment of blood formation and nerve conduction
Visibility-Reducing Particles	In sufficient amount to give an extinction coefficient >0.23 inverse kilometers (visual range to less than 10 miles) with relative humidity less than 70%, 8-hour average (10am – 6pm PST)		Nephelometry and AISI Tape Sampler; instrumental measurement on days when relative humidity is less than 70 percent

[1] The U.S. EPA lowered the PM2.5 24-hour average standard from 65 ug/m^3 to 35 ug/m^3 in September 2006.

Maximum 24-hour average and annual average PM10 concentrations (131 ug/m^3 recorded in South Coastal Los Angeles County area and 52.0 ug/m^3 recorded in the Metropolitan Riverside County area) were 87 and 103 percent of the federal 24-hour and annual average standards, respectively. Maximum 24-hour average and annual average PM2.5 concentrations (132.7 ug/m^3 recorded in east San Gabriel Valley area and 21.0 ug/m^3 recorded in Metropolitan Riverside County area) were 203 and 139 percent of the federal 24-hour and annual average standards, respectively (SCAQMD, 2005a).

Carbon monoxide concentrations did not exceed the standards in 2005. The highest eight-hour average carbon monoxide concentration recorded (5.9 ppm in south central Los Angeles County area) was 62 percent of the federal carbon monoxide standard. The maximum annual average nitrogen dioxide concentration (0.0313 ppm recorded in the northwest San Bernardino Valley area) was 59 percent of the federal standard. Concentrations of other pollutants remained well below the federal standards (SCAQMD, 2005a).

In 2005, neither federal nor state standards for NO_2, SO_2, lead and sulfates were exceeded. Currently, the district is in attainment with the ambient air quality standards for lead, SO_2, and NO_2 (SCAQMD, 2003a).

The 2007 AQMP includes the attainment demonstration for PM10 PM2.5 by 2015 and the eight-hour ozone standard by 2021, while making expeditious progress towards attainment of the state standards. A "bump up" request will be made to the U.S. EPA to designate the Basin as an "extreme" non-attainment area with an extended attainment data of 2024 for ozone (SCAQMD, 2007c).

3.3.4.3 Local Air Quality

The projects' sites are located within the SCAQMD's South Coastal Los Angeles County monitoring area. Recent background air quality data for criteria pollutants for the South Coast Los Angeles County monitoring station are presented in Table 3-2. The area has shown a general improvement in air quality with decreasing or consistent concentrations of most pollutants (see Table 3-2). Air quality in the South Coastal Los Angeles County monitoring area complies with the state and federal ambient air quality standards for CO, NOx, SOx, lead, and sulfate. The air quality in the area also is in compliance with the federal eight-hour ozone standard, the federal 24-hour PM10 standard, and the federal 24-hour and annual average PM2.5 standards. The air quality in the South Coast Los Angeles County area is not in compliance with the state 24-hour PM10 and PM2.5 standards (SCAQMD, 2005a).

3.3.4.4 ConocoPhillips Los Angeles Refinery Criteria Pollutant Emissions

Operation of the existing ConocoPhillips Los Angeles Refinery results in the emissions of criteria pollutants. The reported emissions of criteria air pollutants from the Refinery for the last two-year period are shown in Table 3-3. The emissions in Table 3-3 are based on actual operations and not the maximum potential to emit. The ConocoPhillips Los Angeles Refinery is permitted for higher emissions than presented in Table 3-3.

TABLE 3-2

Ambient Air Quality South Coastal Los Angeles County 1 Monitoring Station (2001-2005) Maximum Observed Concentrations

CONSTITUENT	2001	2002	2003	2004	2005
Ozone: 1-hour (ppm)	0.091	0.084	0.099	0.090	0.091
Federal Standard	(0)	(0)	(0)	(0)	(0)
State Standard	(0)	(0)	(1)	(0)	(0)
8-hour (ppm)	0.070	0.065	0.071	0.075	0.068
Federal Standard	(0)	(0)	(0)	(0)	(0)
Carbon Monoxide:					
1-hour (ppm)	6.0	6.0	6.0	4.0	4.0
8-hour (ppm)	4.71	4.6	4.7	3.4	3.5
Federal Standard	(0)	(0)	(0)	(0)	(0)
State Standard	(0)	(0)	(0)	(0)	(0)
Nitrogen Dioxide:					
1-hour (ppm)	0.13	0.13	0.14	0.12	0.14
	(--)	(0)	(--)	(--)	(--)
Annual (ppm)	0.0308	0.0298	0.0288	0.0288	0.0241
PM10:					
24-hour (ug/m^3)	91	74	63	72	66
Federal standard	(0)	(0)	(0)	(0)	(0)
State standard	(17.0%)	(8.6%)	(6.6%)	(6.7%)	(8.5%)
Annual (ug/m^3)					
Geometric	34.8	34.1	(--)	(--)	(--)
Arithmetic	37.4	35.9	32.8	33.1	29.6
PM2.5:					
24-hour (ug/m^3)	72.9	62.7	115.2	66.6	53.9
Federal standard	(0.3%)	(0%)	(0.9%)	(0.3%)	(0%)
Annual Arithmetic Mean	21.4	19.5	18.0	17.6	16.0
Sulfur Dioxide:					
1-hour (ppm)	0.05	0.03	0.03	0.04	0.4
	(0)	(0)	(0)	(0)	(0)
24-hour (ppm)	0.012	0.008	0.008	0.012	0.010
	(0)	(0)	(0)	(0)	(0)
Lead:					
30-day (ug/m^3)	0.05	0.03	0.10	0.02	0.01
	(0)	(0)	(0)	(0)	(0)
Quarter (ug/m^3)	0.04	0.02	0.05	0.01	0.01
	(0)	(0)	(0)	(0)	(0)
Sulfate:					
24-hour (ug/m^3)	15.9	17.8	17.8	15.9	16.8
	(0%*)	(0%)	(0%)	(0%)	(0%)

Source: SCAQMD Air Quality Data Annual Summaries 2001-2005.

Notes: (18) = Number of days or percent of samples exceeding the state standard, (--) = Not monitored, ppm = parts per million, ug/m^3 = micrograms per cubic meter, * = Less than 12 full months of data, so data may not be representative.

TABLE 3-3

ConocoPhillips Refinery Baseline Criteria Pollutant Emissions (Tons/Year)

Reporting Period	CO	VOC	NOx	SOx	PM10
ConocoPhillips Wilmington Plant					
2004-2005	727	250	638(1)	486(1)	182
2005-2006	749(1)	262(1)	623	434	284(1)
ConocoPhillips Carson Plant					
2004-2005	474	128	368	202	45
2005-2006	480(1)	139(1)	389(1)	245(1)	63(1)

(1) Baseline emissions are based on peak emissions achieved from the annual emission fee reports prepared for the SCAQMD during July 2004 through June 2005, and July 2005 and June 2006.

3.3.4.5 Toxic Air Contaminants

The California Health and Safety Code (§39655) defines a toxic air contaminant (TAC) as an air pollutant which may cause or contribute to an increase in mortality, an increase in serious illness, or which may pose a present or potential hazard to human health. Under California's TAC program (Assembly Bill 1807, Health and Safety Code §39650 et seq.), the CARB, with the participation of the local air pollution control districts, evaluates and develops any needed control measures for air toxics. The general goal of regulatory agencies is to limit exposure to TACs to the maximum extent feasible.

Monitoring for TACs is limited compared to monitoring for criteria pollutants because toxic pollutant impacts are typically more localized than criteria pollutant impacts. CARB conducts air monitoring for a number of TACs every 12 days at approximately 20 sites throughout California. The Refinery is located closest to the North Long Beach Monitoring station. A summary of the averaged data from 2004 monitoring from the North Long Beach station for various TACs is considered to be an appropriate estimate of the TAC concentration in the vicinity of the Refinery (see Table 3-4).

The SCAQMD measured TAC concentration as part of its Multiple Air Toxic Exposure Study, referred to as the MATES-II study. The purpose of the study is to provide an estimate of exposure to TACs to individuals within the Basin. The SCAQMD conducted air sampling at about 24 different sites for over 30 different TACs between April 1998 and March 1999. The SCAQMD has released a Final Report from this study which indicates the following: (1) cancer risk levels appear to be decreasing since 1990 by about 44 percent to 63 percent; (2) mobile source components dominate the risk; (3) approximately 70 percent of all risk is attributed to diesel particulate emissions; (4) about 20 percent of all risk is attributed to other toxics associated with mobile sources; (5) about 10 percent of all risk is attributed to stationary sources; and (6) no local "hot spots" have been identified. The average carcinogenic risk in the Basin is about 1,400 per million people. This means that 1,400 people out of a million are susceptible to contracting cancer from exposure to the known TACs over a 70-year period of time. The

TABLE 3-4

Ambient Air Quality Toxic Air Contaminants – North Long Beach Maximum Concentration 2005

Pollutant	Annual average	Pollutant	Annual average
VOCs	**ppbv(1)**		**ppbv**
Acetaldehyde	2.6	Ethyl Benzene	0.6
Acetone	20	Formaldehyde	6.1
Acetonitrile	2.3	Methyl Bromide	0.12
Acrolein	0.9	Methyl Chloroform	0.05
Acrylonitrile	0.9	Methyl Ethyl Ketone	0.20
Benzene	1.6	Methyl tertiary - Butyl Ether	0.15
1,3 – Butadiene	0.56	Methylene Chloride	2.4
Carbon Disulfide	1.1	Perchloroethylene	0.18
Carbon Tetrachloride	0.10	Styrene	0.7
Chloroform	0.06	Toluene	4.7
o – Dichlorobenzene	0.15	Trichloroethylene	0.18
p – Dichlorobenzene	0.15	meta/para – Xylene	2.5
cis – 1,3 – Dichloropropene	0.05	Ortho – Xylene	0.8
trans – 1,3 – Dichloropropene	0.05		
PAHs(2)	**nanograms/m^3(3)**		**Nanograms/m^3**
Benzo(a)pyrene	0.61	Benzo(k)fluoranthene	0.019
Benzo(b)fluoranthene	0.51	Dibenz(a,h)anthracene	0.18
Benzo(g,h,i)perylene	1.7	Indeno(1,2,3-cd)pyrene	0.64
Inorganic compounds(4)	**nanograms/m^3**		**nanograms/m^3**
Aluminum	2100	Nickel	21
Antimony	10	Phosphorous	61
Barium	91	Potassium	860
Bromine	15	Rubidium	4
Calcium	2300	Selenium	3
Chlorine	6900	Silicon	5600
Chromium	24	Strontium	26
Cobalt	7.5	Sulfur	3100
Copper	59	Tin	10
Hexavalent Chromium	0.11	Titanium	200
Iron	2000	Uranium	2
Lead	18	Vanadium	46
Manganese	40	Yttrium	3
Mercury	4	Zinc	130
Molybdenum	3	Zirconium	14

Source: CARB, 2005a. Annual Toxics Summary by Monitoring Sites, http://www.arb.ca.gov/adam/toxics/toxics.html

(1) ppbv = parts per billion by volume
(2) The most recent data for PAHs is for 2004.
(3) nanograms/m3 = nanograms per cubic meter
(4) The most recent data for inorganic compounds is from 2003.

cumulative risk averaged over the four counties (Los Angeles, Orange, Riverside, San Bernardino) of the Basin is about 980 in one million when diesel sources are included and about 260 in one million when diesel sources are excluded. Of the monitoring sites in the MATES II study, Wilmington is the closest site to the Refinery. The cancer risk at the Wilmington site, based on monitoring data, was about 380 per million from stationary and mobile sources. The cancer risk from mobile sources (alone) was about 240 per million. The complete Final Report on the MATES-II Study is available from the SCAQMD (SCAQMD, 2000).

CARB completed air monitoring between May 2001 and July 2002, at Wilmington Park Elementary school because of the location of the school in proximity to refiners and the ports (CARB, 2003). Monitoring was completed for over 50 air pollutants. The key findings of the study were the following: (1) the air quality around the Wilmington Park Elementary school is similar to other parts of the Los Angeles urban area; (2) the estimated cancer risk in Wilmington was 278 per million as compared to Long Beach with a cancer risk of 279 per million and downtown Los Angeles at 341 per million; (3) local meteorology patterns in Wilmington appear to favor dispersion of local air pollution; and (4) PM10 levels measured in Wilmington were noticeably higher than in nearby Long Beach (CARB, 2003).

3.3.5 REGULATORY SETTING

Ambient air quality standards in California are the responsibility of, and have been established by, both the U.S. EPA and CARB. These standards have been set at concentrations, which provide margins of safety for the protection of public health and welfare. Federal and state air quality standards are presented in Table 3-1. The SCAQMD has established levels of episode criteria and has indicated measures that must be initiated to immediately reduce contaminant emissions when these levels are reached or exceeded. The federal, state, and local air quality regulations are identified below in further detail.

3.3.5.1 Federal Regulations

The U.S. EPA is responsible for setting and enforcing the NAAQS for ozone, CO, NOx, SOx, PM10, PM2.5, and lead. The U.S. EPA has jurisdiction over emissions sources that are under the authority of the federal government including aircraft, locomotives, and emissions sources outside state waters (Outer Continental Shelf). The U.S. EPA also establishes emission standards for vehicles sold in states other than California. Automobiles sold in California must meet the stricter emission requirements of the CARB.

In 1990, the amendments to the federal CAA conditionally required states to implement programs in federal CO non-attainment areas to require gasoline to contain a minimum oxygen content in the winter beginning in November 1992. In response to the federal CAA requirements to reduce CO emissions, California established a wintertime oxygenate gasoline program requiring between 1.8 and 2.2 weight percent oxygen content in gasoline.

Other federal regulations applicable to the proposed project include Title III of the Clean Air Act, which regulates toxic air contaminants. Title V of the Act establishes a federal permit program. The Refinery has submitted its Title V permit application and the proposed project will require modifications to the Title V application and/or operating permit. The Title V program is implemented by the SCAQMD in the southern California area. The U.S. EPA also has authority over the Prevention of Significant Deterioration (PSD) Program. No PSD review will be required for the proposed project because the proposed refinery modifications will result in a decrease in NOx and SOx emissions.

3.3.5.2 California Regulations

CARB, which became part of the California Environmental Protection Agency in 1991, is responsible for ensuring implementation of the California Clean Air Act and federal Clean Air Act, and for regulating emissions from consumer products and motor vehicles. CARB has established California Ambient Air Quality Standards for all pollutants for which the federal government has NAAQS and also has standards for sulfates, visibility, hydrogen sulfide and vinyl chloride. Hydrogen sulfide and vinyl chloride are not measured at any monitoring stations in the Basin because they are not considered to be a regional air quality problem. California standards are generally more stringent than the NAAQS. CARB has established emission standards for vehicles sold in California and for various types of equipment. CARB also sets fuel specifications to reduce vehicular emissions, although it has no direct regulatory approval authority over the proposed project. Federal and state air quality standards are presented in Table 3-1.

California gasoline specifications are governed by both state and federal agencies. During the past decade, federal and state agencies have imposed numerous requirements on the production and sale of gasoline in California. CARB adopted the Reformulated Gasoline Phase III regulations that required, among other things, that California phase out the use of MTBE in gasoline.

The California Clean Air Act (AB2595) mandates achievement of the maximum degree of emission reductions possible from vehicular and other mobile sources in order to attain the state ambient air quality standards by the earliest practical date.

California also has established a state air toxics program (AB1807, Tanner) which was revised by the new Tanner Bill (AB2728). This program sets forth provisions to implement the national program for control of hazardous air pollutants.

The Air Toxic "Hot Spots" Information and Assessment Act (AB2588), as amended by Senate Bill (SB) 1731, requires operators of certain stationary sources to inventory air toxic emissions from their operations and, if directed to do so by the local air district, prepare a health risk assessment to determine the potential health impacts of such emissions. If the health impacts are determined to be "significant" (greater than 10 per million exposures or non-cancer hazard index greater than 1.0), each facility operator must, upon approval of the health risk assessment, provide public notification to affected individuals.

3.3.5.3 Local Regulations

The Basin is under the jurisdiction of the SCAQMD, which has regulatory authority over stationary source air pollution control and limited authority over mobile sources. The SCAQMD is responsible for air quality planning in the Basin and development of the Air Quality Management Plan (AQMP). The AQMP establishes the strategies that will be used to achieve compliance with national Ambient Air Quality Standards and California Ambient Air Quality Standards in all areas within the SCAQMD's jurisdiction. The SCAQMD generally regulates stationary sources of air pollutants. There are a number of SCAQMD regulations that may apply to the proposed project including Regulation II – Permits, Regulation III – Fees, Regulation IV – Prohibitions, Regulation IX – New Source Performance Standards, Regulation X - National Emissions Standards for Hazardous Air Pollutants (NESHAPS) Regulations, Regulation XI – Source Specific Standards, Regulation XIII – New Source Review, Regulation XIV – New Source Review of Carcinogenic Air Contaminants (including Rule 1401 - New Source Review of Toxic Air Contaminants, and Rule 1403 - Asbestos Emissions from Demolition/Renovation Activities), Regulation XX – Regional Clean Air Incentives Market (RECLAIM) Program, and Regulation XXX – Title V Permits.

3.4 HYDROLOGY AND WATER QUALITY

The NOP/IS (see Appendix A) determined the hydrology and water quality impacts of the proposed project at the ConocoPhillips Carson Plant were less than significant. However, the NOP/IS identified wastewater discharges associated with the WGS at the Wilmington Plant as having the potential for significant adverse water quality impacts. The hydrology and water quality setting at the Wilmington Plant is provided in this section.

3.4.1 SURFACE WATER QUALITY SETTING

The Wilmington Plant is located near the Dominguez Channel and Los Angeles River. The Los Angeles River and the Dominguez Channel are the major drainages that flow into the Los Angeles-Long Beach Harbor complex. Sediments and contaminants are transported into the harbor with the flows from the Los Angeles River and, to a lesser degree, the Dominguez Channel.

The Los Angeles River drains an 832-square mile basin, and enters Long Beach Harbor approximately 2.2 miles east of the proposed project. The Los Angeles River watershed is controlled by a series of dams and an improved river channel with a design flow capacity of 146,000 cubic feet per second.

The Dominguez Channel originates in the area of the Los Angeles International Airport and flows southward into the East Channel of the Los Angeles Harbor. The Dominguez Channel, an 8.5-mile long structure, drains approximately 80 square miles west of the Los Angeles River drainage basin. Permitted discharges from industrial sources are a substantial percentage of the persistent flows in the Dominguez Channel. Water quality objectives and beneficial uses for the Dominguez Channel tidal prism have been established by the Regional Water Quality Control Board, Los Angeles Region, in the Water Quality Control Plan for the Los Angeles River Basin. The Wilmington Plant is located approximately two miles west of the Dominguez Channel, less than a quarter mile from the west basin of the Los Angeles Main Channel, and approximately 4.3 miles west of the Los Angeles River.

3.4.2 WASTEWATER GENERATION

Major sources of wastewater at the Wilmington Plant include water containing impurities from splitters and strippers (stripped sour water); water discharged from cooling towers (blowdown); boiler blowdown; oily water from process uses and washdown water, and contaminated storm water runoff from paved portions of the process areas. A considerable volume of water is lost through evaporation at the cooling towers. No wastewater at the Refinery is discharged directly to local surface waters.

Wastewater streams from the Wilmington Plant include process wastewater and surface water runoff. The Plant has an integrated drain system in which wastewater from all sources is combined and treated in the Oil Recovery Unit (ORU) before discharge to the sewer under a permit from the Los Angeles City Bureau of Sanitation (LACBS). The ORU uses a series of American Petroleum Institute (API) separators and dissolved air floatation units to remove oil and sludge from the wastewater. Two 12-million gallon tanks are available to store wastewater during periods when the water flow exceeds 6,000 gallons per minute (gpm) (e.g., during heavy rains). The wastewater treatment units normally treat about 2.6 million gallons per day (1,800 gpm). The LACBS permit requires monthly sampling for arsenic, cadmium, chromium, copper, cyanides, lead, mercury, nickel, zinc, silver, total phenol, pH, dissolved sulfides, chlorides, suspended solids, chemical oxygen demand, biochemical oxygen demand and ignitability (see Table 3-5). Daily sampling is required for ammonia, oil and grease, selenium and thiosulfate.

TABLE 3-5

Discharge Limitations

Constituent	Local Limits				Federal Limits
	Instan-taneous Maximum mg/l	Daily Maximum mg/l	Monthly Average mg/l	Monthly Average lbs/day	Daily Maximum mg/l
Ammonia	----	100.00	----	----	100.00
Arsenic	----	0.07	----	----	----
Cadmium	----	0.05	----	----	----
Chromium (Total)	----	0.82	----	----	----
Copper	----	0.20	----	----	----
Lead	----	0.20	----	----	----
Mercury	----	0.01	----	----	----
Nickel	----	0.10	----	----	----
Phenol	----	40.00	----	----	----
Silver	5.00	----	----	----	----
Thiosulfate	----	100.00	----	----	----
Zinc	----	0.95	----	----	----
Cyanide (Total)	----	0.50	----	----	----
Cyanide (Free)	2.00	----	----	----	----
Sulfides (Dissolved)	0.10	----	----	----	----
Oil and Grease (Total)	30.00	----	15.00	----	100.00
Ignitability (Flash Point)	----	≥ 140° F	----	----	----
pH (Standard Units)	5.50 – 11.00	----	----	----	----
Selenium	----	----	----	2.90	----

Source: Los Angeles, City of, 2006

3.4.3 SPILL CONTROL AND CONTAINMENT

The Wilmington Plant has a Spill Prevention, Control and Countermeasure (SPCC) Plan, as required by 40 CFR Part 112. The purpose of this plan is to prevent the discharge of oil into navigable waters and to contain such discharge should they occur. The SPCC describes the spill prevention and containment methods implemented at the Wilmington Plant. Primary spill prevention methods implemented by the Wilmington Plant include: automatic tank gauging devices that measure the level in storage tanks; doubled bottom tanks; diking around all tanks to contain leaks or spills; and pipeline integrity testing.

3.4.4 REGULATORY SETTING

The Federal Clean Water Act of 1972 primarily establishes regulations for pollutant discharges into surface waters. This Act requires industries that discharge wastewater to municipal sewer systems to meet pretreatment standards. The regulations authorize the U.S. EPA to set the pretreatment standards. The regulations also allow the local treatment plants to set more stringent wastewater discharge requirements, if necessary, to meet local conditions.

The 1987 amendments to the Clean Water Act enabled the U.S. EPA to regulate, under the National Pollutant Discharge Elimination System program, storm water discharges from industries and large municipal sewer systems. The U.S. EPA set initial permit application requirements in 1990. The State of California, through the State Water Resources Control Board, has authority to issue general industrial storm water permits, which meet U.S. EPA requirements, to specified industries.

The Porter-Cologne Water Quality Act is the state of California's primary water quality control law. It implements the state's responsibilities under the Federal Clean Water Act, but also establishes state wastewater discharge requirements. The RWQCB administers the state requirements as specified under the Porter-Cologne Water Quality Act, which include storm water discharge permits. The LACBS assumes responsibility for establishing discharge standards for sewer discharges into the LACBS's system.

In response to the Federal Act, the State Water Resources Control Board prepared two state-wide plans that address storm water runoff: the California Inland Surface Waters Plan and the California Enclosed Bays and Estuaries Plan. These Plans contain similar provisions and complement each other. Both establish numerous water quality objectives for water bodies. The California Enclosed Bays and Estuaries Plan specifies the Los Angeles-Long Beach Harbor (to which surface water from the Los Angeles River eventually flows) as an enclosed bay.

3.5 TRANSPORTATION AND TRAFFIC

3.5.1 INTRODUCTION

The proposed project will occur at the ConocoPhillips Los Angeles Refinery, which consists of the Carson Plant and the Wilmington Plant. The Carson Plant is located at 1520 East Sepulveda Boulevard, Carson, California, while the Wilmington Plant is located at 1660 West Anaheim Street, Wilmington, California, (see Figures 2-2 and 2-3, respectively). The proposed modifications are entirely within the confines of the existing facilities. The existing transportation and traffic conditions for each site are discussed separately below.

3.5.2 CONOCOPHILLIPS CARSON PLANT

Local Circulation: The Carson Plant is located approximately one mile west of the Long Beach Interstate 710 Freeway and approximately two and one half miles east of the Harbor Interstate 110 Freeway. The Carson Plant is bounded on the north by Sepulveda Boulevard, on the west by Wilmington Avenue; on the south by a branch of the Atchison, Topeka and Santa Fe Railroad; and on the east by Alameda Boulevard.

Wilmington Avenue and Alameda Street are north/south four-lane divided roadways and both are considered to be major highways by the City of Carson Transportation and Infrastructure Element of the General Plan (City of Carson, 2004). Sepulveda Boulevard and 223rd Street are east/west four-lane divided roadways in the project vicinity and both are considered to be major highways by the City of Carson (City of Carson, 2004). Major highways function to connect traffic from collector streets to the major freeway systems as well as to provide access to adjacent land uses. Major highways move large volumes of automobiles, trucks and buses and link principal elements within the City to other adjacent regions. These facilities typically handle inter-city vehicle trips in the magnitude of 25,000 or more vehicles per day (City of Carson, 2004).

Public transportation in the City of Carson is provided primarily by the Carson Circuit, Torrance Transit and the Los Angeles County Metropolitan Transportation Authority (MTA) bus lines. The area near the Carson Plant is served by Carson Circuit (Route F – Business Center South), which serves the south central Carson area. Primary routes served by Route F include Bonita Street between 213th Street and Watson Center Road, 213th Street between Avalon Boulevard and Martin Street, and Wilmington Avenue between Watson Center Road and 223rd Street (City of Carson, 2004).

Existing Traffic Conditions: The operating characteristics of an intersection are defined in terms of the level of service (LOS), which describes the quality of traffic flow based on variations in traffic volume and other variables such as the number of signal phases. LOS A to C operates well. Level C normally is taken as the design level in urban areas outside a regional core. Level D typically is the level for which a metropolitan area street system is designed. Level E represents volumes at or near the capacity of the highway which will result in possible stoppages of momentary duration and fairly unstable traffic flow. Level F occurs when a facility is overloaded and is characterized by stop-and-go (forced flow) traffic with stoppages of long duration.

Peak hour LOS analyses were developed for intersections in the vicinity of the Refinery (see Table 3-6). The LOS analysis indicates typical urban traffic conditions in the area surrounding the Refinery, with all intersections operating at Levels A to C during morning and evening peak hours. All intersections are estimated to operate at LOS A to C during the A.M. and P.M. Peak Hour in 2007 (without the proposed project) (see Table 3-6). The detailed traffic analysis is included as Appendix D herein.

TABLE 3-6

Carson Plant Existing Level of Service Analysis (2007)

INTERSECTION	A.M LOS	Peak Hour V/C	P.M. LOS	Peak Hour V/C
Alameda Street and I-405 NB ramps	A	0.452	A	0.560
Alameda St. and 223rd Connector	A	0.415	A	0.510
ICTF Entry/I-405 Ramps and Wardlow/223rd St.	A	0.517	A	0.493
Alameda Connector and 223rd St.	A	0.430	C	0.731
Alameda St. and Sepulveda Connector	A	0.345	A	0.443
Alameda Connector and Sepulveda Blvd.	A	0.426	A	0.578
CP Entrance and Sepulveda Blvd.	A	0.287	A	0.345
Alameda St. and PCH Connector	A	0.194	A	0.232
Wilmington Ave. and Sepulveda Blvd.	B	0.656	A	0.552

Notes: V/C = Volume to capacity ratio (capacity utilization ratio)
LOS = Level of Service
See Appendix D for detailed traffic analysis.

3.5.3 CONOCOPHILLIPS WILMINGTON PLANT

Local Circulation: The Wilmington Plant is located just off the Harbor Interstate 110 Freeway on Anaheim Street. The Harbor Interstate 110 Freeway is a major north-south freeway and provides the ConocoPhillips Wilmington Plant access to the southern California region and beyond. The Harbor Interstate 110 Freeway provides access to other major freeways including the San Diego Interstate 405 Freeway, the Riverside 91 Freeway, the Santa Ana Interstate 5 Freeway, and the Santa Monica Interstate 10 Freeway, among others.

Major streets in the Wilmington area include Anaheim Street, Pacific Coast Highway, Sepulveda Boulevard and Alameda Street. Alameda Street has been upgraded, expanded and modified to provide a dedicated roadway system for trucks and railcars leaving the Ports of Los Angeles/Long Beach to provide more efficient movements of goods and materials into/out of the port areas.

In addition to the freeway system, railroad facilities service the Wilmington Plant area providing an alternative mode of transportation for the distribution of goods and materials. The area is served by the Union Pacific, and Atchison, Topeka and Santa Fe railroads with several main lines occurring near the Wilmington Plant. The Wilmington Plant is located near the Port of Los Angeles which provides a mode for transportation of goods and materials via marine vessels.

Existing Traffic Conditions: The ConocoPhillips Wilmington Plant is located at 1660 West Anaheim Street in the community of Wilmington, California, approximately one-quarter mile west of the Harbor Interstate 110 Freeway. The Wilmington Plant currently employs about 425 full-time employees. The predominate route used to reach the site is from the Harbor Interstate 110 Freeway at Anaheim Street.

The Harbor Interstate 110 Freeway is a north-south freeway that carries about 84,000 vehicles per day in the vicinity of Anaheim Street. Anaheim Street is an east-west, four lane divided roadway that carries about 20,000 to 24,000 vehicles per day. Gaffey Street is a north-south, four lane divided roadway that carries about 24,000 vehicles per day. Figueroa Street is a north-south two to four lane divided roadway that parallels the eastside of the Harbor Interstate 110 Freeway.

A LOS analysis was completed for local intersections in the area to determine the existing traffic conditions (see Table 3-7). The detailed traffic analysis is included as Appendix D herein. Peak hour LOS analyses were developed for intersections in the vicinity of the Refinery (see Table 3-7). The LOS analysis indicates typical urban traffic conditions in the area surrounding the Refinery, with all intersections operating at Levels A to D during morning and evening peak hours. Two intersections are estimated to operate at LOS D during the A.M. Peak Hour in 2007 (without the proposed project) including Figueroa St and I St./I-110 on-ramp and Gaffey –Palos Verdes Dr. – Vermont – Anaheim St.). All other intersections operate at LOS A to C. One intersection is estimated to operate at LOS D during the P.M. Peak Hour in 2007 (without the proposed project), that being Gaffey –Palos Verdes Dr. – Vermont – Anaheim St.). All other intersections operate at LOS A to C.

TABLE 3-7

Wilmington Plant Existing Level of Service Analysis (2007)

INTERSECTION	**A.M LOS**	**Peak Hour V/C**	**P.M. LOS**	**Peak Hour V/C**
Figueroa St. and Anaheim St.	C	0.733	A	0.570
Figueroa Pl. and Anaheim St.	C	0.757	C	0.772
Figueroa St. and I St./I-110 on-ramp	D	0.848	A	0.600
Figueroa St. and G St./I-110 off-ramp	A	0.301	A	0.308
Figueroa Pl. and I St./I-110 off-ramp	A	0.491	C	0.781
Figueroa Pl. and I-110 on ramp/G St.	A	0.243	A	0.249
CP Gate 11 and Anaheim St.	A	0.422	A	0.443
Gaffey St .- Palos Verdes Dr. – Vermont - Anaheim St.	D	0.860	D	0.900

Notes: V/C = Volume to capacity ratio (capacity utilization ratio)
LOS = Level of Service
See Appendix D for detailed traffic analysis.

3.5.4 REGULATORY SETTING

3.5.4.1 Carson Plant

The Congestion Management Program (CMP) was created statewide and has been implemented locally by the MTA. The City of Carson has established specific objectives and goals for traffic within the City (City of Carson, 2004). It is the City's objective that the traffic LOS on the street system in the community not exceed LOS D. Most of the City's major street intersections and the intersections near the Refinery are in compliance with this policy.

New projects within the City must comply with the CMP for Los Angeles County. The CMP involves monitoring traffic conditions on the designated transportation network, performance measures to evaluate current and future system performance, promotion of alternative transportation methods, analysis of the impact of land use decisions on the transportation network, and mitigation to reduce impacts on the network. The CMP requires traffic studies to analyze CMP monitoring locations where the proposed project adds 150 vehicles or more during AM or PM peak hours on a permanent basis.

The City of Carson must remain in compliance with applicable federal, state and regional regulations, and coordinate with neighboring jurisdictions in order to enhance eligibility for all potential transportation improvement program funding. The policies that the City has established to ensure compliance include: (1) actively participate in various intergovernmental committees and related planning forums associated with county, regional, and state CMPs; (2) ensure that the City remains in compliance with the county, regional and state CMPs through the development of appropriate City programs and traffic impact analysis of new projects impacting the CMP routes; (3) ensure that new roadway links are constructed as designated in the Circulation Element, and link with existing roadways in neighboring jurisdictions in order to allow efficient access into and out of the City; (4) assess adjacent local agencies' plans to ensure compatibility across jurisdictional boundaries; and (5) encourage cooperation with other governmental agencies to provide adequate vehicular traffic movements on streets and through intersections by means of synchronized signalization (City of Carson, 2004).

Freeways are controlled access, high-speed roadways with grade-separated interchanges intended to expedite movement between distant areas in the region. Planning, design, construction and maintenance of freeways in California are the responsibility of the California Department of Transportation (CalTrans).

3.5.4.2 Wilmington Plant

The City of Los Angeles prepared a Transportation Improvement and Mitigation Program (TIMP) for the Wilmington-Harbor City Community Plan through an analysis of the land use impacts on transportation. The TIMP establishes a program of specific measures, which are recommended to be undertaken during the life of the Community Plan.

The Wilmington-Harbor City Community Plan provides specific objectives and goals for traffic in the area. It is the City's objective that the traffic LOS on the street system in the community not exceed LOS E. Most of the Wilmington-Harbor City's major street intersections and intersections near the Wilmington Plant are in compliance with this policy. The City has prepared a Transportation Demand Management (TDM) program for the Wilmington area that includes: (1) encouragement of the formation of Transportation Management Associations in order to assist employers in creating and managing trip reduction programs; (2) participation in local and regional TDM programs; (3) continued implementation of the Wilmington-Harbor City TDM which calls for several measures to be taken in developments to achieve trip reduction targets; (4) implementation of the bikeways Master Plan's recommendations for the area; (5) encourage telecommuting to minimize traffic; (6) encouragement of the development of pedestrian oriented areas; and (7) development of a parking management strategy (City of Los Angeles, 1999).

New projects within the City must comply with the CMP for Los Angeles County, adopted by the Los Angeles County MTA in November 1995. The CMP involves monitoring traffic conditions on the designated transportation network, performance measures to evaluate current and future system performance, promotion of alternative transportation methods, analysis of the impact of land use decisions on the transportation network, and mitigation to reduce impacts on the network.