4.5 AIR QUALITY

An Air Quality Impact Analysis (AQIA), dated May 2007, has been prepared by Giroux and Associates to characterize air quality in the project area and to determine the project's potential impacts to air quality. A Diesel Truck Health Risk Assessment (HRA) was also prepared in April 2007 by Giroux and Associates to analyze the impacts associated with diesel emissions from truck trips generated by the project. The findings of the analyses are summarized below, and the Air Quality Impact Analysis is provided in Appendix D and the Health Risk Assessment is provided in Appendix E of this EIR.

4.5.1 Environmental Setting

Climate

The climate of western San Bernardino County, as with all of Southern California, is governed largely by the strength and location of the semi-permanent high pressure center over the Pacific Ocean and the moderating effects of the nearby vast oceanic heat reservoir. Local climatic conditions in the Ontario area are characterized by very warm summers, mild winters, infrequent rainfall, moderate daytime on-shore breezes, and comfortable humidities (AQIA, 2007 p. 1).

The City of Ontario is located in an inland area where the pollutants generated in coastal portions of the Los Angeles basin undergo photochemical reactions and then move inland across the City during the daily sea breeze cycle. The resulting smog at times gives western San Bernardino County some of the worst air quality in all of California. Fortunately, significant air quality improvement in the last decade suggests that healthful air quality may someday be attained, despite the limited regional meteorological dispersion potential (AQIA, 2007 p. 1).

Winds across the project area display a very uni-directional onshore flow from the southwest-west that is strongest in summer, with a weaker offshore return flow from the northeast that is strongest on winter nights when the land is colder than the ocean. The onshore winds during the day average eight to twelve miles per hour (mph), while the offshore flow is often calm or drifts slowly westward at one to three mph (AQIA, 2007 p. 1).

During the day, any locally generated air emissions are readily transported eastward toward the Banning Pass and northeast toward the Cajon Pass without generating any localized air quality impacts. The nocturnal drainage winds which move slowly across the project area have some potential for localized stagnation; but fortunately, these winds have their origin in the adjacent mountains where background pollution levels are low and any localized contributions do not create any unhealthful impacts (AQIA, 2007 p. 1).

Aside from wind flows, temperature inversions control the vertical mixing of pollutants in the area. During summer, the on-shore flow (a shallow layer of cooler ocean air) is capped by a massive dome of warm, sinking air. This marine/subsidence inversion acts like a giant lid over the basin. It allows for the local mixing of emissions, but confines the entire polluted air mass within the basin until it can escape into the desert or along the thermal chimneys formed along heated mountain slopes (AQIA, 2007 p. 1).

"Hot spots" are localized concentrations of air pollutants where emissions from specific sources may expose individuals to elevated risks of adverse health effects (California Health and Safety Code Section 44300-44309, Air Toxic Hot Spots Information and Assessment Act, 2007). In winter, when the air near the ground cools while the air aloft remains warm, radiation inversions are formed. These trap low-level

emissions such as automobile exhaust near their source. As pollution levels (primarily vehicular exhaust) rise during the seaward return flow, the combination of rising non-local pollution plus local emissions trapped by these radiation inversions can create micro-scale air pollution "hot spots" near freeways, shopping centers, and other traffic concentrations in coastal areas of the Los Angeles Basin. Because the nocturnal airflow down the slopes of the San Gabriel Mountains has its origin in very lightly developed areas of the San Gabriel Mountains, background pollution levels at night in winter are very low in the project area. Local air pollution contributions are insufficient to create any "hot spot" potential when added to the nighttime pollution levels (AQIA, 2007 p. 2).

One other important local wind pattern within the project area occurs when high pressure over the Great Basin creates funneled, gusty down-canyon wind flows. The air moving down slope is warmed by a process called "adiabatic compression". Because the air was already dry at the top of the mountains, it becomes even drier when it reaches the bottoms of local canyons. Often called "Santa Ana" winds, these gusty winds can create dust storms, promote wildfires, blow over trucks and campers on the I-15 Freeway, make dust control difficult, and can cause adverse physiological reactions in some people (AQIA, 2007 p. 1). These high winds affect the City of Ontario and the project site.

Air Quality Regulations

Air quality regulations set standards for levels of air quality pollutants that are considered safe, with an adequate margin of safety, to protect the public health and welfare. Table 4.5-1, *Health Effects of Pollutants*, identifies the adverse effects of exposure to various air pollutants (AQIA, 2007 p. 3).

TABLE 4.5-1
HEALTH EFFECTS OF POLLUTANTS

Pollutants	Sources	Health Effects
Carbon Monoxide (CO)	• Incomplete combustion of fuels and other carbon-containing substances, such as motor vehicle exhaust • Natural events, such as decomposition of organic matter	• Reduced tolerance for exercise • Impairment of mental function • Impairment of fetal development • Death at high levels of exposure • Aggravation of some heart diseases (angina)
Nitrogen Dioxide (NO_2)	• Motor vehicle exhaust • High temperature stationary combustion • Atmospheric chemical reactions	• Aggravation of respiratory illness • Reduced visibility • Reduced plant growth • Formation of acid rain
Ozone (O_3)	• Atmospheric reaction of organic gases with nitrogen oxides in sunlight	• Aggravation of respiratory and cardiovascular diseases • Irritation of eyes • Impairment of cardio-pulmonary function • Plant leaf injury
Lead (Pb)	• Contaminated soils	• Impairment of blood function and nerve construction • Behavioral and hearing problems in children
Respirable Particulate Matter (PM_{10})	• Stationary combustion of solid fuels • Construction activities • Industrial processes	• Reduced lung function • Aggravation of the effects of gaseous pollutants • Aggravation of respiratory and

TABLE 4.5-1
HEALTH EFFECTS OF POLLUTANTS

Pollutants	Sources	Health Effects
	• Atmospheric chemical reactions	cardio-respiratory diseases • Increased cough and chest discomfort • Surface soiling • Reduced visibility
Ultra Fine Particulate Matter ($PM_{2.5}$)	• Fuel combustion in motor vehicles, equipment and industrial sources • Residential and agricultural burning • Industrial processes • Formed from photochemical reactions of other pollutants, including NO_x, sulfur oxides, and organics	• Increased respiratory disease • Lung damage • Cancer and premature death • Reduces visibility and results in surface soiling
Sulfur Dioxide (SO_2)	• Combustion of sulfur-containing fossil fuels • Smelting of sulfur-bearing metal ores • Industrial processes	• Aggravation of respiratory diseases (asthma, emphysema) • Reduced lung function • Irritation of eyes • Reduced visibility • Plant injury • Deterioration of metals, textiles, leather, finished, coatings, etc.

Source: AQIA, 2007 p. 5 and California Air Resources Board Factsheet website, accessed 3/22/2007

The air quality standards are designed to protect those people most susceptible to further respiratory distress such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise, called "sensitive receptors". Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed. Recent research has shown, however, that chronic exposure to ozone, even at the federal clean air standard level, can create unhealthful reactions through pulmonary distress. Just meeting clean air standards may therefore ultimately not be enough to protect human health, such that an additional margin of safety may need to be created to achieve all clean air objectives (AQIA, 2007 p. 3).

The Clean Air Act Amendments (CAAA) of 1970 established national Ambient Air Quality Standards (AAQS), with states retaining the option to adopt more stringent standards or to include other pollutants. Because California already had standards in existence before the federal AAQS were established, and because of unique meteorological conditions in California, there is considerable difference between state and federal standards currently in effect in California, as shown in Table 4.5-2, *Ambient Air Quality Standards* (AQIA, 2007 p. 3).

TABLE 4.5-2
AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	California Standards		Federal Standards		
		Concentration	Method	Primary	Secondary	Method
Ozone (O_3)	1 Hour	0.09 ppm (180 µg/m³)	Ultraviolet Photometry	0.12 ppm (235 µg/m³)	Same as Primary standard	Ultraviolet Photometry
	8 Hour	0.07 ppm (140 µg/m³)		0.08 ppm (157 µg/m³)		
Respirable Particulate Matter (PM_{10})	24 Hour	50 µg/m³	Gravimetric or Beta Attenuation	150 µg/m³	Same as Primary standard	Inertial Separation and Gravimetic Analysis
	Annual Arithmetic Mean	20 µg/m³		50 µg/m³		
Ultra Fine Particulate Matter (PM2.5)	24 Hour	No separate State standard		65 µg/m³	Same as Primary standard	Inertial Separation and Gravimetic Analysis
	Annual Arithmetic Mean	12 µg/m³	Gravimetric or Beta Attenuation	15 µg/m³		
Carbon Monoxide (CO)	8 Hour	9.0 ppm (10 mg/m³)		9 ppm (10 mg/m³)	None	Non-dispersive Infrared Photometry (NDIR)
	1 Hour	20 ppm (23 mg/m³)		35 ppm (40 mg/m³)		
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m³)		-		
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	(new standard pending)	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m³)	Same as Primary standard	Gas Phase Chemiluminescence
	1 Hour	0.25 ppm (470 µg/m³)		-		
Lead (Pb)	30-day average	1.5 µg/m³	Atomic Absorption	-	-	High Volume Sampler and Atomic Absorption
	Calendar Quarter	-		1.5 µg/m³	Same as Primary standard	
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	-	Ultraviolet Fluorescence	0.030 ppm (80 µg/m³)	-	Spectrophotometry (Pararosaniline Method)
	24 Hour	0.04 ppm (105 µg/m³)		0.14 ppm (365 µg/m³)	-	
	3 Hour	-		-	0.5 ppm (1300 µg/m³)	
	1 Hour	0.25 ppm (665 µg/m³)		-	-	
Visibility Reducing Particles	8 Hour (10 am to 6 pm, PST)	Extinction coefficient of 0.23 per kilometer-visibility of ten miles of more (0.07 - 30 miles or more for Lake Tahoe) due to particles when the relative humidity is less than 70 percent. Method: Beta Attenuation and Transmittance through Filter Tape		**No Federal Standards**		
Sulfates	24 Hour	25 µg/m³	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m³)	Ultraviolet Fluorescence			
Vinyl Chloride	24 Hour	0.01 ppm (26 µg/m³)	Gas Chromatography			

ppm – parts per million
$\mu g/m^3$ – micrograms per cubic meter
mg/m^3 - milligrams per cubic meter
Source: California Air Resources Board, 2006

The Federal Clean Air Act (1977 Amendments) requires that areas of the nation that do not meet national clean air standards must have a plan that would bring the area into compliance with all national standards. The South Coast Air Basin (SCAB) does not meet the standards for ozone, nitrogen dioxide, carbon monoxide, or PM_{10}. The SCAQMD and the Southern California Association of Governments (SCAG) adopted an Air Quality Management Plan (AQMP) in 1979, with forecasts for the attainment of clean air standards. The AQMP has been revised several times and the 2003 AQMP outlines the air pollution measures needed to meet federal health-based standards for ozone by 2010 and for PM_{10} by 2006 (AQIA, 2007 p. 8). Currently, the South Coast Air basin is considered in attainment of the nitrogen dioxide, sulfur dioxide, and lead air quality standards. Also, the SCAQMD requested re-designation of the South Coast air basin as an attainment area for CO in 2005 and the U.S. EPA approved the re-designation request and CO maintenance plan for the air basin on May 11, 2007.

With re-designation of the air basin as non-attainment for the 8-hour ozone standard, a new attainment plan was recently adopted in June 2007. The 2007 AQMP includes strategies for ultimately meeting the federal 8-hour ozone standard by 2023, the $PM_{2.5}$ annual standard by 2014, and the $PM_{2.5}$ 24-hour standard by 2020 (Draft Final 2007 AQMP, 2007 p. ES-1). Key emissions reductions strategies in the new AQMP include:

- Ultra-low emissions standards for both new and existing mobile sources (including on-and-off-road heavy-duty trucks, industrial and service equipment, locomotives, ships and other watercraft and aircraft)
- Accelerated fleet turnover to achieve benefits of cleaner engines
- Reformulation of consumer products
- Modernization and technology advancements from stationary sources (refineries, power plants, etc.) (AQIA, 2007 p. 10 and Draft Final 2007 AQMP, 2007 p. ES-1).

Existing Air Quality

Air quality in the City of Ontario is monitored at the Southwest San Bernardino Valley monitoring station in Ontario, which monitors levels of suspended particulates. The Northwest San Bernardino Valley station in Upland monitors, carbon monoxide, nitrogen dioxide, ozone, particulates, lead, and sulfates (AQIA, 2007 p. 6).

Table 4.5-3, *Air Quality Monitoring Data*, summarizes the published monitoring data from the SCAQMD monitoring stations in Ontario and Upland, which are nearest the site.

TABLE 4.5-3
AIR QUALITY MONITORING DATA

Pollutant/Standard	Days Standards Were Exceeded and Maximum Observed Levels				
	2001	2002	2003	2004	2005
Ozone[1]					
1-Hour > 0.09 ppm (S)	53	36	48	31	34
1-Hour > 0.12 ppm (F)*	14	5	15	2	8
8- Hour > 0.08 ppm (F)	33	19	35	18	15
Max 1-Hour Conc. (ppm)	0.174	0.139	0.155	0.138	0.149
Carbon Monoxide[1]					
1-Hour > 20 ppm (S)	0	0	0	0	0
8- Hour > 9 ppm (F, S)	0	0	0	0	0
Max 1-Hour Conc. (ppm)	3.0	4.0	4.0	3.0	3.0

TABLE 4.5-3
AIR QUALITY MONITORING DATA

Pollutant/Standard	Days Standards Were Exceeded and Maximum Observed Levels				
	2001	**2002**	**2003**	**2004**	**2005**
Max 8-Hour Conc. (ppm)	1.75	1.6	2.9	2.1	1.8
Nitrogen Dioxide[1]					
1-Hour > 0.25 ppm (S)	0	0	0	0	0
Max. 1-Hr. Conc. (ppm)	0.13	0.12	0.11	0.11	0.10
Lead[1]					
1-Month ≥ 1.5 $\mu g/m^3$ (S)	0	0	0	0	0
Max. 1-Month Conc. ($\mu g/m^3$)	0.05	0.02	0.02	0.02	0.02
Sulfate[1]					
24-Hour ≥ 25 $\mu g/m^3$ (S)	0	0	0	0	0
Max. 24-Hr. Conc. ($\mu g/m^3$)	10.7	11.5	11.8	9.2	8.4
Respirable Particulates (PM_{10})[2]					
24-Hour > 50 $\mu g/m^3$ (S)	27/64	25/61	18/62	17/58	19/60
24-Hour > 150 $\mu g/m^3$ (F)	1/64	0/61	0/62	0/58	0/60
Max. 24-Hr. Conc. ($\mu g/m^3$)	166	91	149	93	74
Ultra-Fine Particulates ($PM_{2.5}$)[2]					
24-Hour > 65 ($\mu g/m^3$) (F)**	2/113	0/111	3/118	2/112	1/110
Max. 24-Hour Conc. ($\mu g/m^3$)	71.2	64.8	88.9	86.1	87.8
Total Suspended Particulates (TSP) [1]					
Max. 24-Hr. Conc. ($\mu g/m^3$)	171	122	269	127	94

ppm – parts per million $\mu g/m^3$ – micrograms per cubic meter
(S)=State standard (F)=Federal standard
* Standard revoked in 2006 ** - Standard reduced to 35 $\mu g/m^3$ in 2006
1 – Northwest San Bernardino Station (between Foothill and Arrow Highway near Grove Avenue in Upland)
2 – Southwest San Bernardino Station (near Grove and Philadelphia Avenues in Ontario)
Source: SCAQMD 2001-2005 Air Quality Readings, 2002-2006.

Ozone, the primary ingredient in photochemical smog, is obviously the biggest pollution problem in the area. About 3 percent of all days of the year experience a violation of the national hourly ozone standard and 11 percent exceed the State standard. The Federal 8-hour standard has been violated an average of 24 days per year since 2001. While these violations have not changed in the last five years, they are much lower than 10 to 20 years ago and are expected to decline in the future (AQIA, 2007 p. 6).

Levels of respirable particulate matter (PM_{10}) in the area are also high during Santa Ana wind conditions, from the trapped accumulation of soot, roadway dust, and ground disturbance. In Ontario, about 35 percent of all days in the last five years experienced a violation of the State 24-hour PM_{10} standard. However, the less stringent federal 24-hour standard has only been exceeded once in the past five years (AQIA, 2007 pp. 6 and 8).

A substantial fraction of PM_{10} is comprised of ultra-small diameter particulates capable of being inhaled into deep lung tissue ($PM_{2.5}$). Although the number of violations and maximum 24-hour concentrations seem to be declining for PM_{10}, the maximum 24-hour concentrations for $PM_{2.5}$ seem to be slightly increasing. Both the frequency of violations of particulate standards, as well as the high percentage of $PM_{2.5}$, are air quality concerns in the project area (AQIA, 2007 p. 8).

Levels of pollutants such as carbon monoxide and nitrogen oxides are very low near the project site because background levels, even in Ontario never exceed allowable levels. There is dispersive capacity to

accommodate localized vehicular air pollutants such as NO_x or CO without any threat of violating applicable AAQS (AQIA, 2007 p. 8).

Target and Food 4 Less previously shared occupancy of the building at the western section of the site and Toys R Us occupied a freestanding building at the southeastern section of the site. The Target/Food 4 Less and Toys R Us buildings and kiosk on the site have not been in use since 2002-2004. Only, the Hollywood Video store is currently in use. Thus, the site currently generates pollutant emissions from vehicle trips and stationary emissions associated with the video store operations.

Global Warming and Greenhouse Gases

Gases that absorb the infrared radiation of sunlight by trapping heat in the atmosphere are called greenhouses gases (GHGs). As more heat is trapped in the atmosphere than is reflected back towards space (due to rising concentrations of greenhouse gases), an increase in the average temperature of the Earth occurs. Rising temperatures, in turn, produce changes in weather, sea levels, and land use patterns, commonly referred to as "climate change." Thus, human activities that generate GHGs are thought to have a potential impact on regional and global climate change (DOE Greenhouse Gases, Climate Change and Energy website, accessed 6/14/2007).

GHG come from natural and anthropogenic (human) sources and include carbon dioxide, methane, nitrous oxide, ozone, fluorinated gases (chlorofluorocarbons, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride), aerosols, and water vapor. Human sources include the combustion of carbon-bearing fossil fuels for transportation, industrial uses of fossil fuels, industrial wastewater emissions, landfill emissions, refrigerants and sulfur hexafluoride emissions from electricity transmission and distribution, and methane and nitrous oxide from agricultural activities (enteric fermentation and manure management) (CEC Inventory of California Green House Gas Emissions and Sinks: 1990 – 2004, 2006 pp. iii, 5-7).

Fossil fuel consumption (by on-road motor vehicles, off-highway mobile sources, and aircraft) and cement manufacturing are a major source of carbon dioxide and, together, is the single largest source of greenhouse gas emissions and accounts for approximately 55 percent of the greenhouse gas emissions globally. Land use changes and forestry practices account for approximately 19 percent of global GHG, consisting mainly of carbon dioxide emissions. Methane accounts for 16 percent of total GHG and nitrous oxide accounts for 9 percent. Other GHG gases generate only 1 percent of the total GHG (U.S. EPA Global Greenhouse Gas Date website, accessed 6/14/2007).

Global warming due to greenhouse gas (GHG) emissions is a cumulative phenomenon, such that no single development project could generate enough GHG emissions to affect global climate change by itself. Thus, more detailed discussion of this issue is provided at the end of Section 6.0, *Cumulative Impacts*, of this Subsequent EIR.

Threshold of Significance

In accordance with Appendix G of the CEQA Guidelines, a project could have a significant adverse impact on air quality, if its implementation results in any of the following:

- Conflicts with or obstructs implementation of the applicable air quality plan;
- Violates any air quality standard or contributes substantially to an existing or projected air quality violation;

- Results in a cumulatively considerable net increase of any criteria pollutant for which the project region is non- attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);
- Exposes sensitive receptors to substantial pollutant concentrations; or
- Creates objectionable odors affecting a substantial number of people.

The SCAQMD has established thresholds of significance for various pollutants. These are:

Pollutant	Construction (lbs/day)	Operations (lbs/day)
ROG	75	55
NO_x	100	55
CO	550	550
PM_{10}	150	150
$PM_{2.5}$	55	55
SO_x	150	150
Lead (Pb)	3	3
Source: SCAQMD Air Quality Significance Thresholds CEQA Air Quality Handbook, October 2006 Rev.		

Projects that exceed these thresholds are considered to have a significant adverse impact on air quality.

Indicators are also listed in the SCAQMD CEQA Air Quality Handbook that should be used as screening criteria to evaluate the need for further analysis with respect to air quality. These indicators are as follows:

- Project could interfere with the attainment of the federal or state ambient air quality standards by either violating or contributing to an existing or projected air quality violation.
- Project could result in population increases within the regional statistical area which would be in excess of that projected in the AQMP.
- Project could generate vehicle trips that cause a CO "hot spot" (AQIA, 2007 p. 12).

The SCAQMD CEQA Handbook also identifies various secondary significance criteria related to toxic, hazardous, or odorous air contaminants. For toxic air contaminants (TACs), the SCAQMD has indicated that the individual cancer risk significance is considered less than significant if it will lead to less than 1.0 in one million cancer risk exposure. It is also considered insignificant if the risk is from 1.0 to 10 in one million and best available control technology has been used. If the risk is greater than 10 in one million, it is considered significant (SCAQMD Air Quality Significance Thresholds CEQA Air Quality Handbook, October 2006 Rev.).

Because emissions-based thresholds are primarily applicable to regional pollution exposure, the SCAQMD has developed localized exposure criteria as additional suggested significance indicators. These thresholds are based on allowable air pollution increments under various SCAQMD rules. For "attainment" pollutants such as NO_2 or CO or sulfates, a local impact is considered significant if it causes or contributes to a violation of an AAQS. For non-attainment particulate pollutants (PM_{10} or $PM_{2.5}$), an incremental increase may be significant. The EPA has recently rescinded the national AAQS for PM-10 because it is not as directly related to health effects as $PM_{2.5}$. For purposes of analysis, the SCAQMD incremental increase of $PM_{2.5}$ is therefore the local impact threshold to be applied to the proposed project. The 24-hour $PM_{2.5}$ significance threshold is as follows:

Construction	-	10.4 $\mu g/m^3$
Operations	-	2.5 $\mu g/m^3$

(AQIA, 2007 p. 13)

For GHG, CEQA requires a lead agency to determine whether a potential environmental impact may be significant. While thresholds of significance may assist a lead agency in making that determination, no State or relevant local agency, including the City of Ontario, has adopted any threshold related to potential global warming impacts. Nevertheless, Section 15064 of the State CEQA Guidelines provides that a lead agency's determination of significance must result from "careful judgment… based to the extent possible on scientific and factual data." Further, the State CEQA Guidelines caution that an "ironclad definition of significant effect is not always possible because the significance of an activity may vary with the setting" (State CEQA Guidelines, Section 15064, subd. (b).)

Because global warming is a global phenomenon, and not one project would likely effect temperature change on its own, global warming must be analyzed as cumulative impacts. Thus, a project would cause a significant effect if its incremental contribution to global climate change is "cumulatively considerable." Because the significance of a project's incremental contribution will depend on a number of factors, including the setting and project characteristics, the City considered several indicia of significance in reaching its conclusion. These include:

- Quantity of project emissions compared to State- and nation-wide emissions
- Project emissions compared to what would otherwise be permitted in its General Plan designation and zoning category
- Project's potential to interfere with the State's efforts to comply with AB 32

These indicia are relevant to the project analyzed in this document, but may not be relevant to other City projects. Thus, the analysis in this Subsequent EIR may or may not inform the global warming analysis of other unrelated projects in the City.

4.5.2 Environmental Impacts

The Hollywood Video store at the site will continue to generate emissions from vehicles and stationary sources. The proposed project would generate new pollutant emissions during demolition, construction, and operation of the proposed Wal-Mart Supercenter.

Air Quality Management Plan Consistency *(Would the project conflict with or obstruct the implementation of the applicable air quality plan? Would the project result in population increases within the regional statistical area which would be in excess of that projected in the AQMP?)*

Since the AQMP has a regional focus, it does not specifically address the proposed Wal-Mart Supercenter or the redevelopment of the project site. Conformity with adopted plans, forecasts, and programs relative to population, housing, employment and land use is the primary yardstick by which the project can be compared to the AQMP. If the project incorporates any available transportation control measures that can be implemented on a project-specific basis, and if the scope and phasing of a project are consistent with adopted forecasts used by the Regional Comprehensive Plan (RCP), then the project would be consistent with the AQMP and its regional air quality impact would not be considered significant (AQIA, 2007 p. 10).

Since the site is designated for commercial uses and existing structures were formerly used for commercial purposes, the site has been considered as part of the existing developments in the forecasts utilized in the development of the AQMP in 2003 and 2007. The project would not directly increase regional population in excess of the projections used in the AQMP. The proposed project would also incorporate available transportation control measures in accordance with the City's Trip Reduction Ordinance and SCAQMD's Rule 2202. Thus, the proposed redevelopment of the project site is not expected to conflict with the AQMP. However, the SCAQMD does not favor designating a project's regional impact as less than significant solely because the proposed development is consistent with regional growth projections. Thus, project-specific impacts are analyzed below (AQIA, 2007 p. 10).

Global Warming and Greenhouse Gases

The proposed project would generate greenhouse gases (GHGs). Potential GHG emissions from the project would come from construction equipment emissions, employee and patron vehicle travel, and operational electricity consumption or off-site activities such as electrical power generation, product processing, and supply transport. While the proposed Wal-Mart Supercenter would generate GHGs, they would not be near any quantities that would lead to global climate change.

Based on the indicia for significance, project impacts are based on comparisons with local, State, and nationwide emissions, as well as for consistency with California strategies to reduce GHG emissions.

There are no estimates of total GHG emissions coming from the City of Ontario or the County of San Bernardino. Also, the project is not a gasoline refinery, coal burning plant, power generation plant, or other large-scale industrial development that may represent a major GHG contributor in the City of Ontario or the County of San Bernardino. As one of many big box stores in the City and the region, the GHG emissions from the project are not expected to represent a significant amount of GHG emissions in the State of California or in the entire country.

Estimates of primary GHG gases that would be generated by the project and total GHG emissions in the State, County, and world are provided in Table 4.5-4, *Comparative Emission Estimates for Primary GHGs.*

TABLE 4.5-4
COMPARATIVE EMISSION ESTIMATES FOR PRIMARY GHGS (Tg CO_2 Eq / Year)

GHG Gas	Comparative Inventories			
	Wal-Mart Supercenter (2008)	**State of California (2004)**	**United States of America (2005)**	**Global Budget (2004)**
Carbon Dioxide	9.64E-03 (0.00964)	355.9	6,089.5	16,797.1
Methane	7.67E-05 (0.0000767)	27.9	539.3	1,732.7
Nitrous Oxide	3.43E-04 (0.000343)	33.3	468.6	1,285.6
Other GHG	--	74.9	163.0	319.6
Total	1.01E-02(0.0101)	492.0	7,260.4	20,135.0

Sources: CARB EMFAC2007 Model (2007 update); US EPA Methane and Nitrous Oxide Emission Factors, 2004; US EPA Indirect Emissions from Purchases/Sales of Electricity and Steam, 2004; US EPA Indirect Emissions from Purchases/Sales of Electricity and Steam, 2004; UNFCCC GHG Emissions Data, 2006; U.S. EPA U.S. GHG Emission Inventory, 2007; and CEC California GHG Emission Inventory, 2006

As shown, project-generated GHG emissions would represent a very small amount of total GHG. Thus, project impacts are expected to be less than significant. More detailed discussion of this issue is provided at the end of Section 6.0, *Cumulative Impacts*.

The project site is currently designated as General Commercial in the Ontario General Plan Land Use Policy Map (Ontario General Plan Land Use Map, 2007). This land use designation allows commercial retail and service uses with the maximum development intensity set at a floor area ratio (FAR) of 0.40 (Ontario General Plan, 1992 p.7-24). Future development under the General Commercial land use designation would allow as much as 265,367.5 square feet of commercial development on the 15.23-acre portion of the site (excluding the 1.06-acre area occupied by the Hollywood Video store, which has an FAR of 0.15). Since the proposed project would lead to an approximately 190,803-square-foot building on the site (at an FAR of 0.29), the project would result in 28 percent less GHG emissions than development allowed under the General Commercial land use designation.

The site is zoned Specific Plan and the Mountain Village Specific Plan allows the Main Street District to have as much as 388,555 square feet of commercial floor area at a maximum FAR of 0.4, but is anticipated to only have a total of 351,400 square feet (FAR 0.36). This includes 35,500 square feet of new retail uses and 180,000 square feet of existing retail uses on the project site, for a total commercial floor area of 215,500 square feet (MVSP, 1998 p. 116). The Hollywood Video's floor area of 7,035 square feet and the proposed project's floor area of 190,803 square feet equal 197,838 square feet, which is less than the anticipated 215,500 square feet. Thus, the project would result in 8 percent less GHG emissions than the development anticipated under the zoning (Specific Plan) for the site.

The Statewide efforts to reduce GHG emissions in California are outlined in Climate Action Team Report to comply with the California Global Warming Solutions Act of 2006 (or Assembly Bill 32). The project's compliance with strategies outlined in the Climate Action Team Report is discussed in Section 6.2.16, *Global Climate Change and Greenhouse Gases*, at the end of Section 6.0, *Cumulative Impacts*. The analysis shows that the proposed Wal-Mart Supercenter complies with the majority of existing strategies, policies, and regulations to reduce potential GHG emissions. A number of measures are proposed to align the project with existing GHG reduction strategies and reduce its contribution to total GHG in the City, County, State, and nation, as well as globally.

As summarized above and discussed in Section 6.2.16, the GHG emissions from the proposed Wal-Mart Supercenter would represent an insignificant amount of GHG emissions in the State and the nation; would not exceed emissions from future development allowed on-site under the Ontario General Plan and Development Code, including the Mountain Village Specific Plan; and would not interfere or counteract with the State's efforts to reduce GHG emissions. Thus, the project would not conflict with adopted policies to reduce GHG. Project impacts on global warming are considered less than significant.

Air Quality Standards *(Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation? Would the project exceed SCAQMD thresholds of significance?)*

The proposed Wal-Mart Supercenter would generate short-term and long-term pollutant emissions, which could degrade local and regional air quality. The project would involve demolition and construction activities that would generate pollutant emissions. Operation of the proposed Wal-Mart Supercenter would also lead to long-term stationary and vehicle emissions, which would add to air pollution levels in the region.

Demolition and Construction Emissions

Dust is the primary concern during the construction of new buildings and infrastructure. Dust includes small inhalable particulate matter, as well as larger diameter particles that rapidly settle out on any surface adjacent to the source. Because such emissions are not amenable to collection and discharge through a controlled source, they are called "fugitive" emissions (AQIA, 2007 p. 14).

Dust (PM_{10}) emission rates vary as a function of many parameters (soil silt, soil moisture, wind speed, area disturbed, number of vehicles, depth of disturbance or excavation, etc.). While redevelopment projects generally involve less ground disturbance than new development on vacant land, the SCAQMD factor for daily PM_{10} emissions during construction is used to estimate PM_{10} emissions from the project. Approximately 26.4 pounds of PM_{10} are generated per day per acre disturbed when "standard" dust control procedures required by SCAQMD Rule 403 are used. Upgraded dust control procedures will reduce the average daily PM_{10} emission rate to as low as 10 pounds per day when a highly aggressive control program is implemented (AQIA, 2007 p. 14).

The California Air Resources Board (CARB) has developed an emissions computer model (URBEMIS2002) that estimates air pollution emissions in pounds per day for various land uses, area sources, construction projects, and project operations. The URBEMIS2002 model allows mitigation measures to be specified to analyze the effects of mitigation on project emissions. The model uses the Institute of Transportation Engineers' Trip Generation Manual along with the ARB's motor vehicle emissions model, EMFAC, to calculate motor vehicle emissions (California Air Resources Board Urbemis2002 website, accessed 3/13/2007).

The use of the URBEMIS2002 model on the project shows that the average daily disturbance “footprint” for the project will be approximately 8.8 acres. The URBEMIS2002 computer model now considers 10 pounds per acre per day as the “default” rate for PM_{10} emissions, with considerably lower emission rates achievable with additional mitigation (AQIA, 2007 p. 14). PM_{10} emissions are estimated at 232 pounds per day with the application of “standard” dust control, and 88 pounds per day with the application of Reasonably Available Control Measures (RACM) for dust control. The URBEMIS2002 model predicts that use of best available control measures (BACMs) can reduce the PM_{10} emissions rate to only 2 to 3 pounds per acre per day. The model predicts that PM_{10} emissions from fugitive dust associated with demolition, clearing and grading at the site can be reduced from 88.0 pounds per day for an average 8.8-acre disturbance area down to 26.4 pounds per day (URBEMIS2002 model output in Appendix D) (AQIA, 2007 p. 15).

Because of the non-attainment status of the air basin for PM_{10}, the projected PM_{10} emissions that would be generated during demolition and construction activities at the site are considered a significant adverse impact.

Impact 4.5.1: Demolition and construction activities would contribute to the current violation of PM_{10} standards in the South Coast Air Basin.

Use of all available best available control measures (BACMs) is required by Rule 403, even if PM_{10} significance thresholds will not be exceeded by the project without the use of BACMs (AQIA, 2007 p. 15).

The most adverse effect comes from exposure to ultra-fine particulate matter ($PM_{2.5}$) comprised of chemically reactive pollutants such as sulfates, nitrates, or organic material. However, limited $PM_{2.5}$ is generated by construction activity. The SCAQMD states that approximately 20.8 percent of construction activity PM_{10}

should be considered as $PM_{2.5}$, but recent studies suggest this fraction is likely lower (MRI, Proposed Revisions to Find Fraction Ratios Used for AP-42 Fugitive Dust Emissions Factors). Application of the current SCAQMD recommended $PM_{2.5}$ ratio predicts that construction activity $PM_{2.5}$ emissions from the project, relative to the 55 pound per day $PM_{2.5}$ significance threshold, would be 21.7 pounds per day without upgraded mitigation and 6.4 pounds per day with upgraded mitigation (AQIA, 2007 p. 15).

Thus, $PM_{2.5}$ emissions will not exceed thresholds. However, because observed adverse health effects are primarily within the sub-2.5 micron size range (House Committee on Science and Technology Hearings, May 8, 2002), upgraded mitigation to minimize $PM_{2.5}$ emissions are recommended to mitigate a potentially adverse impact (AQIA, 2007 p. 15).

In addition to fine particles that remain suspended in the atmosphere semi-indefinitely, construction activities generate larger particles with shorter atmospheric residence times. This dust is comprised mainly of large diameter inert silicates that are chemically non-reactive and can be readily filtered out by human breathing passages. These fugitive dust particles create a potential soiling nuisance as they settle out on parked cars, outdoor furniture, or landscape foliage, rather than create an adverse health hazard. The deposition distance of dust particles is very close to the source (typically within 100 feet). These dust particles would affect land uses near the project site (AQIA, 2007 p. 15). Compliance with SCAQMD Rule 403 would involve the implementation of dust control measures to reduce fugitive dust and PM_{10} during demolition and construction activities at the site.

Exhaust emissions would result from on- and off-site heavy equipment during demolition and construction activities at the site. Emissions would also be generated during finish construction, especially during the application of paints or other coatings. The types and numbers of equipment would vary among contractors such that such emissions cannot be quantified with certainty. Table 4.5-5, *Equipment Fleet*, lists the prototype construction equipment that would be utilized at the site during various phases of construction (AQIA, 2007 pp. 15-16).

TABLE 4.5-5
EQUIPMENT FLEET

Demolition	Grading	Construction	Finish
2 Concrete Saws	1 Tractor/Backhoe	1 Crane	1 Paver
1 Crushing Equipment	1 Grader	1 Forklift	1 Roller
1 Dozer	2 Off Highway Tractors	2 Tractors/Backhoes	1 Other Equipment
1 Loader	1 Rubber Tired Dozer	1 Trencher	
1 Other Equipment	1 Loader	1 Other Equipment	
Source: AQIA, 2007 p. 16			

Using the equipment fleet above, the URBEMIS2002 computer model estimated the daily emissions from demolition and construction activities on-site. The maximum daily emissions are provided in Table 4.5-6, *Construction Activity Emissions.*

TABLE 4.5-6
CONSTRUCTION ACTIVITY EMISSIONS (lbs/day)

Construction Phase	ROG	NO_x	CO	SO_2	PM_{10} Total	PM_{10} Exhaust	PM_{10} Dust	$PM_{2.5}$*
Demolition**	12.9	109.1	94.0	0.5	30.6	4.2	26.4	9.7
Grading	11.2	79.8	86.2	0.0	91.4	3.4	88.0	21.7
Building Construction	6.9	43.5	57.4	0.0	1.7	1.6	0.1	1.6

TABLE 4.5-6
CONSTRUCTION ACTIVITY EMISSIONS (lbs/day)

Construction Phase	ROG	NO_x	CO	SO_2	PM_{10} Total	PM_{10} Exhaust	PM_{10} Dust	$PM_{2.5}$*
Paving and Finish	26.6	29.8	39.6	0.0	1.0	1.0	0.1	1.0
SCAQMD Threshold	**75**	**100**	**550**	**150**	**150**	**-**	**-**	**55**

* $PM_{2.5}$ = Exhaust PM_{10} + (0.208 x fugitive PM_{10})
**Demolition assumes 1,157 Vehicle Miles Traveled (VMT) of on-road truck travel for debris disposal and demolition of 2,500,000 cubic feet of building volume.
Source: AQIA, 2007 p. 16

Construction emission estimates are based upon sequential construction stages, including demolition and site clearing, grading (including utility excavation), new building construction, paving, and finishing (painting and hard landscaping). Because these functions are sequential, there will be minimal potential for overlap between various construction stages (AQIA 2007 p.16).

ROG emissions will be greatest during the application of paints and coatings during finish construction. Use of low-VOC coatings, as required by SCAQMD rules (i.e., SCAQMD Rule 1113), is presumed to be mandatory in developing the emission estimates for ROG and SO_2 (AQIA, 2007 p. 17).

Emissions of ROG, CO, PM_{10} and SO_2 are estimated to be below their applicable thresholds of significance. As shown, only NO_x emissions during demolition activities are projected to exceed SCAQMD thresholds (AQIA, 2007 p.17). This is regarded as a potentially significant adverse impact.

Aside from on-site work, parkway reconstruction, street chokers, and water line replacement would occur on Fifth Street; a sewer line upgrade on the easement across Hollowell Street; and the new storm drain, travel lane, median, parkway and sidewalk reconstruction, water line replacement, traffic island, and traffic signal would be provided on Mountain Avenue. The construction of these infrastructure and roadway improvements would also generate short-term fugitive dust from grading and excavation and pollutant emission from construction equipment use and vehicle trips. These emissions will be highly dependent on the phasing, timing, equipment and methods of construction, and the contractor. If they occur simultaneous to site construction, additional emissions could be expected over the estimates above. If they occur before or after site construction, the emissions in Table 4.5-6 may represent worst-case daily air quality impacts from the project. Due to the difference between the estimated emissions and SCAQMD thresholds for ROG, CO, SO_2, and PM_{10}, any additional emissions from roadway and infrastructure work is not expected to lead to exceedances of the thresholds. However, there remains a potential for exceeding the threshold for NO_x.(AQIA, 2007 p. 17).

Impact 4.5.2: *Construction activity emissions would exceed South Coast Air Quality Management District (SCAQMD) thresholds for nitrogen oxides.*

Use of combustion engines that employ diesel fuel with a maximum sulfur content of 0.05 percent, limiting equipment idling, use of diesel particulate filters, scheduling construction traffic outside of peak hours, and minimizing conflicts with roadway traffic are expected to reduce NO_x emissions to within threshold limits. These measures would reduce demolition equipment and on-road debris hauling to 97.3 pounds per day (AQIA, 2007 pp. 16, 17 and 27).

Construction equipment exhaust contains carcinogenic compounds within the diesel exhaust particulates. The toxicity of diesel exhaust is evaluated relative to a 24-hour per day, 365 days per year, 70-year

lifetime exposure. Public exposure to heavy equipment operating at the site will represent an extremely small fraction of the dosage assumption to nearby residents, employees, and the local population (AQIA, 2007 p. 17).

Diesel equipment is becoming progressively "cleaner" in response to air quality rules on new off-road equipment. Diesel exhaust emissions from up to six pieces of heavy equipment operating on-site will be dwarfed by diesel exhaust from a large fleet of diesel trucks passing near the site each day on the I-10 Freeway to the north. Any public health risk associated with project-related heavy equipment operations exhaust is therefore not quantifiable, but small (AQIA, 2007 p. 17).

Because of the cumulative impact from large amounts of freeway diesel exhaust, the use of reasonably available control measures to reduce equipment-related diesel particulate matter (DPM) from project construction equipment would reduce exposure of nearby land uses to diesel exhaust, such as the use of diesel particulate filters on construction equipment (AQIA, 2007 p. 17).

Local Significance Thresholds

As part of the SCAQMD's Environmental Justice initiative, it has developed air quality threshold levels to insure that no economically or socially disadvantaged community is exposed to any disproportionate share of additional air pollution. A community such as Ontario is not considered socially or economically disadvantaged. Although the City of Ontario is heavily Hispanic, the City ranks No. 1 in retail sales in the Inland Empire. The median income in the City is seven percent above the San Bernardino County average. The development of the New Model Colony is introducing a substantial stock of higher end housing into the City. In addition, there are no major concentrations of sources of air toxic emissions in the City, based upon ARB documentation. Thus, pollutant emissions from the project would not specifically target a socially or economically disadvantaged community. (AQIA, 2007 p. 18).

The SCAQMD has recommended that local significance thresholds (LST) be applied to CEQA analyses for both construction and project operations in the air basin. However, the LST analysis not required and SCAQMD acknowledges that this should be done at the discretion of the lead agency (AQIA, 2007 p. 18).

The City of Ontario does not normally perform LST analyses. Also, the SCAQMD LST guidelines provide look-up tables for projects up to five acres in size, with the use of dispersion modeling recommended for larger projects. Thus, the LST thresholds are not meaningful for projects over 5 acres, since the site is more than 5 acres in size (AQIA, 2007 p. 18). However, a screening analysis has been provided below in response to the SCAQMD comment letter on the NOP.

Project-related emissions have been compared to LST thresholds as an information item, but not as an applicable impact significance threshold. SCAQMD LST guidelines provide look-up tables for projects up to five acres in size. The use of dispersion modeling is recommended for larger projects. However, if larger project construction activities do not generate emissions exceeding the thresholds for 5-acre projects, they will likely meet LST guidelines with an even larger margin of safety. For project construction activity, the estimated construction emissions are compared to the 5-acre guidelines for an assumed 100-meter separation between the average area of construction and the nearest receptors. These are provided in Table 4.5-7, *LST Thresholds* (AQIA, 2007 p. 18).

TABLE 4.5-7
LST THRESHOLDS (LBS/DAY)

Western SB County	CO	NO_x	Fugitive Dust PM_{10}	Exhaust $PM_{2.5}$
LST Threshold (5 acres)	2,508	550	141	17

TABLE 4.5-7 LST THRESHOLDS (LBS/DAY)				
Western SB County	**CO**	**NO_x**	**Fugitive Dust PM_{10}**	**Exhaust $PM_{2.5}$**
Proposed Project	94	109	92	12
Proposed Project Mitigated	94	97	26	6
* grading exhaust emissions plus ten percent of fugitive dust Source: AQIA, 2007 p. 18				

As shown, the project's CO and NO_x emissions are well below the LST threshold for a 5-acre disturbance area. For an 8.8-acre simultaneous disturbance area, the margin of safety will be even larger. Emissions during construction are not expected to exceed the screening threshold for a 5 acre grading area, with or without upgraded mitigation. Additionally, PM_{10} is not judged to be a good predictor of short-term health impacts, as evidenced by EPA's decision to revoke the national PM_{10} standard (AQIA, 2007 p. 18).

Exhaust $PM_{2.5}$ emissions will be below the LST level and will be further reduced by recommended use of soot traps for construction equipment. Thus, a more advanced LST impact analysis for construction activities is not considered necessary because use of LSTs is voluntary, and project construction will not exceed the screening level thresholds for CO, NOx, and $PM_{2.5}$ (AQIA, 2007 p. 18).

Construction activity air quality impacts occur mainly near the surface disturbance area. There may, however, be some spillover into the surrounding community. That spill-over may be physical as vehicles drop or carry out dirt or as silt is washed into public streets. Passing non-project vehicles then pulverize the dirt to create off-site dust impacts. Spillover may also occur via congestion effects. Construction may entail roadway encroachment, detours, lane closures and competition between construction vehicles (trucks and contractor employee commuting) and ambient traffic for available roadway capacity. Emissions controls require good housekeeping procedures and a construction traffic management plan that will maintain such spillover effects at a less-than-significant level (AQIA, 2007 p. 18).

Vehicle Emissions

The greatest project-related air quality concern centers on the projected 7,981 vehicle trips, which includes trips from patrons/visitors, employees, delivery trucks, and other trips that would come to and from the site. (Bus trips along Fifth Street have been accounted in the existing traffic counts and ambient growth for the area.) (Robert Kahn, pers. comm. 5/8/2007). Mobile source emissions associated with project area growth were calculated using the California Air Resources Board URBEMIS 2002 computer model for the opening year 2008 scenario. Project energy demand met by burning fossil fuels in regional power plants will add NO_x, ROG, and CO emissions from project operations. Results of this analysis are shown in Table 4.5-8, *Project-Related Operational Emissions* (AQIA, 2007 pp. 18-19).

TABLE 4.5-8 PROJECT-RELATED OPERATIONAL EMISSIONS (LBS/DAY)						
	ROG	**NO_x**	**CO**	**PM_{10}**	**SOx**	**$PM_{2.5}$***
Operational Emissions (On-Road Traffic)	50.1	65.8	678.1	67.7	0.4	0.0
Area Source Emissions (Consumer Products & Energy Consumption)	2.9	1.8	2.3	0.0	0.0	11.4
TOTAL	**53.0**	**67.6**	**680.4**	**67.7**	**0.4**	**11.4**
SCAQMD Significance Thresholds	55	55	550	150	150	55
Exceeds Threshold (?)	No	Yes	Yes	No	No	No

TABLE 4.5-8
PROJECT-RELATED OPERATIONAL EMISSIONS (LBS/DAY)

	ROG	NO_x	CO	PM_{10}	SOx	$PM_{2.5}$*
% of Threshold	96	123	124	45	<1	21

* = assuming $PM_{2.5} = 0.169 \times PM_{10}$
Source: AQIA, 2007 p. 21

As shown, the NO_x and CO emissions from the project would exceed SCAQMD thresholds. NO_x emissions have the potential for aggravation of respiratory illness, reduced visibility, reduced plant growth, and acid rain formation. As precursors to regional smog formation, NO_x would transform to ozone, which in turn causes aggravation of respiratory and cardiovascular diseases, irritation of the eyes, impairment of cardio-pulmonary function, and plant leaf injury. CO leads to reduced tolerance for exercise, impairment of mental function, impairment of fetal development, death at high concentrations, and aggravation of some heart diseases (angina). NO_x and CO emissions from mobile sources generated by the project would create a potentially significant air quality impact (AQIA, 2007 pp. 5, 19, and 20).

Impact 4.5.3: *Vehicle emissions associated with the proposed project would exceed South Coast Air Quality Management District (SCAQMD) thresholds for carbon monoxide and nitrogen oxides.*

The project would be implementing trip reduction measures, in accordance with the City's Trip Reduction Ordinance requirements, through the provision of bike racks, preferential parking for employee carpools/vanpools, pedestrian walkways, and loading areas to encourage the use of alternative modes of transportation (OMC Section 9-1.3050). The project would also need to comply with Rule 2202 of the SCAQMD which requires that the project implement various trip reduction measures to meet an emission reduction target (ERT) based on the number of employees at the site. The ERT can be met by the implementation of a variety of optional trip reduction programs and measures selected by the employer for on-site implementation and/or the purchase of credits to offset emissions. In addition, a bus shelter would be constructed at the existing bus stop near the site to encourage the use of public transit services and reduce reliance on the automobile. The location of the commercial uses near residential areas (to the east, south, and west of the site) would also allow residents to walk or bike to the project for goods and services that they may otherwise have to drive farther away to obtain. Energy conservation measures would also contribute to an incremental reduction in the pollutant emissions from the project (SCAQMD Rule 2202, 2004).

However, vehicle emissions from the project are expected to remain significant and adverse.

When NO_x is first released, it is primarily as nitrogen oxide (NO), which is not considered a criteria air pollutant. NO_x becomes itself harmful when it converts to NO_2 or when it participates in the ozone formation process. These conversions occur over time far from the project site. Thus, there is no health risk associated with NO_x emissions above threshold in the immediate project vicinity (AQIA, 2007 p. 20).

CO emissions above the SCAQMD threshold could be potentially harmful in the formation of air pollution "hot spots". However, a screening level hot spot analysis was performed for all major intersections in the project vicinity and summarized below. Based on the Micro-scale CO analysis, no hot spots are expected with the proposed project (AQIA, 2007 pp. 20 and 23).

Thus, the air quality impacts from project-related vehicular emissions are regional in nature. No health risk assessment for NO_x or CO is therefore possible, except to note the regional impact of NO_x (AQIA, 2007 p. 20).

Stationary Emissions

Secondary air quality impacts will occur from the project due to energy consumption in power plants or on-site heaters, stoves, water heaters, etc. Urban developments also create miscellaneous emissions from a variety of sources such as cleaning products, landscaping equipment, or fireplaces, and contribute to off-site emissions at restaurants, gas stations, dry cleaners, or sand and gravel plants. Except for more readily quantifiable energy consumption (stationary sources), many of these small, miscellaneous sources are typically not quantified on a single project basis. These small sources, however, are non-negligible when the individual contributions are summed throughout Southern California (SCAQMD CEQA Handbook website, accessed 3/22/2007).

Use of power and natural gas by the proposed Wal-Mart Supercenter would lead to emissions associated with on-site gas consumption, as well as indirectly by power and gas generation plants at off-site locations. Use of equipment, appliances, and other activities within the proposed commercial building also has the potential to generate stationary emissions. These emissions would largely depend on the type and size of equipment, technology, and the length of use. The area source emissions from the project are not expected to exceed SCAQMD thresholds, as estimated in Table 4.5-8 above, and would not be considered significant. However, energy conservation measures would reduce the pollutant emissions from off-site stationary sources.

Micro-Scale CO Impact Analysis *(Would the project generate vehicle trips that cause a CO "hot spot"?)*

Micro-scale air quality impacts have traditionally been analyzed when the air basin is a non-attainment area for carbon monoxide (CO). However, the SCAQMD has demonstrated in its CO attainment redesignation request to EPA that there are no "hot spots" anywhere in the air basin, even at intersections with much higher volumes, greater congestion, and much higher background CO levels than anywhere in Ontario or near the proposed project site. If the worst-case intersections in the air basin have no "hot spot" potential, any local impacts near the project site will be well below thresholds with an even larger margin of safety (AQIA, 2007 p. 23).

To verify this conclusion, a CO screening analysis was performed at the intersections of Mountain Avenue and Sixth, Fifth, and Fourth Streets near the site. One-hour CO concentrations were calculated on the sidewalks adjacent to these intersections. Peak one-hour CO levels (ppm above background) are summarized in Table~~s~~ 4.5-9, *Micro-Scale Air Quality Impact Assessment*.

TABLE 4.5-9
MICRO-SCALE AIR QUALITY IMPACT ASSESSMENT (ONE-HOUR CO LEVELS IN PPM)

Intersections	Existing	2008	2008 w/Project
AM Peak Hour			
Mountain/ 6th	1.8~~6~~	1.7~~4~~	1.9~~7~~
Mountain/5th	1.7~~3~~	1.6~~2~~	1.7~~2~~
Mountain/4th	1.6~~2~~	1.5~~1~~	1.6~~1~~
PM Peak Hour			
Mountain/ 6th	2.7~~4~~	2.6~~2.3~~	2.9~~5~~
Mountain/5th	2.1~~.7~~	2.0~~1.5~~	2.2~~1.6~~

TABLE 4.5-9
MICRO-SCALE AIR QUALITY IMPACT ASSESSMENT (ONE-HOUR CO LEVELS IN PPM)

Intersections	Existing	2008	2008 w/Project
Mountain/4th	2.1~~.6~~	2.0~~1.5~~	2.1~~.6~~

Decrease in pollutant levels from existing to 2008 are due to increased use of cleaner vehicles.
Source: AQIA, 2007 p. 23

The one-hour CO levels would need to be added to the regional background level to establish the total exposure. Existing one-hour background CO levels in the project vicinity are 3.0 ppm (SCAQMD, 2002-2006). Thus, it would require local contributions of 17 ppm or above to cause the California one-hour CO standard of 20 ppm to be violated. Table 4.5-9 shows that the future maximum AM peak hour local micro-scale CO exposure at nearby intersections would be 2.9~~7~~ ppm. Even if the worst-case background CO level were to occur simultaneously with maximum local stagnation during the peak traffic hours, peak CO levels would equate to 5.9~~7~~ ppm and will be below the one-hour standard (AQIA, 2007 p. 23).

Worst-case one-hour combined levels are even lower than the allowable 8-hour exposure of 9 ppm. Micro-scale air quality impacts from project implementation are thus individually and cumulatively considered to be less than significant (AQIA, 2007 p. 23).

Hazardous Materials and Toxic Emissions *(Would the project generate toxic, hazardous, or odorous air contaminants that may present health risks to the local population? Diesel emissions risk is considered significant if the risk is greater than 10 in one million.)*

Diesel Exhaust
Diesel exhaust is a complex mixture of small carbon particles, microscopic droplets of semi-volatile liquids, and gases and includes over 40 substances listed by the U. S. Environmental Protection Agency (EPA) as hazardous air pollutants. Fifteen of these substances are listed by the International Agency for Research on Cancer (IARC) as known or probable carcinogens. Short-term exposure to diesel exhaust at high concentrations have been observed to cause increased cough, labored breathing, chest tightness and wheezing and could induce inflammatory immunological reactions such as asthma and human reactions to nasal allergens (HRA, 2007 p. 1).

As indicated earlier, diesel emissions risk is considered less than significant if it will lead to less than 1.0 in one million cancer risk exposure. It is also considered insignificant if the risk is from 1.0 to 10 in one million and best available control technology has been used. If the risk is greater than 10 in one million, it is a considered significant impact (SCAQMD Air Quality Significance Thresholds, 2006 revised).

The proposed project will utilize diesel-fueled demolition and construction equipment during the short-term and tractor-trailer delivery trucks during long-term operations. Because the demolition and construction phases would be much less than 70 years and daytime dispersion is generally good in Ontario, only the operational impacts were considered for detailed analysis in the HRA.

For the long-term truck use, approximately 35 Wal-Mart semi-trucks are expected to visit the project site weekly during a 6-day per week delivery window. Thus, there will be 6 semi-trucks per day on-site, with 3 trucks delivering to each of the two loading dock areas. A health risk screening analysis for 3 daily diesel truck deliveries was performed using the EPA SCREEN3 computer model. If the screening analysis using conservative impact assumptions demonstrates no significant health risk to off-site residences, schools and other sensitive receptors, no formal health risk assessment (HRA) is required.

The screening analysis predicts a risk for nearby sensitive receptors of 0.090 in a million, which is considered less than significant (AQIA, 2007 p. 24).

The screening analysis for cancer risk from 35 Wal-Mart semi-trucks shows that diesel emissions would be below the significance threshold. The analysis assumed that exhaust emissions will be spread throughout the site, instead of focusing them at the loading docks. The analysis also did not include vendor vehicles, such as trucks bringing soft drinks, beer, or bottled water that might be diesel fueled. Thus, a more detailed Health Risk Assessment (HRA) was undertaken using hour-by-hour dispersion modeling (AQIA, 2007 p. 28).

The Industrial Source Complex Short Term computer model (ISCST3) was used to calculate the diesel particulate matter (DPM) exposure from diesel delivery truck operations at the site. In addition to the estimated 35 weekly Wal-Mart delivery trucks, it was also assumed that 35 vendor trucks (for soft drinks, bottled water, beer, etc.) will be diesel-fueled. Each truck was assumed to idle for approximately 10 minutes on-site (5 minute idling is the maximum allowed by law during each activity), and to spend 4 minutes each (2 minutes in, 2 minutes out) traveling on the site. The EMFAC2007 computer model was used to estimate idling and running emissions from 10 diesel trucks per day (70 trucks per week) between 2008 and 2077 (70-year analysis protocol) (HRA, 2007 p. 2).

The findings show that the maximum excess cancer risk for a person that remains outside their home for 70 years for 365 days per year for 24 hours per day would be 0.44 in a million, due to exposure to DPM emissions from the project site. The point of maximum exposure is the condominium units located just west of the northern loading dock. Dwelling units to the south and east would have less exposure and, thus, less risk. Since this risk is less than one in a million, it is considered less than significant. When the unrealistic assumption of a person chained to their outside porch from cradle to grave is additionally modified, the margin of exposure safety increases dramatically. Thus, diesel truck delivery activities associated with the project would not expose any off-site residents to a significant DPM exposure risk (HRA, 2007 p. 2 and AQIA, 2007 p. 25).

Hazardous Materials Use
Existing structures to be demolished were built when hazardous compounds were routinely used as building products. Some of the buildings on the site were built in 1964, 1970, and 1973 when asbestos was still routinely used. Thus, there may be asbestos containing materials (ACMs), lead based paint (LBP), or other harmful building materials within these structures (AQIA, 2007 p. 25). Demolition activities will need to comply with SCAQMD guidelines for asbestos removal and disposal. This issue is addressed further in Section 4.13, *Human Health and Hazards*, of this EIR.

Regional Air Quality Violations *(Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non- attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors? Would the project interfere with the attainment of the federal or state ambient air quality standards by either violating or contributing to an existing or projected air quality violation?)*

Contribution to Existing Violations
The South Coast Air basin is considered a non-attainment area for ozone and particulate matter (AQIA, 2007 p. 8). Thus, project-generated emissions of reactive organic gases and nitrogen oxides that lead to ozone formation and emissions of particulate matter ($PM_{2.5}$) would contribute to existing violations of air quality standards. As discussed above, the project would generate these pollutants during demolition and construction activities, from vehicles coming to and from the site, and from stationary and area sources.

Thus, the project would lead to significant adverse impacts related to the generation of air pollutants and would cause continued violation of air quality standards in the South Coast Air Basin.

The SCAQMD recently updated the AQMP, which identified strategies for the region to meet the ozone and particulate matter standards by set deadlines. As discussed earlier, these strategies include the adoption of ultra-low emissions standards for both new and existing mobile sources (including on-and-off-road heavy trucks, industrial and service equipment, locomotives, ships and aircraft); an accelerated fleet turnover to achieve benefits of cleaner engines; reformulation of consumer products; and modernization and technology advancements from stationary sources (refineries, power plants, etc.) (AQIA, 2007 p. 10 and Draft Final 2007 AQMP, 2007 p. ES-1).

The project would comply with the City's Trip Reduction Ordinance and Rule 2202 of the SCAQMD, as well as other applicable SCAQMD rules and regulations that implement the AQMP. While the project would contribute to regional air pollution levels, it would not interfere with programs and strategies outlined in the AQMP that would allow the region to meet clean air standards by set deadlines. No conflict with the AQMP is expected from the project.

Sensitive Receptors *(Would the project expose sensitive receptors to substantial pollutant concentrations?)*

Sensitive receptors include young children, the elderly, and the acutely and chronically ill (especially those with cardio-respiratory disease). Residential areas are considered to be sensitive to air pollution exposure because they may be occupied for extended periods, and residents may be outdoors when pollutant levels are highest. Schools and parks are similarly considered to be sensitive receptors due to the presence of children in these areas throughout most of the day and persons engaged in strenuous exercise. Commercial uses are considered less sensitive to air pollution exposure because they are populated by mainly healthy adults for limited periods in an indoor environment. Sensitive receptors near the site include residential uses to the east, south, and west of the site. Schools are located near the project site, but not immediately adjacent to the site. Munoz Park is located across Fifth Street, southwest of the site (AQIA, 2007 p. 13). In addition, residences are located adjacent to the sewer line segment to be upgraded, located on an easement running along the alignment of Cypress Avenue/Granite Avenue where it intersects with Hollowell Street.

The nearest schools to the project site are El Camino Elementary School (0.4 mile west), Hawthorne Elementary School (0.52 mile east), Elderberry Elementary School (0.48 mile south), Vernon Middle School (0.76 mile southwest), Buena Vista Arts Integrated School (0.64 mile southwest), Redeemer Lutheran School (0.37 mile northeast) and Citrus Elementary School (0.63 mile northeast) (Thomas Guide, 2005 pp. 571, 572, 601, 602). Because residential uses are considered equally sensitive as schools, and because the nearest residences are closer than off-site schools, residential exposure was evaluated as the potentially maximally impacted sensitive receptor (AQIA, 2007 p. 13).

Many mobile air pollutants require additional transformation to convert into their most unhealthful forms. That conversion process occurs several hours later and miles away. Impacts on sensitive receptors are localized and come mainly from "primary" pollutants that require no additional transformation. Primary pollutants include particulate matter (both from soil dust and from diesel exhaust) and carbon monoxide (CO) (AQIA, 2007 p. 13). Project-related emissions of nitrogen oxides (NO_x) or reactive organic gases (ROG), contributors to regional smog formation, are less critical in local sensitive receptor exposure (AQIA, 2007 pp. 13-14).

Pollutant emissions from demolition and construction activities on the site may affect adjacent residential uses and users of the park near the site, as well as residences near the location of the sewer line upgrade. As discussed earlier, the project would implement BACMs, as required under SCAQMD Rule 403, which would reduce fugitive dust emissions and nuisance impacts on adjacent residences and Munoz Park. Schools are located farther away and would not be noticeably exposed to fugitive dust emissions and nuisance impacts (AQIA, 2007 p. 13).

Emissions from vehicles coming to and from the site would not create micro-scale CO concentrations that may affect nearby land uses (AQIA, 2007 p. 23). In addition, diesel exhaust emissions and odors from the project are not expected to generate significant adverse impacts due to the mobile nature of equipment (AQIA, 2007 p. 17).

The proposed project would need to comply with pertinent SCAQMD regulations. These include Rule II, which requires a SCAQMD permit for construction or operation of equipment which may generate air contaminants, such as standby generators, fire pump engine, or any operation generating pollutant emissions or the use of any engine with more than 50 horsepower; Rule 401, which prohibits visible emissions; Rule 402, which prohibits air contaminants or other material which could cause injury, nuisance, or annoyance to the public; Rule 403, which requires fugitive dust control measures to prevent visible dust from any active operation, open storage pile, or disturbed surface area (SCAQMD Rule Book).

SCAQMD Rules 431.1 and 431.2 regulate the use of low sulfur fuel in stationary equipment. Stationary equipment and appliances also need to meet the SCAQMD standards for the performance of new stationary sources (Rule IX) and national emission standards for hazardous air pollutants (Rule X). Rule 1113 requires that architectural coatings contain no more than 250 grams of volatile organic compounds (VOC) per liter of coating (2.08 pounds per gallon). Rule 1168 also requires that adhesives, adhesive bonding primers, adhesive primers, sealants, sealant primers, or any other primers contain no more than 250 grams of VOC per liter. The project would need to use, as well as sell, paint, adhesives, and sealants that meet this standard (SCAQMD Rule Book).

SCAQMD Rule 1403 provides standards for asbestos emissions from demolition and renovation activities, which the project would need to comply with. SCAQMD Rule 2202 requires an employer who employs 250 or more employees to provide incentives or other measures to reduce employee vehicle trips to and from the site through the use of carpools/vanpools, public transit, bicycles, and walking. Similar to the City's Trip Reduction Ordinance, the project would need to comply with Rule 2202 by the submission application forms for the initial project opening and annual updates thereafter to identify of trip reduction options that would reduce emissions generated by employee commutes (SCAQMD Rule Book).

Compliance with pertinent SCAQMD rules and regulations would avoid significant adverse impacts on sensitive receptors located near the site and the sewer line upgrade.

Objectionable Odors *(Would the project create objectionable odors affecting a substantial number of people?)*

The proposed project would include a general merchandise store, a grocery store, the sale of alcoholic beverages, banking services, a game arcade, and an outdoor garden center. These uses do not generally result in objectionable odors (as associated with agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting facilities, refineries, landfills, dairies, and fiberglass molding facilities). No sources of objectionable odors are located near the site, and no sources of

objectionable odors would be introduced by the project (SCAQMD CEQA Air Quality Handbook, 1993 p. 5-11).

During construction, there may be localized instances when the characteristic diesel exhaust odor is noticeable from construction equipment and asphalt paving, but the mobile nature of equipment and the transitory exposure would be a brief nuisance and would not lead to the micro-scale violation of air quality standards (AQIA, 2007 p. 17). Thus, adverse impact in terms of objectionable odors during demolition and construction activities would be less than significant.

The commercial development proposed on the site would not involve the handling of large quantities of solid waste materials, chemicals, food products, or other odorous materials, and has no potential to create objectionable odors (SCAQMD CEQA Air Quality Handbook, 1993 p. 5-11). Vehicle use of the internal or adjacent roads is not expected to involve or to generate odorous emissions, although vehicle idling may generate carbon monoxide and NO_x fumes at local intersections. This impact is similar to vehicle exhaust generation along any other major roadway in the City or in the region and is not expected to be considered significant.

Trash bins would be covered and maintained regularly in accordance with standards outlined in the City's Municipal Code. Disposal of on-site solid wastes will be done at least weekly, as required by the City (OMC Title 6, Chapter 3). No objectionable odors from on-site trash and that may affect a substantial number of people are expected. Impacts related to objectionable odors would be less than significant.

4.5.4 Previous Analysis

To the extent applicable, this Subsequent EIR tiers off previous environmental documents relating to the development of the project site. As outlined in Section 1.2.1, *Previous Environmental Review*, previous analyses include a Supplemental EIR considering the environmental impacts associated with future development within the Mountain Village Specific Plan area (which included the project site) and the EIR analyzing the environmental impacts of new development and redevelopment within the Added Area, which was part of Amendment No. 1 to the Ontario Redevelopment Project No. 2.

While baseline conditions in this Subsequent EIR reflect the present situation, the linkages between the three documents remain pertinent to the environmental review of the Wal-Mart Supercenter proposal. The following discussion summarizes the salient points of similarity/difference between the previous documents and the Subsequent EIR and, where similar impacts are present, applicable policies, standard conditions or mitigation measures in the previous documents are identified for incorporation or implementation by the current project, where appropriate.

Supplemental EIR for Mountain Village Specific Plan

The Supplemental EIR for the Mountain Village Specific Plan estimated construction and operational air quality impacts from existing and future developments in the Specific Plan area and identified measures to reduce air quality impacts. However, the Supplemental EIR stated that implementation of the mitigation measures would not reduce impacts to less than significant levels and unavoidable air quality impacts are expected. The Supplemental EIR also stated that if employment growth in the County does not keep pace with residential growth, future development may add to jobs/housing imbalance. (Jobs/housing balance is defined by SCAG as the availability of adequate housing to house workers employed within a defined area or adequate employment within a defined area to fill the housing supply. Jobs/housing balance is expected to lead to shorter commutes for workers, among other benefits, and consequently, less

vehicle emissions in the region (The New Economy and Jobs/Housing Balance in Southern California, 2001 pp. 7 and 15).)

The proposed Wal-Mart Supercenter would generate pollutant emissions during demolition and construction activities at the site and from stationary equipment used during commercial operations of the project. Mitigation to reduce short-term emissions would reduce impacts to less than significant levels. Vehicles coming to and from the site would also generate pollutant emissions in the region and power and gas consumption at the site would indirectly lead to emissions from power and gas generation plants. The long-term air quality impacts of the project would exceed SCAQMD thresholds.

As analyzed in the previous EIR, significant adverse impacts on air quality are expected with the new development in the Specific Plan area and on the project site. The Supplemental EIR provided standard conditions and mitigation measures to reduce potentially significant adverse air quality impacts. These are listed below, along with the project's compliance.

Standard Condition/Mitigation Measure	Project Compliance
SC 4.2-1: SCAQMD Rule 403, which requires that "every reasonable precaution (is taken) to minimize fugitive dust emissions…" from grading operations to control particulate emissions, shall be implemented during the grading/construction phase.	The project shall implement dust control measures, in accordance with SCAQMD Rule 403, as a standard condition below.
SC 4.2-2: Adherence to SCAQMD Rules 431.1 and 431.2 which require the use of low sulfur fuel for stationary construction equipment.	The project shall comply with SCAQMD Rules 431.1 and 431.2 regarding the use of low sulfur fuel in stationary equipment, as a standard condition below.
SC 4.2.3: The project shall comply with Title 24 energy-efficient design regulations, as well as the provision of window glazing, wall insulation, and efficient ventilation methods n accordance with Uniform Building Code requirements.	The project shall use energy efficient appliances and implement energy conservation measures, in accordance with Title 24 and the Uniform Building Code, as a standard condition.
MM 4.2-1: The City of Ontario shall assist in implementing Transportation Demand Management measures related to the proposed project. The AQMP contains a number of transportation control measures (TCMs) which should be considered for inclusion where possible in project planning. These measures, not all of which can be fully implemented in a commercial traffic environment, include: ➢ Improved public transit ➢ Area wide carpool program ➢ On street parking controls ➢ Park and ride lots ➢ Incentives for carpools, transit, bicycles, and walking ➢ Bicycle lanes and safe storage ➢ Staggered work hours ➢ Traffic flow improvements	The project would comply with the City's Trip Reduction Ordinance and would provide bike racks, passenger loading areas, preferential carpool/vanpool parking, and pedestrian walkways. The project would also provide staggered work hours (Brent McManigal, pers. comm. 1/16/2007) and would include the widening of Mountain Avenue, construction of Hawthorne Street and Main Street, construction of a bus shelter on Fifth Street, and installation of a traffic signal at Hawthorne Street and Mountain Avenue.
MM 4.2-2a: Under supervision of the City of Ontario,	The project shall implement these dust control

Standard Condition/Mitigation Measure	Project Compliance
construction contractors shall implement a dust control program. Dust control procedures shall entail: ➢ Termination of construction activities on unpaved surfaces when winds exceed 25 mph. ➢ Stabilize disturbed areas if construction is delayed. ➢ Limit the simultaneous disturbance area to 5 acres or use enhanced dust control for any large single project.	measures, as outlined below.
MM 4.2-2b: Under supervision of the City of Ontario, construction contractors shall utilize measures to prevent dirt from being tracked, washed, blown or otherwise conveyed onto paved roadways, and shall wash or sweep the construction access points from any public roadway on a daily basis.	The project shall implement this mitigation measure, as outlined below.
MM 4.2-2c: Trucks hauling dirt on public roads to and from the site shall be covered during transport. Haul truck drivers will water the load prior to leaving the site to prevent soil loss during transport.	The project shall implement this measure, as outlined below.
MM 4.2-2d: Construction management procedures required by the City of Ontario and other jurisdictions shall be implemented. Contractor personnel responsible for supervision and the appropriate actions to be taken for the following measures shall be identified. ➢ Sandbag construction sites for erosion control. ➢ Conduct pre-construction assessments and perform remediation consistent with air hazards criteria in SCAQMD rules and regulations ➢ Truck routes and schedules for receipt of materials shall be coordinated with City staff. Construction operations shall be scheduled to avoid impacts during peak hours, where feasible. ➢ Where feasible, truck and heavy equipment, shall limit allowable idling time to ten (10) minutes.	The project shall implement these erosion control measures as part of its Stormwater Pollution Prevention Plan and dust control plan, as outlined below.
M 4.2-2e: Equipment shall be maintained in proper tune; 90-day low- NO_x tune-ups shall be required for off-road equipment.	The project shall implement this measure, as outlined below.
MM 4.2-3a: Lane closures or detours shall require coordination with the City staff. To avoid impacts to local traffic, construction vehicles shall be required to park off traveled roadways, where feasible.	The project shall conduct lane closures and detours in accordance with the Greenbook. The project shall limit or restrict parking of construction vehicles away from roadways, as

Standard Condition/Mitigation Measure	Project Compliance
	outlined below.
MM 4.2-3b: Encourage car pooling for construction workers.	The project shall implement this measure, as outlined below.

The proposed project would implement these standard conditions and mitigation measures, as provided below.

EIR for Amendment No. 1

The EIR for Amendment No. 1 indicated that future development and redevelopment in the Added Area, including the project site, would result in air quality impacts associated with construction activities (demolition, grading, equipment, and vehicle emissions), vehicle trips, industrial processes, use of stationary equipment and off-site power and gas generation. Estimates of emissions from redevelopment and buildout of the Added Area were provided and found to exceed SCAQMD thresholds. The analysis found that compliance with SCAQMD regulations, the City's Transportation Demand Management Ordinance, and the Ontario General Plan would reduce these emissions but impacts would remain significant.

Emissions from the project have been accounted for in the estimates in the EIR for Amendment No. 1. The project would comply with applicable SCAQMD regulations, the City's Trip Reduction Ordinance, and the Ontario General Plan. The proposed project would provide bike racks, preferential parking for carpools, pedestrian walkways, and passenger loading areas, as required under the City's Trip Reduction Ordinance. The project would also comply with applicable SCAQMD regulations on fugitive dust control, architectural coatings, asbestos removal, and stationary equipment.

As analyzed in the previous EIR, significant adverse impacts on air quality are expected with the new development and redevelopment in the Added Area, including the project site. The EIR for Amendment No. 1 identified policies in the Ontario General Plan, which would reduce air quality impacts. These are listed below, along with the project's compliance.

General Plan Policy in EIR	Project Compliance
1. Require that developers clear only "necessary" acreage during construction. Acreage cleared should reflect the prospect of development in the immediate future, as well as the contractor's ability to control windblown dust during a high wind episode. (Hazards Element Policy 4.3)	The project shall minimize the ground disturbance area and implement dust control measures, as outlined below.
2. Incorporate mandatory dust control measures similar to those required by the County into the City Development Code, including: • Pre-watering and 24 hour sprinkler irrigation on job sites; • Vegetative cover with temporary irrigation on idle lands after grading is complete. (Hazards Element Policy 4.4)	The project shall implement dust control measures, as outlined below.
3. Require traffic reduction measures, such as ridesharing and staggered work hours for	The project shall comply with City's Trip Reduction Ordinance requirements, including the

General Plan Policy in EIR	Project Compliance
employers with more than 100 employees. (Natural Resources Element Policy 2.2)	provision of preferential parking for employee carpools/vanpools and will provide staggered work hours (Brent McManigal, pers. comm. 1/16/2007).
4. Promote the growth of "clean" industry which does not increase pollution from point sources. (Natural Resources Element Policy 2.4)	The proposed project is not an industrial use.
5. Work with Omnitrans to expand bus service. Require bus-related improvements (shelters, turnouts, etc.) as part of new Special Plan developments. (Natural Resources Element Policy 2.5)	The project would provide a bus shelter on Fifth Street, at the existing Omnitrans bus stop.
6. Promote other transit forms (bikeways, walking) as an alternative to automobiles. (Natural Resources Element Policy 2.7)	Residents of the area would be able to walk and bike to the site. Bike racks would be provided on site, in compliance with the City's Trip Reduction Ordinance.
7. Encourage new development to implement mitigation measures that reduce vehicle miles traveled. These measures may include, but are not limited to, the following: • Buspool and vanpool services; • Preferential parking for carpool vehicles; • Financial incentives for carpool, buspool and vanpool participants; • Flexible or modified work hours for ridesharing employees; • Provision of bicycle storage and shower facilities; and • Provision of convenient, safe access to public transit stops.	The project shall comply with City's Trip Reduction Ordinance requirements, through the provision of bike racks, employee carpool parking, pedestrian walkways, and loading areas to encourage the use of alternative modes of transportation. It will also provide staggered work hours for employees to correspond with customer shopping patterns (Brent McManigal, pers. comm. 1/16/2007).
8. Establish a Transportation Demand Management (TDM) Program to reduce vehicle trips to and from land uses within the City, especially reducing single occupant commuter traffic.	The City has adopted a Trip Reduction Ordinance (Section 9-1.3050 of the Development Code) that requires new development to provide site improvements and facilities to promote the use of alternative modes of transportation and reduce vehicle trips.
9. Require that proposals for major new developments include submission of a TDM plan to the City, including monitoring and enforcement provisions.	A TDM plan is not required for the project, although compliance with the City's Trip Reduction Ordinance would need to be demonstrated in project plans.
10. Support the establishment of Transportation Management Associations (TMAs) in concentrated areas of employment in the City. (Infrastructure Element Policy 11.3)	There are no TMAs in the project area. Also, Wal-Mart's employee schedule has its 450 employees coming in at staggered hours during the 24-hour project operation (Brent McManigal, pers. comm. 1/16/2007). Thus, it is not considered a large employer that would benefit from a transportation management association (Mauricio Diaz, pers.

General Plan Policy in EIR	Project Compliance
	comm. 3/13/2007).
11. Discourage direct driveway access to arterial roadways. (Infrastructure Element Policy 12.1)	No new driveways are proposed on Mountain Avenue, an arterial roadway.
12. Maintain at least a level of service D on arterial streets wherever possible. (Infrastructure Element Policy 12.2)	Intersection operations dictate traffic flows and LOS would be D or better at area intersections with the implementation of the proposed roadway improvements and identified mitigation measures in Section 4.4, *Transportation and Circulation.*
13. Maintain and rehabilitate roadways as necessary to preserve City streets and thoroughfares. (Infrastructure Element Policy 12.3)	Roadway maintenance and rehabilitation is the City's responsibility.
14. Institute all practical transportation system management solutions (e.g., lane restriping, elimination of on-street parking) before expending public funds to acquire additional right-of-way. (Natural Resources Element Policy 12.6)	The City will not be expending public funds to acquire additional right-of-way. Rights-of-way for Mountain Avenue, Main Street, and Hawthorne Street would be dedicated by the applicant.
15. Monitor traffic growth around freeway interchanges to determine the need, timing and design for ramp improvements and additional right-of way needs at freeway interchanges. (Infrastructure Element Policy 13.2)	The City has worked with Caltrans on the needed ramp improvements at Mountain Avenue.
16. Require new development to fund transit facilities, such as bus shelters and turnouts, where feasible. (Infrastructure Element Policy 15.2)	A bus shelter would be provided at the existing bus stop on Fifth Street, southeast of the site.
17. Include pedestrian facilities in new developments where possible, especially pedestrian pathways in new residential developments and pedestrian plazas and connections in new employment centers. (Infrastructure Element Policy 15.3)	Pedestrian walkways and sidewalks would be provided on-site, in compliance with the City's Trip Reduction Ordinance.
18. Encourage bicycle riding through provision of a safe and efficient network of bike paths and bike lanes, particularly in newly developing areas. (Infrastructure Element Policy 15.4)	Pedestrian walkways and sidewalks, which may be used by bicyclists, would be provided on-site, in compliance with the City's Trip Reduction Ordinance.
19. Require provision of an accessible and secure area for bicycle storage at all new commercial and industrial developments. (Infrastructure Element Policy 15.5)	Bike racks would be provided on-site, in compliance with the City's Trip Reduction Ordinance.

The EIR for Amendment No. 1 also stated that compliance with the City's Transportation Demand Management Ordinance will reduce vehicle trips and promote public transit use. New development would also be required to obtain the necessary SCAQMD permits to reduce fugitive dust, stationary source emissions, toxic air contaminants, and particulate emissions.

Based on the comparative discussion, the project's impacts are no different than those analyzed in the previous EIRs. However, specific impacts of the Wal-Mart Supercenter are discussed above.

4.5.5 Standard Conditions and Mitigation Measures

Standard Conditions

In addition to other project-specific conditions which may be imposed by the City, the City will impose the following standard conditions on the project as part of any future approval:

Standard Condition 4.5.1: The project shall comply with SCAQMD Rule 403 regarding fugitive dust control measures to be implemented during demolition and construction activities. (Supplemental EIR for Mountain Village Specific Plan)

Standard Condition 4.5.2: The project shall comply with City's Trip Reduction Ordinance requirements, through the provision of bike racks, preferential carpool parking, pedestrian walkways, and loading areas to encourage the use of alternative modes of transportation. (EIR for Amendment No. 1 and Supplemental EIR for Mountain Village Specific Plan)

Standard Condition 4.5.3: The proposed project shall implement energy conservation measures, as required under Title 24, Part 6, of the California Code of Regulations (California's Energy Efficiency Standards for Residential and Nonresidential Buildings) and the Uniform Building Code. (Supplemental EIR for Mountain Village Specific Plan)

Standard Condition 4.5.4: The project shall comply with SCAQMD Rules 431.1 and 431.2 regarding the use of low sulfur fuel in stationary equipment. (Supplemental EIR for Mountain Village Specific Plan)

Standard Condition 4.5.5: The project shall comply with SCAQMD Rule 1403, as part of demolition remediation.

Standard Condition 4.5.6: The project shall comply with SCAQMD Rule 2202 regarding the implementation of motor vehicle mitigation options to reduce emissions generated by employee commutes.

Standard Condition 4.5.7: The project shall comply with pertinent SCAQMD rules and regulations for equipment used at the site.

Mitigation Measures

Mitigation measures that would reduce the potentially significant adverse impacts of the project and/or that have been identified in the Supplemental EIR for the MVSP and the EIR for Amendment No. 1 and found to be applicable to the project include the following:

Mitigation Measure 4.5.1~~a~~: Demolition and construction activities shall implement best available control measures for the reduction of PM_{10} emissions. These include:

- *The simultaneous disturbance of the site shall be minimized as much as possible. Limit the simultaneous disturbance area to 5 acres or use enhanced dust control measures.*

- *The proposed project shall comply with SCAQMD established minimum requirements for construction activities to reduce fugitive dust and PM_{10} emissions. A plan to control*

fugitive dust through the implementation of best available control measures shall be prepared and submitted to the City of Ontario for approval prior to the issuance of demolition and grading permits. The plan shall specify the dust control measures to be implemented.

- *The project proponent shall comply with all applicable SCAQMD Rules and Regulations, including Rule 403 insuring the clean up of construction-related dirt on approach routes to the site. Rule 403 prohibits the release of fugitive dust emissions from any active operation, open storage pile, or disturbed surface area visible beyond the property line of the emission source. Particulate matter deposition on public roadways is also prohibited.*

- *Adequate watering techniques shall be employed to mitigate the impact of construction-related dust particulates. Portions of the site that are undergoing earth moving operations shall be watered such that a crust will be formed on the ground surface, and then watered again at the end of each day. The minimum watering frequency for exposed surfaces shall be three times daily.*

- *Any vegetative cover to be utilized on-site shall be planted as soon as possible after grading, to reduce the disturbed area subject to wind erosion. Irrigation systems required for these plants shall be installed as soon as possible to maintain good ground cover and to minimize wind erosion of the soil.*

- *Inactive sites shall be stabilized and all stockpiles of material shall be covered if left unattended for more than 72 hours.*

- *Any construction access roads (other than temporary access roads) shall be paved as soon as possible and cleaned after each work day. The maximum vehicle speed on unpaved roads shall be 15 mph.*

- *Grading operations shall be suspended during first stage ozone episodes or when winds exceed 25 mph. A high wind response plan shall be formulated for enhanced dust control if winds are forecast to exceed 25 mph in any coming 24-hour period.*

- *The project shall provide pre-watering and 24 hour sprinkler irrigation of exposed ground surfaces during grading and excavation activities.*

(EIR for Amendment No. 1 and Supplemental EIR for Mountain Village Specific Plan)

Mitigation Measure 4.5.2a: Any construction equipment using direct internal combustion engines shall use a diesel fuel with a maximum of 0.05 percent sulfur. Preference shall be given to construction contractors who are able to provide heavy equipment equipped with Tier-3 rated diesel engines, or those equipped with oxidation catalysts to reduce NO_x.

Mitigation Measure 4.5.2b: Construction operations affecting off-site roadways shall be scheduled by implementing traffic hours and shall minimize obstruction of through-traffic lanes.

Mitigation Measure 4.5.2c: Idling trucks or heavy equipment shall turn off their engines if the expected duration of idling exceeds five (5) minutes, as required by law.

Mitigation Measure 4.5.2d: On-site heavy equipment used during grading and construction shall be equipped with diesel particulate filters.

Mitigation Measure 4.5.2e: Under supervision of the City of Ontario, construction contractors shall utilize measures to prevent dirt from being tracked, washed, blown or otherwise conveyed onto paved roadways, and shall wash or sweep the construction access points from any public roadway on a daily basis. (Supplemental EIR for Mountain Village Specific Plan)

Mitigation Measure 4.5.2f: Trucks hauling dirt on public roads to and from the site shall be covered during transport. Haul truck drivers shall water the load prior to leaving the site to prevent soil loss during transport. (Supplemental EIR for Mountain Village Specific Plan)

Mitigation Measure 4.5.2g: Construction management procedures required by the City of Ontario and other jurisdictions shall be implemented. Contractor personnel responsible for supervision and the appropriate actions to be taken for the following measures shall be identified.

- *Sandbag construction sites for erosion control.*
- *Conduct pre-construction assessments and perform remediation consistent with air hazards criteria in SCAQMD rules and regulations*
- *Truck routes and schedules for receipt of materials shall be coordinated with City staff. Construction operations shall be scheduled to avoid impacts during peak hours, where feasible.*

(Supplemental EIR for Mountain Village Specific Plan)

Mitigation Measure 4.5.2h: Equipment shall be maintained in proper tune; 90-day low- NO_x tune-ups shall be required for off-road equipment. (Supplemental EIR for Mountain Village Specific Plan)

Mitigation Measure 4.5.2i: Lane closures or detours shall require coordination with the City staff. To avoid impacts to local traffic, construction vehicles shall be required to park off traveled roadways, where feasible. (Supplemental EIR for Mountain Village Specific Plan)

Mitigation Measure 4.5.2j: The contractor shall encourage car pooling for construction workers. (Supplemental EIR for Mountain Village Specific Plan)

Mitigation Measure 4.5.3: The project shall use energy-efficient street lighting and parking lot lighting for all on-site travel paths to reduce emissions at the power generation facility serving the area.

4.5.6 Unavoidable Significant Adverse Impacts

Preliminary analysis in the Initial Study (IS) for the project indicated that no impacts relating to objectionable odors are expected with the project. Potentially significant air quality impacts were likely to be generated by the proposed project, as they relate to the potential violation of existing air quality standards, contribution to an ongoing violation, and obstruction to the implementation of the Air Quality Management Plan for the South Coast Air Basin. Of concern were short term impacts from construction and demolition, including fugitive dust and hazardous materials, and long-term impacts from stationary

and vehicle emissions (CO, ozone, and NO_x). Potential cumulatively significant impacts and impacts to sensitive receptors were also anticipated.

Detailed analysis in the Subsequent EIR, as provided above, indicates that objectionable odors are expected to be less than significant. No conflict with the AQMP is expected from the project. GHG emission from the project would be less than significant and would not have the potential to cause global climate change by itself.

Potential impacts relating to demolition and construction emissions would exceed SCAQMD thresholds and would affect sensitive receptors near the site. Vehicle emissions would also exceed SCAQMD thresholds and would contribute to cumulative regional air pollution levels. The analysis states that the proposed Wal-Mart Supercenter would generate pollutant emissions, which are expected to result in significant adverse impacts on air quality. PM_{10} during demolition and construction activities could lead to reduced lung function, aggravation of the effects of gaseous pollutants, aggravation of respiratory and cardio-respiratory diseases, increased cough and chest discomfort, surface soiling and reduced visibility. NO_x emissions have the potential for aggravation of respiratory illness, reduced visibility, reduced plant growth, and acid rain formation. As precursors to regional smog formation, NO_x would transform to ozone, which in turn causes aggravation of respiratory and cardiovascular diseases, irritation of the eyes, impairment of cardio-pulmonary function, and plant leaf injury.

PM_{10} and NO_x emissions during demolition and construction activities on-site can be reduced to less than significant levels with the implementation of the standard conditions and mitigation measures outlined above. Table 4.5-10, *Mitigated Construction Emissions,* shows the reduction in emissions anticipated with the implementation of the mitigation measures above.

TABLE 4.5-10
MITIGATED CONSTRUCTION EMISSIONS (lbs/day)

Activity Year	ROG	NOx	CO	SO_2	PM_{10} Total	PM_{10} Exhaust	PM_{10} Dust	$PM_{2.5}$
2007 – No Mitigation	12.9	109.1	94.0	0.1	92.3	4.3	88.0	22.6
2007 - w/ Mitigation	12.9	97.3	94.0	0.1	27.3	0.9	26.4	6.4
2008 – No Mitigation	33.5	73.3	97.0	0.0	2.8	2.6	0.2	2.6
2008 – w/ Mitigation	33.5	73.3	97.0	0.0	0.7	0.6	0.1	0.6
SCAQMD Threshold	**75**	**100**	**550**	**150**	**150**	**-**	**-**	**55**

Source: AQIA, 2007 p. 30

In the long-term, carbon monoxide (CO) emissions from project-related traffic will exceed SCAQMD significance thresholds by 24 percent, but will not cause any micro-scale "hot spot' impacts. CO leads to reduced tolerance for exercise, impairment of mental function, impairment of fetal development, death at high concentrations, and aggravation of some heart diseases (angina). NO_x significance thresholds will also be exceeded by 23 percent. As indicated earlier, NO_x emissions have the potential for aggravation of respiratory illness, reduced visibility, reduced plant growth, and acid rain formation. As precursors to regional smog formation, NO_x would transform to ozone, which in turn causes aggravation of respiratory and cardiovascular diseases, irritation of the eyes, impairment of cardio-pulmonary function, and plant leaf injury. In the absence of viable transportation alternatives to the automobile, the vehicle emissions from the project cannot be mitigated to less than significant levels.

Pollutant emissions from the project will delay the ultimate attainment of all clean air standards. However, the regional air quality plan expects the region to meet clean air standards within specified time frames, as long as the rate of growth predicted for the region is not exceeded (AQIA, 2007 p. 19).

Since the project would replace commercial uses that previously operated on the site with less floor area than the existing vacant commercial structures, long-term emissions would be slightly less than those generated by past commercial uses on the site. However, the existing buildings have not been in use for several years, and the proposed project would add to existing regional pollution levels on a project level and cumulative basis. Air quality impacts are expected to remain significant and unavoidable even after mitigation.