4.0 Environmental Impact Analysis

This section describes the existing land use policy and any conflicts with the applicable land use plans, policies, or regulations as evaluated under the certified General Plan EIR as well as with respect to the proposed Town Center Specific Plan. This section analyzes the potential impacts to the existing land use pattern and the potential for adverse changes to those land uses. The proposed Specific Plan would not physically divide an established community and is not subject to any habitat conservation plan or natural community conservation plan, as discussed in the Initial Study (Appendix B of this EIR), and these issues will not be discussed further.

Environmental Setting

Existing Land Uses

The City of Duarte consists of two distinct land use areas: the northern wilderness area and the southern urbanized area.

According to the previously certified General Plan EIR, the existing (2006) land uses include the following:

- Wilderness land – approximately 54 percent (2,331 acres) of the total land acreage in the City.
- Urbanized area – approximately 47 percent of total land area in the City.
- Residential uses – approximately 902 acres of land approximately, representing 21 percent of the total land area and approximately 45 percent of developed land in the City.[i]
- Industrial uses – approximately 4.4 percent of developed land area.
- Commercial uses – approximately 5.6 percent of developed land area.
- Planned Communities and Areas – approximately 6.5 percent of developed land area.

Table 4.1-1 (Existing Conditions [2006]), prepared for the General Plan EIR, describes the distribution of existing land uses within Duarte in 2006, when the General Plan Update was prepared.

[i] *Developed land excludes Wilderness Area.*

Table 4.1-1
Existing Conditions (2006)

Land Use Designation	Existing Acreage (Acres)	Percent of City (%)	Percent of Developed Land (%)
Very Low Density Residential	113	2.60	5.60
Low Density Residential	646	14.85	32.0
Medium Density Residential	91	2.09	4.51
High Density Residential	52	1.19	2.58
Administrative Professional	4	0.09	0.20
Neighborhood Commercial	5	0.11	0.25
General Commercial	103	2.37	5.1
Hospital	79	1.81	3.91
Industrial	89	2.05	4.41
Public School	80	1.84	3.96
City Owned Facilities	12	0.28	0.59
County Owned Facilities	2	<0.01	0.10
Edison and Flood Control Utilities	95	2.18	4.70
Streets and Freeway	478	10.99	23.68
Parks/Trails	39	0.90	1.93
Wilderness Areas	422	9.70	N/A
National Forest	1,909	43.89	N/A
Planned Communities and Areas/Specific Plan	131	3.01	6.49
TOTAL DEVELOPED LAND	2,019		100.0
TOTAL LAND	4,350	100.0	
Source: 2007 Duarte General Plan Update EIR			

As of 2015, the Specific Plan Planning area was composed of 110 parcels across 55 acres (not including street rights-of-way). The Planning Area is generally occupied by commercial uses in the western portion of the area, government uses in the center, and residential uses intermixed along the corridors and concentrated on the eastern end.

Table 4.1-2 (Existing Land Use [2015]) shows the allocation and distribution of existing land use in the Planning Area.

Table 4.1-2
Existing Land Use (2015)

Land Use	Acres	Percent of Total
Commercial	27.71	50%
Office	3.57	6%
Single-Family Residential	2.14	4%
Multi-Family Residential	6.29	11%
Government	7.77	14%
Institutional	3.24	6%
Vacant	4.36	8%
Total	55.08	100%
Source: MIG, October 2015		

Residential Uses

The majority of the urbanized land area within the southern half of Duarte is residential, predominantly single-family. Homes built prior to 1970 were single-family and although single-family construction continues to dominate the market, multi-family units began to be developed post-1970. According to the General Plan, there are four categories of residential uses within the City: Very Low, Low, Medium, and High Density Residential Development. According the General Plan EIR, the Department of Finance, as of January 2006, estimated the following medium- and high-density residential uses in Duarte: 4,353 single-family detached units, 882 attached single-family housing units, 224 two to four multi-family units, 1,278 residential units within a structure with five or more units, and 229 mobile homes.[1]

Within the Planning Area, as of 2015, just over 15 percent of land uses are residential and are concentrated in the eastern portion of the Planning Area, east of Oaks Avenue and Pops Road. While lower density, single-family homes remain the dominant housing type citywide (totaling 77 percent of the City's housing stock in 2010), residential uses in the Planning Area are predominately higher density, ranging from apartment homes to attached townhomes. The single-family uses within the Planning Area also tend to be higher density than elsewhere in Duarte, in the form of small-lot developments such as the homes developed at the Citrus Collection Specific Plan area at the south end of Highland Avenue.

There are 107 existing residential units in the Planning Area. The proposed Specific Plan estimates the amount of new development that would occur within the Planning Area after adoption of the Specific Plan, based on identified opportunity development sites, would be 1,036 net new residential units. This total number may be further constrained by the Maximum Allowable Development amounts identified in the Specific Plan. To provide for a conservative analysis, this SEIR utilizes the theoretical maximum build-out amount, rather than the Maximum Allowable Development amount.

Commercial Uses

The General Plan EIR found that commercial land in the City encompasses approximately 112 acres divided between General Commercial (2.4 percent of the total land area, approximately 103 acres), Neighborhood Commercial (less than one percent, approximately five acres), and Administrative/Professional uses (less than one percent, approximately four acres).

Commercial developments make up approximately 50 percent of land uses in the Planning Area (including their respective surface parking areas). Existing commercial uses are distributed throughout the Planning Area, with a concentration in the western half of the Planning Area. With the exception of businesses with direct access to the I-210 freeway, Duarte businesses tend to be smaller establishments serving a local market. Due to their location near the I-210, commercial uses in the Planning Area are primarily composed of commercial centers, including both strip commercial centers and commercial shopping centers. The largest centers are located at the corner of Huntington Drive and Buena Vista Street, which serves as an anchor and focal point for the Planning Area.

Office uses within the Planning Area make up just over six percent of land uses and are generally clustered around the Buena Vista Street and Highland Avenue intersections with Huntington Drive. Office uses are characterized by medium to small office buildings with surface parking areas.

Hospital Uses

The General Plan EIR states that approximately 79 acres, or 1.8 percent, of land in Duarte is occupied by major hospital land uses. The hospital uses are concentrated in two areas: the City of Hope in the southern portion of the City, and Santa Teresita Medical Center north of Huntington Drive along Buena Vista Street. Santa Teresita closed as an acute care hospital in 2004, and currently (2016) provides assisted living and skilling nursing care for seniors.

There are currently no existing major hospital uses within the Planning Area, although institutional uses include two skilled nursing and assisted living facilities.

Industrial Uses

According to the General Plan EIR, industrial uses account for approximately 89 acres, or two percent, of Duarte. Industrial areas are primarily located in the central and easterly sections of the City, with access to major transportation routes, including freeways and rail.

There are currently no existing industrial uses within the Planning Area.

Open Space Uses

According to the General Plan EIR, open space comprises the largest land use within Duarte. The northern half of Duarte consists of approximately 2,331 acres of the Angeles National Forest and San Gabriel Mountains. Approximately 52 percent of Duarte's land area is open space due to the Angeles National Forest, other wilderness areas, parks, and recreation areas. Open space land accounts for a total of 2,370 acres of land throughout Duarte, divided into the following categories: wilderness area, national forest, parks, and golf course.

There are currently no existing open space uses within the Planning Area. There is one public plaza located within the district, on Huntington Drive across from City Hall ("Plaza Duarte"). This parcel is identified in the existing land use summary as public facilities/government but also serves an open space function.

Public/Quasi-Public Uses

Public and quasi-public uses, according to the General Plan EIR, include community facilities (667 acres or 15.3 percent of the City), streets and highways (478 acres or 11 percent of the City), civic and government facilities (12 acres), schools (80 acres or 1.8 percent of the City), and a library, museum, churches, cemetery, and drainage channels/utility easements.

Civic uses make up 14 percent of the Planning Area, located along the central portion of Huntington Drive, as well as along Buena Vista Street. These uses include the Civic Center (including City Hall and the Fitness Center with its 25-yard competition pool), Public Library, U.S. Postal Service Office (on Highland Avenue), the City of Duarte Teen Center, and Duarte Plaza. Private institutional uses, such as churches and nursing homes, make up an additional 5.7 percent of the Planning Area.

Planned Communities and Areas/Specific Plans

According to the General Plan EIR, Duarte has adopted a variety of Planned Communities and Areas throughout the City, which function as Specific Plans. These Planned Developments/Specific Plans occupy approximately 131 acres of land and represent approximately three percent of the City's total land area. The proposed Specific Plan would represent an additional Specific Plan within the City.

Vacant and Underutilized Land

According to the General Plan EIR, vacant land refers to parcels with no development, while underutilized land refers to parcels that are developed below the potential use or capacity of the site. According to the certified General Plan EIR, the City of Duarte was 98 percent developed as of 2005. Most of the vacant parcels are located in the hillsides, where development is limited to Very Low Density hillside residential development.

Table 4.1-3
Vacant Land (2005)

Land Use District	Vacant Acreage
Very Low Density Hillside (R-1B & D)	141.00
Medium Density Res. (R-3)	1.70
High Density Res. (R-3 & R-4)	5.47
Commercial Professional (CP)	0.33
General Commercial (C-2)	2.15
Total	150.65
Source: 2007 Duarte General Plan Update EIR	

Vacant parcels make up less than four percent of the Planning Area as of 2015, most of which is currently designated for commercial use. The largest vacant area is located on the north side of Huntington Drive, midblock between Buena Vista Street and Cotter Avenue. These properties are owned by the Duarte Housing Authority.

Regulatory Framework

Federal Plans and Policies

Clean Air Act

The Federal Clean Air Act was enacted to protect and enhance air quality and promote the health and welfare of the public. The United States Environmental Protection Agency (EPA) has established ambient air quality standards for certain criteria pollutants, which are generally implemented by state and local agencies.

Clean Water Action (Section 404)

Section 404(b) of the Federal Clean Water Act was established to preserve water quality, and discourages the alteration or destruction of wetlands. This act requires that the United States Army Corps of Engineers (Army Corps) evaluate the impacts of discharge of dredged or fill materials into any water of the United States (U.S.). The Army Corps Wetlands Policy requires the implementation of mitigation measures for any impacts to designated wetland areas.

National Pollutant Discharge Elimination System Permit Program

The National Pollutant Discharge Elimination System (NPDES) program requires the owner or operator of any facility, or person responsible for any activity that discharges waste into the surface waters of the U.S. to obtain a NPDES permit from the Regional Water Quality Control Board, as mandated by the National Clean Water Act. The existing NPDES (Phase 1) stormwater program requires municipalities serving greater than 100,000 persons to obtain a NPDES storm water permit for construction projects greater than five acres. Proposed NPDES storm water regulations (Phase II) expand this existing national program to smaller municipalities with populations of 10,000 or more and construction sites that disturb greater than one acre of land.

Federal Endangered Species Act

The Federal Endangered Species Act (ESA) was passed in 1973 and is administered by the U.S. Department of Fish and Wildlife Service. The ESA provides a process for listing species as endangered or threatened, and establishes requirements for the protection of all listed species.

State Plans and Policies

California Wetlands Policy

The State Wetlands Policy, administered by the California Department of Fish and Wildlife under Fish and Game Code Sections 1601 to 1606, protects marshlands and other designated wetland areas, and requires mitigation for disturbance of wetland areas.

California Endangered Species Act

Similar to the Federal ESA, the California Endangered Species Act (CESA) was created to protect rare, threatened, and endangered species in California. The CESA was enacted in 1984, and is administered by the California Department of Fish and Wildlife.

Regional Plans and Policies

A number of regional plans influence land use planning in the City of Duarte. Regional plans/policy created by planning agencies such as the Southern California Association of Governments (SCAG) and the South Coast Air Quality Management District (SCAQMD) are discussed below.

Southern California Association of Governments (SCAG) Regional Plans and Policies

The Southern California Association of Governments (SCAG) is responsible for regional planning in the southern California area. SCAG provides a framework to coordinate local and regional decisions regarding future growth and development and prepares future growth forecasts for the region. As the designated Metropolitan Planning Organization (MPO) for the area, SCAG is mandated by the Federal government to research and develop plans for transportation, growth management, hazardous waste management, and air quality based on the regional growth projections. SCAG is responsible for the production of a Regional Comprehensive Plan and Guide, a Regional Transportation Plan/Sustainable Communities Strategy, Regional Transportation Improvement Plan, and Growth Vision Report. On April 7, 2016, SCAG's Regional Council adopted the 2016-2040 Regional Transportation Plan/ Sustainable Communities Strategy (2016 RTP/SCS or Plan). The Plan is a long-range visioning plan that balances future mobility and housing needs with economic, environmental and public health goals.

As SCAG is the largest MPO in the United States, it has subregional councils of government to provide for the subregions' land use and transportation planning at a more local level. The subregional council for Duarte is the San Gabriel Valley Council of Governments (SGVCOG).

South Coast Air Quality Management Plan

In addition to SCAG, the South Coast Air Management District (SCAQMD) is responsible for the production of a regional Air Quality Management Plan (AQMP) and has prepared multiple AQMPs to accomplish the goal of an annual five-percent reduction in air pollutant emissions. The most recent AQMP was published and adopted in 2012. The AQMD is currently in the process of developing the 2016 AQMP, which is a comprehensive and integrated Plan primarily focused on addressing the ozone and $PM_{2.5}$ standards.

Local Plans and Policies

Zoning/Development Code

Zoning is one of the primary methods of implementing a general plan. Zoning classifies the specific uses of land. Duarte's Development Code translate the long-term goals and policies of the General Plan into the guidelines and standards used for decision-making on future developments.

The City of Duarte's Development Code (Title 19 of the Municipal Code) establishes land use zones with the purpose to encourage, classify, designate, regulate, restrict, and segregate the highest and best location and use of buildings,

structures and land in the City, and apply uniform regulations to properties similarly situated within each zoning classification.[2]

Specific Plan Areas

Specific Plans are adopted to implement General Plan goals and policies by designating land uses, densities, and development and design standards in more specific detail, and replace zoning standards for the particular area to which they apply. As of 2016, Duarte had 18 Specific Plans, either adopted by resolution, ordinance, or considered preliminary, not including the proposed Duarte Town Center Specific Plan.

Duarte Redevelopment

According to the General Plan EIR, the Duarte Redevelopment Agency was established in 1974, and seven redevelopment project areas were adopted, which resulted in the elimination of blighted conditions in those areas. In 1998, the various project areas were merged into the "Merged Project Area" of approximately 600 acres. As of February 1, 2012, the passage and subsequent State Supreme Court upholding of ABX1 26 dissolved redevelopment agencies and replaced them with Successor Agencies. As a result of the elimination of the RDAs, property tax revenues are now being used to pay required payments on existing bonds, other obligations, and pass-through payments to local governments. The remaining property tax revenues that exceed the enforceable obligations are now being allocated to cities, counties, special districts, and school and community college districts. To help facilitate the winding down process at the local level, Successor Agencies have been established to manage redevelopment projects currently underway, make payments on enforceable obligations, and dispose of redevelopment assets and properties. The City of Duarte elected to become a successor Agency by Resolution on January 24, 2012.

General Plan

Land Use Element

The Land Use Element of the General Plan sets the goals, objectives, and policies for the permitted types, intensities, and locations of land uses in the City. The Land Use Element contains descriptions of residential, commercial, hospital, public and quasi-public, industrial, open space, and specific plan areas.

Policies and Implementation Measures

The General Plan includes the following policies and implementation measures pertaining compatibility with regional plans and policies:

P LU 2.1.1 New infill residential development should be compatible in design, bulk, and height with existing residential development located nearby.

IM Review the zoning ordinance and design guidelines to insure adequate development and aesthetic standards. Require all infill development projects to undergo review by the Architectural Design Review Board and be consistent with design guidelines. Work to prevent light spillage from one land use to another.

P LU 2.1.2 Permitted uses along Huntington Drive should accurately reflect economic market conditions and incompatible uses and activities should be eliminated.

P LU 2.1.3 Provide for the shopping and service needs of residents by conveniently clustering commercial establishments in such a way to encourage "one-stop" shopping.

IM New commercial development along Huntington Drive should be concentrated in nodes at key intersections. Continue to support the Architectural Review Board and its review of all commercial

projects in the city. Utilize the community design manual to insure neighborhood commercial uses are aesthetically compatible with existing neighborhoods.

P LU 2.1.6 Hillside development must be sensitive to the local views of the hills and to the natural environment.

P LU 2.1.7 Make every effort to ensure that industry and residences, where located in close proximity, will be compatible neighbors with non-industrial uses located nearby. And with neighboring cities as well.

IM Designate these uses as nonconforming land uses and initiate abatement procedures which will allow for their removal.

P LU 3.1.1 Develop Specific Plan areas which will provide the flexibility needed to make these places unique.

P LU 3.1.2 Develop a flexible specific and strategic plan for the commercial area along the Huntington Drive and Buena Vista axis capturing traffic off the I-210 freeway.

P LU 3.1.3 Assess the cost/benefits of providing City and/or Redevelopment Agency public improvements and assistance within a City Center area.

P LU 3.1.4 Create a flexible mixed use Transit Oriented Development Specific Plan for the current non-residential area north of the Gold Line Station.

P LU 3.1.5 If the Duarte Gold Line State becomes a reality before 2020, consider a thorough analysis of a potential amendment to the General Plan to provide expanded Transit Oriented Development for additional area north and west and east of the Gold Line Station.

P LU 3.1.6 Promote the use of mixed land use techniques and construction methods to provide more housing and minimize housing costs without compromising basic health, safety, and aesthetic qualities.

IM Provide for vertical and/or horizontal mixed use with unique parking and design standards. Encourage land use intensification of the proposed City Center area for mixed use development with an emphasis on retail development on the ground floor and higher density residential on upper floors. Work to improve parking issues relative to overall numbers and proximity to businesses.

P CON 1.1.2 Work with the San Gabriel Mountains Conservancy in its efforts to protect the wilderness area within Duarte.

P CON 1.1.3 To preserve the characteristics of the mountains, river beds, and canyons and to protect the valuable watershed, grading of lots should be kept to a minimum. Streets should be carefully designed to reduce or eliminate the possibility of erosion in the hillside and mountainous areas.

IM Implement the General Plan land use policy. Implement the hillside ordinance.

P CON 1.1.6 Continue to investigate open space land opportunities for the preservation of natural resources and sensitive habitat.

P CON 2.1.1 Work to conserve current water supplies and seek new sources of water.

P CON 2.1.2 Maintain groundwater recharge areas to protect water quality and ensure continued recharge of groundwater basins.

IM Comply with NPDES/SUSMP requirements.

P CON 2.1.6 Encourage water conservation in residential, commercial and industrial development.

IM Continue to examine water consumption impacts of new development in conjunction with environmental review.

P CON 3.1.2 Analyze all projects as defined in the California Environmental Quality Act (CEQA) for potential impacts on the community and utilize the proper mitigation measures to mitigate any potential adverse impacts on the community.

IM Comply with CEQA law and guidelines.

P CON 4.1.1 Work towards achieving waste-reduction and diversion goals.

IM Continue implementing policies and programs pursuant to AB 939.

P CON 4.1.2 Remove as much as possible from the waste stream, and, preferably, to reuse it and to continue to increase alternative ways to create diversion.

IM Support ongoing recycling programs.

P CON 4.1.3 Promote the City's recycling program in the waste hauler newsletter and City website.

IM Advertise the current recycling program in the waste hauler newsletter and City website.

P CON 4.1.4 Consider increasing bulk community round-ups from twice a year to more frequent round-ups.

P CON 5.1.2 Discourage the extension of urban service into areas which are to remain open as open space. Streets and roadways should avoid large open areas as much as possible.

P CON 5.1.3 Maintain open space areas around noise generators to buffer the noise impacts on noise sensitive uses including schools and residential areas.

IM Consider open space as a noise mitigation device in the review of future development.

P CON 5.1.4 To protect the public health, safety, and welfare, the city should designate open space where there is danger of flood, fire, or earthquake, unless these risks can be adequately mitigated.

IM Consider open space as a device for hazardous mitigation in the review of future development.

P AQ 1.1.2 Promote and support mixed-use land patterns that allow the integration of retail, office, institutional, and residential uses.

IM Designate Planned Unit Development or Specific Plan areas where appropriate.

P AQ 1.2.1 Establish a Mixed-Use Zoning District that offers incentives to mixed-use developments.

P AQ 1.2.2 Create opportunities to receive State transportation funds by adopting incentives (e.g., expedited review process) for planning and implementation infill development projects that include job centers and clean transportation nodes (e.g., preparation of a "transit village" plan).

P AQ 2.1.1 Collaborate with local transit agencies to:

- Develop programs and educate employers about employee rideshare and transit;
- Establish mass transit mechanisms for the reduction of work-related and non-work related vehicle trips;
- Promote mass transit ridership through careful planning of routes, headways, origins and destination, and types of vehicles.

P AQ 2.1.2 Provide merchants with fliers/posters that publicize mass transit schedules to encourage their customers to use mass transit.

P AQ 2.1.3 Consider providing incentives such as preferential parking for alternative-fuel vehicles (e.g., compressed natural gas (CNG) or hydrogen).

P AQ 2.2.1 Synchronize traffic signals throughout the city and with adjoining cities while allowing free flow of mass transit systems.

IM Continue to collaborate with adjacent cities to improve traffic flow.

P AQ 2.2.2 Monitor traffic and congestion to determine when and where the City needs new transportation facilities to achieve increased mobility and efficiency.

IM Perform traffic studies yearly and/or require traffic studies as development occurs.

P AQ 2.2.3 Consider replacing existing vehicles in the City fleet with the cleanest vehicles commercially available.

IM Prepare a vehicle replacement plan.

P OS 2.1.6 Establish neighborhood parks designed and located to conveniently serve the needs of various segments of the community.

P Noise 2.1.4 Prohibit significant noise generating activities from locating adjacent to residential neighborhoods and near schools.

P Noise 2.1.5 Evaluate the noise impacts from projects and existing uses in adjacent cities and work cooperatively with these cities to develop mitigation measures that will improve ambient noise conditions in Duarte.

P Noise 3.1.1 Establish a system of locating land uses according to the maximum noise levels they generate.

P Noise 3.1.3 Ensure that construction noise does not cause an adverse impact to the residents of the City.

P HOU 1.1.1 Promote and encourage development of housing, which varies by size, type, design, and type of ownership.

Thresholds of Significance

A project may create a significant environmental impact if one or more of the following occurs:

- Disrupt or physically divide an established community; (refer to Section 7.0, Effects Found Not to be Significant);
- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect; or
- Conflict with any applicable habitat conservation plan or natural community conservation plan (refer to Section 7.0, Effects Found Not to be Significant).

For purposes of this impact analysis, a significant impact would occur if implementation of the proposed Specific Plan would result in inconsistencies or conflicts with the adopted goals and policies of the City of Duarte General Plan, applicable rules and regulations of the Development Code, SCAG's Regional Comprehensive Plan and Guide, and SCAG's Southern California Compass Growth Visioning Program.

Environmental Impacts

Inconsistency impacts with Federal and State plans and policies would remain less than significant.

The General Plan contains policies and implementation actions that continue to support current procedures followed by the City when development applications are reviewed. The policies in the General Plan recognize that all communities within Duarte have an interest in area-wide land use transportation planning, economic development, environmental protection, and the provision of adequate service and facilities. The General Plan EIR examined the General Plan's consistency with Federal and State plans and policies, and determined that the General Plan was consistent with these plans and policies, and would continue to facilitate implementation of, and the City's participation in, area-wide planning efforts.

Table 4.1-4 (Proposed Specific Plan Consistency with Federal and State Plans and Policies) presents the proposed Specific Plan's consistency with the General Plan and, therefore, with Federal and State plans and policies. Impacts would remain less than significant with implementation of General Plan policies and implementation measures in coordination with proposed Specific Plan policies.

Table 4.1-4
Proposed Specific Plan Consistency with Federal and State Plans and Policies

Plan or Policy	Consistency Statement	
	General Plan	Proposed Specific Plan
Federal Plan or Policy		
Clean Air Act	Consistent. The General Plan contains goals and policies to protect air quality consistent with the Clean Air Act, including 1) management of local pollutants to meet air quality standards, 2) land use and transportation measures to reduce vehicle trips and congestion, and 3) encouraging alternate modes of transportation (i.e., walking, biking, and public transit use).	Consistent. The proposed Specific Plan allows for the development of a mix of housing and commercial uses that would encourage walking and public transit, therefore reducing vehicle trips and congestion. Streetscape improvements to facilitate walking and access to transit, as well as bike lanes, are also proposed in the Specific Plan.
Clean Water Act	Consistent. The General Plan contains goals and	Consistent. Future development

(Section 404)	policies designed to protect water resources and enhance water quality.	within the Planning Area would be subject to General Plan goals and policies, and would therefore protect water resources and enhance water quality. Specific Plan policies encourage green infrastructure in both the public and private realms (bioswales, detention basins, bioretention areas, and flow-through planter boxes).
National Pollutant Discharge Elimination System (NPDES) Permit Program	Consistent. The General Plan provides goals and policies designed to protect water quality. Development allowed through implementation of the General Plan would be required to implement storm water management practices during and after construction in accordance with the NPDES permit.	Consistent. Future development within the Planning Area would be subject to General Plan goals and policies, and would therefore be required to implement storm water management practices during and after construction, in accordance with the NPDES permit. Furthermore, Specific Plan policies encourage low-impact development to manage, reduce, and re-use storm water runoff whenever possible.
Federal Endangered Species Act	Consistent. No known rare or endangered plant or animal species have been identified within the City of Duarte. Should any be identified, any development occurring as a result of implementation of the General Plan would be required to comply in full with the Endangered Species Act. This would include mitigation of any significant impacts to any rare or endangered species.	Consistent. The Planning Area is located in the urbanized portion of the City, outside of areas identified to contain rare and endangered species.
State Plan or Policy		
California Endangered Species Act	Consistent. The City of Duarte does not contain any known rare or endangered species. However, should any such plant or animal species be identified, development resulting from implementation of the General Plan would be required to comply fully with the California Endangered Species Act and mitigate any impacts to such species.	Consistent. The Planning Area is located in the urbanized portion of the City, outside of areas identified to contain rare and endangered species.
California Wetlands Policy	Consistent. There are no known wetlands within the City of Duarte. In the case that a wetland may be discovered and affected by new development resulting from build-out of the General Plan it would be subject to the CDFW streambed alteration agreement requirements. These agreements require the avoidance of wetlands and implementation of mitigation measures for any related wetlands impacts.	Consistent. The Planning Area is located in the urbanized portion of the City; there are no wetlands located in the Planning Area.

Inconsistency impacts with policies in SCAG's Regional Comprehensive Plan and Guide would remain less than significant.

The General Plan contains policies and implementation actions that continue to support current procedures followed by the City when development applications are reviewed. The policies in the General Plan reflect and respond to the regional goals identified by SCAG. The General Plan EIR examined the General Plan's consistency with SCAG's Regional Comprehensive Plan and Guide, and determined that the General Plan was consistent with these SCAG documents and would continue to facilitate implementation of, area-wide planning efforts through local participation and coordination

Table 4.1-5 (Proposed Specific Plan Consistency with SCAG's Regional Comprehensive Plan and Guide [RCPG] Policies) presents the proposed Specific Plan's consistency with the General Plan and, therefore, with SCAG's Regional Comprehensive Plan and Guide. Impacts would remain less than significant with implementation of General Plan goals, policies and implementation measures in coordination with proposed Specific Plan objectives.

Table 4.1-5
Proposed Specific Plan Consistency with SCAG's Regional Comprehensive Plan and Guide (RCPG) Policies

SCAG RCPG Policies	Consistency Statement	
	General Plan	Proposed Specific Plan
Growth Management Chapter		
3.01. The population, housing, and jobs forecasts, which are adopted by SCAG's Regional Council and that reflect local plans and policies, shall be used by SCAG in all phases of implementation and review.	Consistent. The project 2020 population of the General Plan is 26,106, which is slightly higher than projections identified by SCAG by 1,641 people. The City was required to supply SCAG with the assumptions and current data to support the General Plan 2020 projections so that SCAG's projections could be revised to reflect the General Plan update.	Consistent. Specific Plan build-out would result in a projected citywide population of 25,327. This is within the anticipated population analyzed in the certified General Plan EIR and, therefore, remains consistent with population projections for the City.
3.03. The timing, financing, and location of public facilities, utility systems, and transportation systems shall be used by SCAG to implement the region's growth policies.	Consistent. Specific infrastructure or service improvement projects are not identified within the General Plan. However, goals are provided that allow for improvements to occur with build-out of the General Plan. Future development projects as a result of General Plan build-out would require infrastructure and service improvements subject to review by the City and responsible agencies.	Consistent. Per State Law, the Specific Plan includes an Infrastructure Chapter to identify the location and extent of necessary infrastructure. The Specific Plan recommends transportation improvements to facilitate pedestrian and bicycling on Huntington Drive, Buena Vista Street, and Highland Avenue, .
2004 Regional Transportation Plan (Separate Plan from RCP)		
1. Transportation investments shall be based on SCAG's adopted Regional Performance Indicators.	Consistent. The General Plan contains goals and policies that provide for traffic congestion reduction and encourage adequate transportation facilities be provided.	Consistent. The Specific Plan contains objectives that would improve transportation facilities, including pedestrian and bicycling improvements on Huntington Drive, Buena Vista Street, and Highland Avenue.
2. Ensuring safety, adequate maintenance, and efficiency of operations on the existing multi-	Consistent. As noted above for Policy 1, the General Plan contains goals and policies that provide for traffic congestion reduction and	Consistent. The Specific Plan contains objectives that would improve transportation facilities,

modal transportation system will be RTP priorities and will be balanced against the need for system expansion improvements.	encourage adequate transportation facilities be provided.	transit stops, and encourage multi-modal transportation through mixed-use development.
3. RTP land use and growth strategies that differ from currently expected trends will require a collaborative implementation program that identifies required actions and policies by all affected agencies and subregions.	Consistent. The General Plan contains policies aimed at maintaining a balance between land use and circulation systems, which have the ability to require phasing, if determined necessary.	Consistent. The Specific Plan contains objectives aimed at providing a balanced mix of land uses and improvement of transportation facilities that would be consistent with General Plan growth strategies and expected trends.
4. HOV gap closures that significantly increase transit and rideshare usage will be supported and encouraged, subject to Policy #1.	Consistent. The City of Duarte provides a fixed bus route system with three travel routes within the City. In addition, Foothill Transit and the Los Angeles Metropolitan Transportation Authority (MTA) serve the City of Duarte. The City would continue to seek private sector participation in any future transit service development. In addition, General Plan policies CIRC 3.1.4 and AQ 2.11 promote and encourage ride share activities.	Consistent. In addition to the City's fixed route bus system, Foothill Transit, and Metro bus service, the Metro Gold Line Duarte Station is operational and located approximately 0.25 miles south of the Planning Area. Future development within the Planning Area would be subject to General Plan goals and policies to reduce vehicle miles traveled. The Specific Plan includes incentives for transportation demand management.
5. Progress monitoring on all aspects of the Plan, including timely implementation of projects, programs, and strategies will be an important and integral part of the Plan.	Consistent. Implementation measures are provided in each element of the General Plan. Each implementation measure identifies policy or policies it is implementing, the specific measures to be implemented, the agency or department responsible for the implementation, funding, and the time frame to complete the measures. The implementation is included to comply with Government Code Section 65400, which requires that the legislative body consider and adopt reasonable means for implementing the General Plan. The City must submit an annual report on its progress on the General Plan to the State Office of Planning and Research and the State Department of Housing and Community Development.	Consistent. Future development within the Planning Area would be subject to the goals, policies, and implementation measures of the General Plan. The Specific Plan includes an Implementation Action Plan; each Action has an associated timeframe for completion.
GMC Policies Related to the RCPG Goal to Improve the Regional Standard of Living		
3.04. Encourage local jurisdictions' efforts to achieve a balance between the types of jobs they seek to attract and housing prices.	Consistent. The General Plan contains policies to maintain a balance between jobs and housing and to provide housing opportunities available to incomes of all segments of the community.	Consistent. As analyzed in Section 4.2 (Population and Housing) of this SEIR, the Specific Plan would maintain a balance between jobs and housing. In addition, future

		development within the Planning Area would be subject to General Plan policies. The Specific Plan allows for a balanced mix of new uses, including commercial, residential, and hotel space.
3.05. Encourage patterns of urban development and land use, which reduce costs on infrastructure construction and make better use of existing facilities.	Consistent. The General Plan contains policies to encourage infill and mixed uses that would reduce infrastructure construction costs.	Consistent. The Specific Plan contains objectives aimed at providing a balanced mix of land uses through infill development.
3.06. Support public education efforts regarding the costs of various alternative types of growth and development.	Consistent. The General Plan process included a Community Attitude Survey which also described the approach for providing a balance of uses and a healthy local economy and the need to maintain a high level of city services.	Consistent. Development of the Specific Plan involved comprehensive community outreach. The Vision, identified through outreach and re-affirmation over the years, focuses on providing a balance of uses and a healthy local economy.
3.07. Support subregional policies that recognize agriculture as an industry, support the economic viability of agricultural activities, preserve agricultural land, and provide compensation for property owners holding lands in greenbelt areas.	Consistent. There is no existing agriculture industry in the City of Duarte. Therefore, Policy 3.07 of SCAG's Regional Comprehensive Plan does not apply to the General Plan.	Consistent. There is no existing agricultural use within the Planning Area. Therefore, Policy 3.07 does not apply to the Specific Plan.
3.08. Encourage subregions to define an economic strategy to maintain the economic vitality of the subregion, including the development and use of marketing programs, and other economic incentives, which support attainment of subregional goals and policies.	Consistent. The General Plan includes an Economic Element as an additional Element to address economic strategies to enhance the vitality of Duarte's economy. Goals, policies, and implementation measures stated in the document include marketing programs, economic incentives and additional elements to support subregional goals and policies.	Consistent. An Economic Market Analysis and a Fiscal Impact Report was prepared to inform the Specific Plan. In addition, future development within the Planning Area would be subject to General Plan goals, policies, and implementation measures supporting subregional goals and policies. The Specific Plan includes economic incentives and related community benefits through three Tiers of possible development. The Specific Plan Implementation Action Plan also includes actions to further marketing and economic development.
3.09. Support local jurisdictions' actions to minimize the cost of infrastructure and public service delivery, and efforts to seek new sources of funding for	Consistent. The General Plan contains policies to seek private funding sources for the extension of services and facilities where these services are not already part of the City's financed Capitol Improvement	Consistent. Future development within the Planning Area would be located in the urbanized area of the City where infrastructure is already in place, and would be

development and the provision of services.	Program.	subject to General Plan goals and policies, ensuring that private funding sources are maximized for the extension of services and facilities.
3.10. Support local jurisdictions' actions to minimize red tape and expedite the permitting process to maintain economic vitality and competitiveness.	Consistent. The General Plan provides policies related to project processing, along with policies to improve the economic viability of the City.	Consistent. The Specific Plan provides incentives and bonuses to achieve the desired long-term vision of the Plan. In addition, General Plan policies related to project processing and economic viability would apply.
GMC Policies Related to RCPG Goal to Improve the Regional Quality of Life		
3.11. Support provisions and incentives created by local jurisdictions to attract housing growth in job rich subregions and job growth in housing rich subregions.	Consistent. The General Plan provides policies that provide incentives for both housing and job growth.	Consistent. At build-out, the Planning Area would support an additional 1,036 housing units and 577 new jobs. Under existing conditions, the Planning Area is comprised of 77% nonresidential uses, 15% residential uses, and 8% vacant. The Specific Plan supports both housing and job growth within the Planning Area, to develop a mix of uses that can provide synergy and heightened activity within the Planning Area.
3.12. Encourage existing or proposed local jurisdictions' programs aimed at designing land uses which encourage the use of transit and thus reduce the need for roadway expansion, reduce the number of auto trips and vehicle miles traveled, and create opportunities for residents to walk and bike.	Consistent. Refer to consistency analysis for SCAG Policy 4.16. Additionally, General Plan Policies LU 3.1.4 and LU 3.1.5 encourage transit oriented development.	Consistent. The Specific Plan contains objectives aimed at providing a balanced mix of land uses and streetscape improvements that would encourage use of alternative modes of transportation such as walking, biking, and public transit, and therefore would reduce vehicle trips and vehicle miles traveled.
3.13. Encourage local jurisdictions' plans that maximize the use of existing urbanized areas accessible to transit through infill and redevelopment.	Consistent. Duarte is a built out city surrounded by other urbanized areas. Based on these circumstances, new development allowed under the General Plan would take the form of redevelopment or infill projects on underutilized or small vacant lots throughout the City. In addition, the General Plan contains policies that encourage the use and redevelopment of existing urbanized areas.	Consistent. The Planning Area is within the urbanized portion of Duarte. New development within the Planning Area would consist of infill development on underutilized lots that are accessible to transit.
3.14. Support local plans to increase density of future development located at strategic points along the regional commuter rail, transit systems,	Consistent. Refer to consistency analysis for SCAG Policy 3.13.	Consistent. At build-out, the Planning Area would support an additional 1,036 housing units, 217,021 square feet of commercial uses, and 331 hotel

and activity centers.		rooms within the urbanized portion of Duarte. The Planning Area is served by multiple bus routes and is located approximately 0.25 miles north of the Metro Gold Line Duarte Station. Specific Plan objectives aim to strengthen the mix of residential densities and promote higher density development in proximity to the Metro Gold Line Station.
3.15. Support local jurisdictions' strategies to establish mixed-use clusters and other transit-oriented developments around transit stations and along transit corridors.	Consistent. Refer to consistency analysis for SCAG Policy 3.14.	Consistent. Refer to consistency analysis for SCAG Policies 3.13 and 3.14.
3.16. Encourage developments in and around activity centers, transportation corridors, underutilized infrastructure systems, and areas needing recycling and redevelopment.	Consistent. Refer to consistency analysis for SCAG Policies 3.13 and 3.14.	Consistent. Refer to consistency analysis for SCAG Policies 3.13 and 3.14.
3.17. Support and encourage settlement patterns, which contain a range of urban densities.	Consistent. The General Plan Land Use Element and Land Use Map provides a range of residential densities throughout the City.	Consistent. The Specific Plan objectives encourage higher density development in this central core area of the City, to preserve lower density development in the surrounding suburban areas.
3.18. Encourage planned development in locations least likely to cause environmental impact.	Consistent. The General Plan contains numerous policies to protect environmental resources and minimize adverse environmental effects.	Consistent. Future development within the Planning Area would be located within the urbanized area of Duarte, where infrastructure is already in place. New development would be subject to all General Plan policies aimed at protecting environmental resources and minimizing environmental effects.
3.19. Support policies and actions that preserve open space areas identified in local, State, and Federal plans.	Consistent. The General Plan contains policies to preserve open space area within the City.	Consistent. Future development within the Planning Area would be located within the urbanized area of Duarte, outside of open space areas identified for preservation. The Specific Plan includes objectives to provide public open spaces areas such as parks, plazas, and paseos. In addition, future development within the

		Planning Area is subject to General Plan policies related to open space.
3.20. Support the protection of vital resources such as wetlands, groundwater recharge areas, woodlands, production lands, and land containing unique and endangered plants and animals.	Consistent. The General Plan contains numerous policies to protect environmental resources and minimize adverse environmental effects for wetlands, groundwater, and wildlife.	Consistent. Future development within the Planning Area would be located within the urbanized area of Duarte, where no wetlands or other biological resource areas are located. Future development would also be subject to General Plan policies related to local environmental resources \.
3.21. Encourage the implementation of measure aimed at the preservation and protection of recorded and unrecorded cultural resources and archaeological sites.	Consistent. The General Plan contains policies in the Historic Preservation Element aimed at the preservation and protection of cultural resources.	Consistent. Future development within the Planning Area would be subject to General Plan policies related to the preservation and protection of cultural resources. The Specific Plan includes policies requiring historic structures to comply with Secretary of the Interior standards for renovation.
3.22. Discourage development, or encourage the use of special design requirements, in areas with steep slopes, high fire, flood, and seismic hazards.	Consistent. The General Plan provides policies that protect against flooding, slope, and seismic hazards.	Consistent. The Planning Area is located in the urbanized, generally flat area of Duarte. Future development within the Planning Area would be subject to General Plan policies related to flooding, slope, and seismic hazards.
3.23. Encourage mitigation measures that reduce noise in certain locations, measures aimed at preservation of biological and ecological resources, measures that would reduce exposure to seismic hazards, minimize earthquake damage, and to develop emergency response and recovery plans.	Consistent. Refer to the consistency analysis for Policy 3.18.	Consistent. Refer to the consistency analysis for Policy 3.18.
GMC Policies Related to the RCPG Goal to Provide Social, Political, and Cultural Equity		
3.24. Encourage efforts of local jurisdictions in the implementation of programs that increase the supply and quality of housing and provide affordable housing as evaluated in the Regional Housing Needs Assessment.	Consistent. The General Plan contains numerous policies to provide incentives to developers to supply affordable housing and to encourage a strong housing base.	Consistent. Future development within the Planning Area would be subject to General Plan policies related to affordable housing.
3.25. Encourage the efforts of local jurisdictions, employers and service agencies to provide	Consistent. The Duarte General Plan includes policies to assist in worker training and higher education to prepare the labor	Consistent. Future development within the Planning Area would be subject to General Plan policies

adequate training and retraining of workers, and prepare the labor force to meet the future challengers of the regional economy.	force for the regional economy.	related to worker training and higher education.
3.26. Encourage employment development in job-poor localities through support of labor force retaining programs and other economic development measures.	Consistent. City-wide, Duarte is considered job-poor, as a result the Duarte General Plan encourages employment development throughout the city through retraining efforts and other development measures.	Consistent. Specific Plan build-out would accommodate an additional 577 jobs within the Planning Area and would therefore contribute more jobs in the City.
3.27. Support local jurisdictions and other service providers in their efforts to develop sustainable communities and provide, equally to all members of society, accessible and effective services such as: public education, housing, health care, social services, recreational facilities, law enforcement, and fire protection.	Consistent. The Duarte General Plan is the primary source of long-range planning and policy direction that will guide growth and preserve the quality of life within the community. The Housing Element encourages the development of housing for all income levels. The Open Space and Conservation Element provides direction regarding the conservation, development and utilization of natural resources. The Safety Element contains policies to reduce hazards associated with fires, floods, earthquakes, landslides, and other hazards and ensures adequate fire and police services. The Land Use Element promotes harmony between the diverse types of uses within the city in balance with public services and infrastructure. The Economic Element contains policies dedicated to assuring a high-level of services and variety of jobs are available to the community. Additionally, public service and utility providers were contacted as part of the General Plan Update and EIR process to obtain their input on how the General Plan update would impact their services and is reflected in the General Plan Elements and certified EIR.	Consistent. Future development within the Planning area would be subject to General Plan goals and policies related to the development of sustainable communities and accessible and effective services. In addition, public service providers were contacted as part of the Specific Plan process to ensure that Specific Plan implementation would not result in significant impacts on their services.
Air Quality Chapter		
5.07. Determine specific programs and associated actions needed (e.g. indirect source rules, enhanced use of telecommunications, provision of community-based shuttle services, provision of demand management based programs, or vehicle-miles-traveled/emission fees) so that options to command and control regulation can be assessed.	Consistent. The General Plan identifies programs and associated actions that provide for assessment of regulation.	Consistent. Programs and associated actions identified in the General Plan would remain applicable to Specific Plan implementation. New development associated with the Specific Plan would be located in close proximity to existing rail and bus transit, and transportation demand management incentives are provided.
5.11. Through the environmental document review process, ensure	Consistent. The certified General Plan EIR addressed air quality, land use, and	Consistent. This SEIR addresses air quality, land use, and

that plans at all levels of government (regional, air basin, county, subregional, and local) consider air quality, land use, transportation and economic relationships to ensure consistency and minimize conflicts.	transportation impacts of the General Plan Update and provided mitigation measures where feasible to reduce significant environmental impacts to a less than significant level. In addition, all future development allowed under the General Plan Update would be required to undergo subsequent environmental review by the City, as necessary.	transportation impacts of the Specific Plan. General Plan EIR mitigation measures and General Plan policies and implementation measures remain applicable to Specific Plan implementation and would ensure that impacts are reduced to less than significant levels, where feasible. In addition, future development allowed under the Specific Plan would be required to undergo subsequent environmental review by the City, as necessary.
Water Quality Chapter		
11.02. Encourage "watershed management" programs and strategies, recognizing the primary role of local governments in such efforts.	Consistent. The City of Duarte is located within the territory covered by the San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy. The mission of the Conservancy is to preserve open space and habitat in order to provide for low-impact recreation and educational uses, wildlife habitat restoration and protection, and watershed improvements within our jurisdiction. The Conservancy has prepared a number of plans that are applicable to the City of Duarte. The City shall continue to work with the Conservancy.	Consistent. As discussed in the certified General Plan EIR, the City shall continue to work with the San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy. The Planning Area is located within the urbanized portion of Duarte, and the Specific Plan includes policies to further low-impact development and stormwater quality. Implementation of the Specific Plan would not conflict with Conservancy efforts to preserve open space habitat.
11.05. Support regional efforts to identify and cooperatively plan for wetlands to facilitate both sustaining the amount and quality of wetlands in the region and expediting the process for obtaining wetlands permits.	Consistent. Currently, there are no wetlands located within the vicinity of the city of Duarte; therefore, Policy 11.05 of SCAG's *Regional Comprehensive Plan* does not apply to the General Plan.	Consistent. Currently, there are no wetlands located within the vicinity of the Planning Area; therefore, Policy 11.05 of SCAG's *Regional Comprehensive Plan* does not apply to the Specific Plan.
11.07. Encourage water reclamation throughout the region where it is cost-effective, feasible, and appropriate to reduce reliance on imported water and wastewater discharges. Current administrative impediments to increased use of wastewater should be addressed.	Consistent. The City of Duarte does not import water; all water is extracted from local wells. However, the General Plan Update included policies to reduce water consumption and maintain recharge. The City is served by the County Sanitation District of Los Angeles County, which has a number of water reclamation plants and is annually increasing its reclamation activities.	Consistent. The Specific Plan includes policies to further low-impact development and stormwater quality. Future development within the Planning Area would be subject to General Plan policies related to water conservation and groundwater recharge.
Open Space Chapter		
9.01. Provide adequate land resources to meet the outdoor recreation needs of the present and future residents in the region	Consistent. The General Plan Update contained policies to provide adequate recreation for future build-out populations and preserve natural resources that draw tourism,	Consistent. The Planning Area is located within the urbanized portion of Duarte, outside of open space areas. The Specific Plan

and to promote tourism in the region.	such as the Angeles National Forest.	includes objectives for providing public and quasi-public open space in the form of plazas and parklets. In addition, future development within the Planning Area would be subject to General Plan policies related to recreation and preservation of natural resources.
9.02. Increase the accessibility to open space lands for outdoor recreation.	Consistent. Refer to the consistency analysis for SCAG Policy 9.01.	Consistent. Refer to the consistency analysis for SCAG Policy 9.01.
9.03. Promote self-sustaining regional recreation resources and facilities.	Consistent. Refer to the consistency analysis for SCAG Policy 9.01.	Consistent. Refer to the consistency analysis for SCAG Policy 9.01.
9.04. Maintain open space for adequate protection of lives and properties against natural and man-made hazards.	Consistent. Refer to the consistency analysis for SCAG Policy 3.19 and 3.22.	Consistent. Refer to the consistency analysis for SCAG Policy 3.19 and 3.22.
9.05. Minimize potentially hazardous developments in hillsides, canyons, areas susceptible to flooding, earthquakes, wildfire, and other known hazards, and areas with limited access for emergency equipment.	Consistent. Refer to the consistency analysis for SCAG Policy 3.22.	Consistent. Refer to the consistency analysis for SCAG Policy 3.22.
9.06. Minimize public expenditure for infrastructure and facilities to support urban type uses in areas where public health and safety could not be guaranteed.	Consistent. Through General Plan goals, policies, implementation measures and zoning requirements, the City ensures that adequate infrastructure and facilities exist prior to new development as well as ensure the public's health and safety. Public expenditures are determined by the City Council as a part of the City's annual budget process for the Capital Improvement Program.	Consistent. The Planning Area is located in the urbanized area of Duarte, where infrastructure is in place and hazards associated with flooding, wildfires, and steep slopes do not apply. Future development within the Planning Area would be subject to General Plan goals, policies, and implementation measures and zoning requirements related to providing adequate infrastructure and facilities to ensure public health and safety.
9.07. Maintain adequate viable resource production lands, particularly lands devoted to commercial agriculture and mining operations.	Consistent. The City of Duarte does not currently consist of any lands with viable resource production lands (i.e., commercial agriculture or mining operations) and therefore, Policy 9.07 of *SCAG's Regional Comprehensive Plan* does not apply to the General Plan.	Consistent. The Planning Area does not currently consist of any lands with viable resource production lands (i.e., commercial agriculture or mining operations) and therefore, Policy 9.07 of *SCAG's Regional Comprehensive Plan* does not apply to the Specific Plan.

9.08. Develop well-managed viable ecosystems or known habitats of rare, threatened and endangered species, including wetlands.	Consistent. The General Plan promotes the protection of viable ecosystems and habitats through the preservation and enhancement of open space uses. Refer to the consistency analysis for SCAG Policy 3.19 and Policy 3.20.	Consistent. Refer to consistency analysis for SCAG Policy 3.19 and Policy 3.20.

Impacts related to inconsistencies with the principles and strategies of SCAG's Southern California Compass Growth Visioning Program would remain less than significant.

The SCAG Growth Vision Report (GVT) contains principles and strategies to guide regional development and transportation improvements throughout Southern California. The General Plan EIR examined the General Plan's consistency with SCAG's Compass Growth Visioning Program and determined that the General Plan would not conflict with the SCAG GVT. No adverse impacts were anticipated.

Table 4.1-6 (Proposed Specific Plan Consistency with SCAG's Growth Visioning Strategies) presents the proposed Specific Plan's consistency with the General Plan and, therefore, with SCAG's Growth Visioning Principles and Strategies. Impacts would remain less than significant with implementation of General Plan goals, policies and implementation measures, in coordination with proposed Specific Plan objectives.

Table 4.1-6
Proposed Specific Plan Consistency with SCAG's Growth Visioning Strategies

SCAG Growth Visioning Principles and Strategies	Consistency Statement	
	General Plan	Proposed Specific Plan
Principle 1: Improve mobility for all residents.		
1) Encourage transportation investments and land use decisions that are mutually supportive.	Consistent. The General Plan provides goals and policies that provide for transportation investment and maintenance, it also encourages Transit Oriented Development and development methods that provide for increased pedestrian mobility. Specifically, the creation of the Gold Line Station Area Development Specific Plan, which includes a metro station near residential and non-residential development. (Refer to GP Goals and Policies: Circ 1.1, Circ 1.1.5, Circ 3.1.1, Circ 3.1.5, LU 3.1, LU 3.1.4, and LU 3.1.5)	Consistent. Future development within the Planning Area would be subject to General Plan goals and policies related to transportation investment and maintenance. Specific Plan objectives aim to strengthen the mix of residential densities and promote higher density development in proximity to the Metro Gold Line Station. Specific Plan objectives also aim to allow for enhanced pedestrian mobility and access to transit.
2) Locate new housing near existing jobs and new jobs near existing housing.	Consistent. The General Plan provides goals and policies that encourage a mix of land uses including specifically the Gold Line Specific Plan component that would provide residential and non-residential uses in proximity to transit. (Refer to GP Goals and Policies: LU 2, LU 3.1, LU 3.1.4, and LU 3.1.5)	Consistent. Future development within the Planning Area would be subject to General Plan goals and policies. The Specific Plan would provide for a balanced mix of housing and jobs. In addition, Specific Plan objectives aim to strengthen the mix of residential densities and promote higher density development in proximity

		to the Metro Gold Line Station.
3) Encourage transit-oriented development.	Consistent. The General Plan provides goals and policies that encourage Transit Oriented Development and development methods that provide for increased pedestrian mobility. Specifically, the creation of the Gold Line Station Area Development Specific Plan and the City Center Mixed Use Area Specific Plan will include mixed uses near available public transit (i.e., Metro Gold Line and public transit stops). Additionally, the General Plan provides for additional public transit and pedestrian facilities and bicycle lanes. (Refer to GP Goals and Policies: Circ 3.1, Circ 3.1.1, Circ 3.1.3, Circ 3.1.4, Circ 3.1.5, LU 3.1, LU 3.1.4, and LU 3.1.5)	Consistent. Future development within the Planning Area would be subject to General Plan goals and policies. Specific Plan objectives aim to strengthen the mix of residential densities and promote higher density development in proximity to the Metro Gold Line Station. Specific Plan objectives also aim to allow for enhanced pedestrian mobility and access to transit.
4) Promote a variety of travel choices.	Consistent. The General Plan provides transportation options that are conducive to pedestrian, bicycle, public transit, and automobile modes of transportation. (Refer to consistency analysis for SCAG Growth Visioning Strategy Policy 1.3)	Consistent. The Specific Plan recommends improvements to Huntington Drive, Buena Vista Street, Highland Avenue, pedestrian-oriented facilities, and transit stops.
Principle 2: Foster livability in all communities.		
1) Promote infill development and redevelopment to revitalize existing communities.	Consistent. The City of Duarte is approximately 98 percent built out, and is surrounded by urban development to the east, south, and west and by National Forest and wilderness to the north. Therefore, the General Plan encourages infill and redevelopment within the urban portion of the city as other options for development are limited. (Refer to GP Goals and Policies: LU 1.1.8, LU 2.1.2, LU 3.1.3, LU 3.1.4, and AQ 1.2.2)	Consistent. The Planning Area is located within the urbanized portion of the City. Therefore, Specific Plan implementation would consist of infill development.
2) Promote developments, which provide a mix of uses.	Consistent. The General Plan includes goals and policies that promote mixed use development. (Refer to GP Goals and Policies: AQ 1.1.2, AQ 1.2.1, Econ 5.1.1, Econ 6, LU 1, LU 3.1.4, and LU 3.1.6)	Consistent. The Specific Plan is deliberately designed provide a balanced mix of land uses within the Town Center area of the City.
3) Promote "people scaled," walkable communities.	Consistent. The General Plan includes pedestrian-oriented facilities that would encourage a "walkable" community within the project site and its surrounding neighborhood. Specifically, the City Center Mixed Use Area Specific Plan will include mixed use development for a "walkable" environment. (Refer to the consistency analysis for SCAG Growth Visioning Strategy Policy 1.3)	Consistent. The Specific Plan emphasizes pedestrian mobility and connectivity between uses and to transit options within the City.
4) Support the preservation of	Consistent. The General Plan includes goals	Consistent. Specific Plan build-out

stable, single-family neighborhoods.	and policies that encourage the development of multi-family residential and commercial uses, which is not anticipated to adversely affect any single-family neighborhoods in the project vicinity. (Refer to GP Housing Element Goals and Policies: 2, 2.1, 2.1.2, 2.1.3, 2.1.4, and 2.2)	would provide additional multi-family residential and commercial development opportunities near transit, jobs, and the I-210 freeway, preserving the largely single-family neighborhoods throughout the rest of the City . In addition, future development within the Planning Area would be subject to General Plan goals and policies related to housing.
Principle 3: Enable prosperity for all people.		
1) Provide, in each community, a variety of housing types to meet the housing needs of all income levels.	Consistent. The General Plan provides land use designations for a variety of residential uses. Goals and policies also address the provision of housing opportunities for all income levels. (Refer to GP Housing Element Goals and Policies: 3, 3.1, 3.1.3, and associated housing programs)	Consistent. The Specific Plan objectives encourage strengthening the mix of residential densities in Duarte by providing opportunities for higher density housing in this portion of the City, while preserving single-family neighborhoods.
2) Support educational opportunities that promote balanced growth.	Consistent. The General Plan supports efforts within the city to provide educational opportunities for its residents.	Consistent. The Specific Plan includes comprehensive outreach efforts to discuss potential growth associated with the Specific Plan. The project website, Ad Hoc meetings, and future hearings will provide opportunities for residents to discuss balanced growth.
3) Ensure environmental justice regardless of race, ethnicity, or income class.	Consistent. The General Plan provides housing opportunities for a range of income levels, as well as provides jobs within the local area irrespective of race, ethnicity, or income class. (Refer to the consistency analysis for SCAG Growth Visioning Strategy Policy 3.1)	Consistent. The Specific Plan would provide increased housing and employment options within the City. Future development within the Planning Area would be subject to General Plan goals and policies related to housing.
4) Support local and state fiscal policies that encourage balanced growth.	Consistent. The General Plan provides goals and policies that support applicable local and State fiscal policies encouraging balanced growth. (Refer to GP Goals and Policies: LU 1, LU 1.1, LU 1.1.1, LU 1.1.2, LU 1.1.3, LU 2.1, LU 2.1.1, LU 2.1.2, LU 2.1.4, and Econ 4.1.6)	Consistent. Future development within the Planning Area would be subject to General Plan goals and policies related to local and State fiscal policies and balanced growth.
5) Encourage civic engagement.	Consistent. The General Plan Update process included a Community Attitude Survey, which fostered community engagement in the development of future goals and policies established in the General Plan.	Consistent. Development of the Specific Plan involved a comprehensive community outreach component which helps ensure that the Specific Plan provides a balance of uses and a healthy local economy to maintain a high level of City services.

Principle 4: Promote sustainability for future generations.		
1) Preserve rural, agricultural, recreational and environmentally sensitive areas.	Consistent. The General Plan emphasizes protection of the Angeles National Forest and other wildlife areas in the northern portion of the city. Goals and policies also address provision of adequate and diverse recreational lands. The General Plan does not significantly degrade the quality or function of any environmentally sensitive areas or recreational areas. (Refer to GP Goals and Policies: Con 1, Con 1.1, Con 1.1.1, Con 1.1.2, Con 1.1.3, Con 1.1.4, Con 1.1.5, Con 1.1.6, Con 5.1.2, Con 6.1, Con 6.1.1, OS 2.1.2, OS 2.1.3, OS 2.1.5, OS 2.1.6, and OS 2.1.7)	Consistent. The Planning Area is located in the urbanized portion of the City, thereby preserving rural and other less-dense land uses. Development under the Specific Plan would continue to be subject to applicable General Plan goals and policies related to preservation of rural, agricultural, recreational, and environmentally sensitive areas.
2) Focus development in urban centers and existing cities.	Consistent. The General Plan focuses new development within the existing urban portion of the City. Minimal development would be provided for in the hillside area. Specially, Specific Plans, redevelopment, and infill are the focus of goals and policies in the General Plan. (Refer to GP Goals and Policies: LU 1.1.1, LU 2.1.3, LU 2.1.2, LU 2.1.4, LU 3.1.2, LU 3.1.3, LU 3.1.4, LU 3.1.6, AQ 1.2.1, AQ 1.2.2, AQ 1.1.2, and Econ 5.1.1)	Consistent. The Planning Area is located in the urbanized portion of the City and would consist of future infill development.
3) Develop strategies to accommodate growth that uses resources efficiently, eliminates pollution, and significantly reduces waste.	Consistent. General Plan goals and policies encourage energy efficiency, waste reduction, and traffic reduction, which would be required for new development to comply with on a project-by-project basis. (Refer to GP Goals and Policies: Con 4, Con 4.1, Con 4.1.1, Con 4.1.2, Con 4.1.3, Con 4.1.4, LU 2.1.3, LU 2.1.2, LU 2.1.4, LU 3.1.2, LU 3.1.3, LU 3.1.4, LU 3.1.6, AQ 1.2.1, AQ 1.2.2, AQ 1.1.2, and Econ 5.1.1)	Consistent. Future development within the Planning Area would be subject to General Plan goals and policies regarding energy efficiency, waste reduction, and traffic reduction.
4) Utilize “green” development techniques.	Consistent. The General Plan incorporates green elements through land use designations and Specific Plan design. Future development may be assessed for additional site specific green development techniques on a project-by-project basis. (Refer to the consistency analysis for SCAG Growth Visioning Strategy Policy 1.3)	Consistent. Future development within the Planning Area would be subject to “green” standards such as Title 24 energy requirements, water conservation, and low impact development guidelines. CalGreen Building Code standards require sustainable development. “Green” development strategies would be customized on an individual project basis; low-impact development and green infrastructure policies are included in the Specific Plan.

Impacts related to inconsistencies with local plans and policies would remain less than significant.

Due to the comprehensive nature of land use issues, the General Plan Land Use Element may not be able to address issues in the same level of detail as other local physical planning documents, plans, and ordinances. City documents - including the Development Code and Specific Plan area standards -- are used to implement the General Plan and establish more specific regulations and policies for new development. The General Plan EIR determined that the General Plan would not result in land use impacts relative to local plans or policies. Impacts would remain less than significant.

Table 4.1-7 (Proposed Specific Plan Consistency with Local Plans and Policies) presents the proposed Specific Plan's consistency with the General Plan and therefore with local plans or policies. Impacts would remain less than significant with implementation of General Plan goals, policies, and implementation measures, in conjunction with proposed Specific Plan objectives.

Table 4.1-7
Proposed Specific Plan Consistency with Local Plans and Policies

Plan or Policy	Consistency Statement	
	General Plan	Proposed Specific Plan
City of Duarte Development Code	Consistent. Duarte continues to ensure that its legislative enactments, including zoning, are consistent with the General Plan. Each of Duarte's General Plan land use categories corresponds to one or more zoning districts.	Consistent. The Specific Plan is intended to replace certain components of the Development Code for the Specific Plan Area, and references applicable components of the Development Code. Implementation of the Specific Plan would not conflict with the Development Code, since the Specific Plan standards clearly state which regulation shall apply.
Planned Community/Areas (Specific Plans)	Consistent. The Planned Community and Areas adopted by the City of Duarte have been designed to implement specific goals and policies of the General Plan. The adopted Planned Community and Specific Plan Areas would remain consistent with the General Plan Update.	Consistent. Implementation of the Town Center Specific Plan would not conflict with adopted Planned Community/Areas or Specific Plans. The Town Center Specific Plan would become a new Specific Plan, and would be idetnifeid in the General Plan land use diagram in order to be consistent with the General Plan.
Redevelopment Plans	Consistent. California State Law requires all adopted Redevelopment Plans to conform to the City General Plan. The General Plan Update did not involve any changes that would make the Merged Projects Area Redevelopment Plan inconsistent with the General Plan Update. Similarly, as the General Plan is intended to guide future development in the City of Duarte, the Redevelopment Plan adopted by the City	Consistent. All Redevelopment Agencies were officially dissolved as of February 1, 2012. The Specific Plan does not involve a redevelopment plan.

	would be consistent with the General Plan Update.	

Impacts related to indirect land use incompatibilities would remain less than significant.

Implementation of the General Plan Update did not result in any direct impacts regarding land use compatibility. The General Plan encourages a compatible pattern of development, with goals and policies that direct future growth and development in Duarte while minimizing existing and potential land use conflicts. The goals and policies of the General Plan were designed to preserve and improve existing and future physical development by providing a balance of residential and non-residential development, ensuring that adjacent land uses are compatible with one another, and effectively developing or redeveloping vacant, underutilized, or small parcels. Therefore, the certified General Plan EIR determined that impacts related to land use incompatibilities would be less than significant with implementation of General Plan policies and implementation measures.

The proposed Specific Plan serves as a long-range policy document that encourages a mix of land uses - including residential, office, restaurant, office, and hotel uses - to provide a diverse Town Center environment. The Land Use and Zoning chapter of the Specific Plan describes the type, location, and intensity of land uses proposed in the Planning Area. Specific Plan land use designations are established to regulate allowed uses within the Planning Area, ensuring that adjacent land uses are compatible with one another. Overarching objectives of the Specific Plan include facilitating a balanced community with a mix of uses and ensuring that new uses and development are compatible, harmonious, and complementary to the surrounding area. Therefore, implementation of the proposed Specific Plan would provide a framework for minimizing potential land use conflicts. In addition to implementation of Specific Plan objectives, development standards, and design guidelines, future development within the Planning Area would be subject to General Plan policies designed to preserve and improve the existing and future physical environment. Impacts would remain less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance with Mitigation Incorporated

Not applicable.

Significant Unavoidable Impacts

All land use impacts associated with implementation of the proposed Specific Plan would remain less than significant through implementation of General Plan policies and implementation measures in coordination with proposed Specific Plan objectives. No significant unavoidable land use impacts would result from the proposed Specific Plan.

Reference

1 State of California, Department of Finance, E-5 Population and Housing Estimates for Cities, Counties and the State, 2001-2006, with 2000 Benchmark. Sacramento, California, May 2006.

2 City of Duarte Municipal Code, Policy 19.04.010, 2004.

This Page Intentionally Left Blank

This section identifies the existing population, employment, and housing statistics for the City of Duarte as evaluated in the previously certified General Plan EIR as they apply to the proposed Specific Plan. This section analyzes the potential impacts that could result from implementation of the proposed Specific Plan at build-out conditions.

The Initial Study prepared for the proposed Town Center Specific Plan determined that there would be no impact related to displacement of existing hosing or people necessitating the construction of replacement housing elsewhere. Therefore, these impacts have not been further analyzed in this Supplemental EIR.

Environmental Setting

SCAG is the responsible agency for developing and adopting regional growth forecasts for Los Angeles County. SCAG, in cooperation with the San Gabriel Valley Councils of Governments (SGVCOG), the Council of Governments subregion in which Duarte is located, prepared the 1999 Housing and Community Development "Regional Housing Needs" forecast. SCAG's 2016 Regional Transportation Plan (2016 RTP) growth forecasts are the basis for the population, housing, and employment forecasts within the County.

Population

As of January 1, 2016, the California Department of Finance (DOF) estimated the City of Duarte population to be 22,177 persons.[1] According to the 2010 Census, there were approximately 21,321 persons residing in Duarte. Refer to Table 4.2-1 (Regional Population Growth and Projections [2000-2035]) for a summary of City, County, and regional growth and projections.

Projections forecast a population increase in Duarte of approximately 10.6 percent from 2010 to 2035, resulting in a projected resident population of 23,600 persons in year 2035.[2] The 2010 Census reported a population of 21,321, which represents a reduction of 165 persons (a decrease of one percent) since 2000. According to the General Plan EIR, Duarte's population increased by 12.0 percent from 1970 to 1980, and by 23.4 percent between 1980 and 1990. The significant slowdown in population growth from 1990 to 2000 in Duarte and its immediate neighbors was partially due to the lack of available land within these communities, which are essentially built out.

Table 4.2-1
Regional Population Growth and Projections (2000-2035)

Year	Population		Total Growth	Percent Growth	Population		Total Growth	Percent Growth
	2000[1]	2010[2]	2000-2010	2000-2010	2020[3]	2035[4]	2020 - 2035	2020 - 2035
Duarte	21,486	21,321	(165)	-1%	22,100	23,600	1,500	6.8%
Monrovia	36,929	36,590	(339)	-1%	37,500	39,300	1,800	4.8%
Bradbury	855	1,048	193	23%	1,100	1,200	100	9.1%-
Temple City	33,377	35,558	2,181	7%	37,000	39,500	2,500	6.8%
Azusa	44,712	46,361	1,649	4%	49,300	53,000	3,700	7.57%
Los Angeles County	9,519,338	9,818,605	299,267	3%	10,326,200	11,145,100	818,900	7.9%
SGVCOG	1,813,448	1,802,000[6]	-	-	1,921,000	2,121,000	200,000	10.4%

Sources:
1 2000 Census, January 1, 2000
2 2010 Census, May 23, 2016
3 Southern California Association of Governments, 2016-2040 RTP/SCS Final Growth Forecast by Jurisdiction
4 Ibid.
5 SGVOG = San Gabriel Valley Councils of Governments
6 SGVOG 2008 Projected Population Growth

Within a regional context, SCAG projects Duarte's population to be approximately 22,100 in 2020, which represents approximately 1.2 percent of the SGVCOG subregion's population (1,921,000 persons). In the year 2035, the City of Duarte and the SGVCOG subregion are projected to have populations of 23,600 and 2,121,000, respectively.[2] As such, the SGVCOG subregion is projected to grow by approximately 10.4 percent, and Duarte is projected to grow by approximately 6.8 percent, from 2020 to 2035.

As indicated in Table 4.2-1, Los Angeles County experienced a four percent higher rate of population growth from 2000 to 2010 than the City of Duarte. The population for Los Angeles County is projected to grow by 7.9 percent from 2020 to 2035. In contrast from 2020 to 2035, the City of Duarte is projected to have a population growth of 6.8 percent, which is approximately 1.1 percent lower than projected for Los Angeles County.

According to the Market Assessment Study prepared for the proposed Duarte Town Center Specific Plan, conducted in November 2015 ("Market Assessment Study [2015]"), a Half-Mile Walkable Area in all directions from the Specific Plan Area, which includes a portion of Bradbury in the north and City of Hope in the south, contains a total population of 11,586 persons.

Employment Profile

According to the certified General Plan EIR, the City of Duarte had 10,041 persons in the labor force and a 5.4 percent unemployment rate in the year 2000. Labor force data obtained from the Employment Development Department (EDD) reports that as of April 2016, Duarte had a 4.2 percent unemployment rate, with 10,100 residents employed out of a labor force of 10,500 residents. In April 2016, Los Angeles County's unemployment rate was slightly higher at 4.7 percent, with 4,777,900 County residents employed out of the 5,011,500 residents in the labor force.[3]

According to SCAG's 2016-2040 RTP/SCS Final Growth Forecast by Jurisdiction, the City of Duarte is anticipated to have 10,900 jobs in 2020 and 11,600 in 2035. Employment opportunities within Duarte are projected to increase by

approximately 6.4 percent (0.4 percent annually) or 700 jobs from 2020 to 2035. Refer to Table 4.2-3 (Employment Projections [2020 – 2035]), for a summary of City, County, and regional projections for employment.

As indicated in Table 4.2-3, Los Angeles County is anticipated to have 4,662,500 employment opportunities in 2020 and is projected to have an 8.6 percent (399,600 jobs) increase in employment opportunities from 2020 to 2035. The rate of employment growth within the City of Duarte is anticipated to be slightly lower, by approximately 2.2 percent, than projected for the County.

Table 4.2-2
Employment Projections (2020-2035)

Year	Employment		Total Growth	Percentage Growth
	2020	2035	2020-2035	2020-2035
Duarte	10,900	11,600	700	6.4%
Monrovia	21,500	22,600	1,100	5.1%
Bradbury	200	200	0	0.0%
Temple City	7,500	8,100	600	8.0%
Azusa	18,500	19,800	1,300	7.0%
Los Angeles County	4,662,500	5,062,100	399,600	8.6%

Source: Southern California Association of Governments, 2016-2040 RTP/SCS Final Growth Forecast by Jurisdiction

The Market Assessment Study (2015) described the City and Specific Plan Area employment profile. Health Care and Social Assistance is the largest source of jobs for the City (3,927) and Specific Plan Area (149). Retail Trade is the second largest employment category for residents of the City (12 percent) and Specific Plan Area (25 percent). Other Services employ the third largest portion of the City (11 percent) while, in the Specific Plan Area, Accommodation and Food Services is third (24 percent).

Housing

According to the 2010 Census, there were 7,254 dwelling units in the City of Duarte, of which 3.3 percent (241 dwelling units) were vacant.[4] Of the 7,013 occupied units within the City, 67.1 percent (4,703 dwelling units) were owner-occupied and 32.9 percent (2,310 dwelling units) were renter-occupied.[5]

According to the General Plan EIR, new housing production in the City of Duarte has significantly decreased since the 1980s. The State Department of Finance (DOF) estimated a slowdown in units added between 2000 and 2006 to be primarily due to the lack of available land within Duarte because the City is essentially built out.

Table 4.2-4 (Housing Projections [2020-2035]), provides summary projections for housing within the City of Duarte, Los Angeles County, and the SGVCOG subregion for 2020 and 2035. SCAG estimates the City of Duarte will have 7,400 dwelling units in 2020 and 8,000 units in 2035, which represents an 8.1 percent increase in units.

SCAG estimates Los Angeles County will have 3,493,700 dwelling units in 2020 and 3,809,300 dwelling units in 2035, which represents a nine percent increase in units. In comparison, the rate of housing growth within the City of Duarte is anticipated to be approximately one percent less than the percent growth for Los Angeles County.

SCAG estimates the SGVCOG subregion will have 589,000 dwelling units in 2020 and 637,000 dwelling units in 2035, which represents an increase of approximately eight percent. Within a regional context, the City of Duarte's 2035 housing stock would represent approximately 1.26 percent of the SGVCOG subregion's housing units. The rate of housing growth within the City of Duarte is anticipated to be approximately the same as the percent of growth for the SGVCOG subregion.

Table 4.2-3
Housing Projections (2020-2035)

Year	Households 2020	2035	Total Growth 2020-2035	Percentage Growth 2020-2035
Duarte	7,400	8,000	600	8.1%
Monrovia	14,200	14,900	700	4.9%
Bradbury	400	400	0	0.0%
Temple City	12,300	13,200	900	7.3%
Azusa	13,900	15,000	1100	7.9%
Los Angeles County	3,493,700	3,809,300	315600	9.0%
SGVCOG	589,000	637,000	48000	8.1%

General Plan

The General Plan includes the following policies and implementation measures pertaining to population and housing.

P LU 1.1.1 Where appropriate, require and review market studies to determine the mix and type of commercial development necessary to satisfy and sustain the needs for the Duarte Trade Area.

IM Prepare market studies to see if Duarte can attract and sustain national or regional quality restaurants and stores.

P LU 1.1.2 Encourage the development of a mix of housing types and densities to ensure a variety of housing to accommodate a range of tastes and incomes.

P LU 1.1.3 Re-designate ineffective non-residential properties, which will result in rezoning into higher-density residential sites. This will allow the sites to be developed with affordable housing. This program is probably going to occur during the 2006-11 Housing Element planning period.

P LU 1.1.8 The Redevelopment Agency owns 2400-2404 Huntington Drive, adjacent to Las Brisas Homes, a first time home buyers project. The Agency intends to provide these parcels for development of low and moderate income housing and will acquire parcels east to provide an adequate development site.

IM This project will not provide for low and moderate housing but in-lieu fees will be collected and other properties will be designated for low and moderate income housing.

P LU 2.1.4 Provide and encourage industrial development involved in research and development-oriented uses to help achieve a jobs housing balance.

P LU 2.1.7 Make every effort to ensure that industry and residences, where located in close proximity, will be compatible neighbors with non-industrial uses located nearby, and with neighboring cities as well.

P LU 3.1.6 Promote the use of mixed land use techniques and construction methods to provide more housing and minimize housing costs without compromising basic health, safety and aesthetic qualities.

P HOU 1.1.1 Promote and encourage development of hosing, which varies by size, type, design, and type of ownership.

P HOU 1.1.2 Facilitate construction of low- and moderate-income housing.

P HOU 1.1.3 Actively encourage development of second units by publicizing the existence of the revised ordinance, and by providing incentives for development of such units.

P HOU 1.1.4 Promote the use of mixed land use techniques and construction methods to provide more housing and minimize housing costs without compromising basic health, safety and aesthetic qualities.

P HOU 1.1.5 Encourage use of innovative construction techniques, design standards, and energy conservative methods in new housing development, through revised zoning and subdivision and ordinances.

P HOU 1.1.6 Reexamine City zoning and building codes for possible amendments to reduce construction costs without sacrificing basic health and safety.

P HOU 2.1.1 Continue to cooperate with the Los Angeles County Community Development Commission to provide below-market rate rehabilitation loans for both owner-occupied and retail housing.

P HOU 2.1.2 Continue to investigate and pursue housing rehabilitation programs and funding sources offered by the State and Federal governments.

P HOU 2.1.3 Continue to encourage the rehabilitation of owner-occupied and rental housing units.

P HOU 2.1.4 Promote the use of rehabilitation assistance programs to alleviate deteriorated or deteriorating housing conditions.

P HOU 2.2.1 Continue to encourage the maintenance of sound owner-occupied and renter occupied housing.

P HOU 3.1.2 Accommodate the City's fair share of the regional housing needs.

P HOU 3.1.3 Develop programs to serve persons with special needs including: the elderly, handicapped, single parents, and large family, homeless populations.

P ECON 3.1.1 Develop creative marketing approaches with location criteria to attract retailers not already existing in Duarte and to assist existing retailers.

IM Work with individual business owners to improve their appearance, provide better parking, access, marketing and expansion opportunities.

P ECON 4.1.5 Collaborate with Citrus and other colleges, California State University Los Angeles, California Polytechnic University, Chamber of Commerce and other higher education providers to encourage educational, and job reentry training opportunities for Duarte residents.

P ECON 4.1.6 Perform a jobs/housing balance study and set goals to achieve and maintain a jobs/housing balance.

Thresholds of Significance

Population, employment, and housing impacts resulting from the implementation of the proposed project may be considered significant if they would result in the following:

- Induce substantial population growth in an area, either directly (for example, proposing new homes and business) or indirectly (for example, through extension of roads or other infrastructure);
- Displace substantial numbers of existing housing units, necessitating the construction of replacement housing elsewhere (refer to Section 7.0, Effects Found Not to be Significant); and/or
- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere (refer to Section 7.0, Effects Found Not to be Significant).

The characteristics of a project that can trigger population, employment, or housing changes are 1) actual development of residential, commercial, and industrial space, or 2) changes in land use development intensity standards.

Environmental Impacts

Impacts related to population growth would remain less than significant.

According to the certified General Plan EIR, SCAG estimated that the City of Duarte would have a population of 22,656 in 2005 and 23,866 by 2020, and that the SGVCOG subregion would have a population of 1,956,591 in 2005 and 2,257,808 in 2020. The General Plan Update allows for the construction of approximately 726 additional dwelling units within Duarte and the addition of approximately 658,744 square feet of non-residential development. As noted in the certified General Plan EIR, the build-out potential of Duarte was anticipated to be increased by approximately 2,396 persons, resulting in a population of 25,418 by the year 2020. Although build-out of the General Plan Update would result in a population of 25,418 persons, which represents 1,552 more persons than projected by SCAG, Duarte remains generally consistent with the subregional forecast for 2020. The forecast is not a mandate passed down by SCAG, but rather a projection to help jurisdictions plan for the future. The increase in population is expected to occur over a 15-year period (2005 to 2020), allowing for development of necessary services and infrastructure to accommodate projected growth. Therefore, the certified General Plan EIR determined that impacts related to population growth would be less than significant.

According to the DOF, the City of Duarte had a population of 22,177 as of January 2016.[6] As of October 2015, the Planning Area contained 107 dwelling units. The proposed Specific Plan could accommodate up to 1,143 dwelling units, resulting in a net increase of 1,036 dwelling units in the Planning Area. Based on a rate of 3.04 persons per household in 2015, the proposed Specific Plan would result in an increase in population of 3,150 persons, for a citywide population of 25,327 at build-out of the Specific Plan. This population total is within the population anticipated and analyzed in the certified General Plan EIR, and therefore remains consistent with population projections for the City. Future residential development facilitated by implementation of the proposed Specific Plan would be able to accommodate the anticipated population growth within the City and region. Impacts would remain less than significant.

Impacts related to the City's housing stock would remain less than significant.

As noted in the General Plan EIR, if the General Plan could accommodate population projections for the City of Duarte, then impacts on the housing stock would be considered less than significant. The General Plan Update provides for an additional 726 residential dwelling units, resulting in a total of 7,702 dwelling units at build-out. As stated in the General Plan EIR, SCAG reported that Duarte had 6,779 households in 2005, and that the SGVCOG subregion had 564,632 households in 2005. SCAG projects that, by 2020, the City of Duarte will have a total of 7,458 dwelling units and the SGVCOG subregion will have 668,667 dwelling units. The General Plan EIR determined that

implementation of the General Plan Update would adequately meet the housing needs of the anticipated population growth within the City; therefore, impacts were determined to be less than significant.

Since certification of the General Plan EIR, the City has experienced an increase in housing stock. According to the DOF, the City of Duarte had a total of 7,337 housing units as of January 2016.[7] As of October 2015, the Planning Area contained 107 dwelling units. The proposed Specific Plan land use plan can accommodate up to 1,143 dwelling units, resulting in a net increase of 1,036 units, for a citywide total of 8,373 dwelling units. Because the housing stock as increased since certification of the General Plan EIR, the addition of 1,036 units at Specific Plan build-out would provide for 671 more dwelling units than the previously certified General Plan and would adequately meet the housing needs of the anticipated population growth within the City; therefore, impacts on housing stock would remain less than significant.

Any related environmental impacts resulting from the projected increase in housing units under the Specific Plan are discussed in the appropriate environmental sections (e.g., public services, transportation, utilities) of this EIR.

Impacts related to employment growth would remain less than significant.

As noted in the certified General Plan EIR, the City of Duarte had approximately 11,000 jobs as of December 2005. Build-out of the General Plan Update would include 248,744 square feet of retail space, 50,000 square feet of office space, and 360,000 square feet of research and development space. Implementation of the General Plan Update would account for an employment growth of 945 jobs.[8]

According to the certified General Plan EIR, SCAG estimated that the SCGCOG subregion had approximately 764,110 employment opportunities, and the City of Duarte had approximately 10,131 employment opportunities, in 2005. SCAG projections indicate that the SCGCOG subregion would have approximately 907,883 employment opportunities in 2020, and the City of Duarte would have approximately 11,6453 employment opportunities, in 2020. Build-out under the General Plan Update would generate an additional 292 jobs.

At the regional level, the emphasis has primarily been placed on achieving a balance of employment and housing opportunities within the subregions. This regional concept, referred to as jobs/housing balance, encourages the designation and zoning of sufficient vacant land for residential uses with appropriate standards to ensure adequate housing is available to serve the needs derived from the local employment base. In addition, the jobs/housing balance helps improve regional mobility (traffic), reduce vehicle miles traveled, and thereby improve air quality.

The jobs/housing ratio can be used as the general measure of balance between a community's employment opportunities and the housing needs of its residents. A rate of 1.0 or greater generally indicates that a City provides adequate employment opportunities in the City, potentially allowing its residents to work in the City.

As discussed in the certified General Plan EIR, the City of Duarte had jobs/housing balance of 1.55 in 2005. Build-out of the General Plan Update would result in 11,945 jobs and 7,702 housing units, which represents a jobs/housing ratio of 1.55. Because the jobs/housing ratio would not change under the General Plan Update, the General Plan EIR determined that impacts would be less than significant.

Table 4.2-5 (Proposed Specific Plan Employment Generation) summarizes projected employment growth within the Specific Plan Area. The proposed Specific Plan would result in 577 additional jobs, for a citywide total of 12,522 jobs at build-out. Specific Plan implementation t would result in a citywide total of 8,373 housing units, with a citywide jobs/housing ratio of 1.50, which is above 1.0 and consistent with the jobs/housing ratio as analyzed in the previously certified General Plan EIR. Therefore, the impact would remain less than significant.

Table 4.2-4
Proposed Specific Plan Employment Generation

Land Use	Generation Factor	Square Feet	Employment Growth
Retail	0.00236 per SF	(6,764)	(16)
Office Use	0.00313 per SF	62,230	195
Restaurant	0.00236 per SF	176,194	416
Civic	0.0007 per SF	35,518	25
Church	--	(11,630)	--
Nursing Home	0.00236 per SF	(38,527)	(91)
Sub - Total	*N/A*	*217,021*	*529*
Hotel	0.143 per room*	331 Rooms	48
		Total	577

Source: Natelson Company. Employment Density Study Summary Report, prepared for the Southern California Association of Governments. October 31, 2001
* *Economic & Planning Systems, Inc., 2016*

Mitigation Measures

No mitigation measures are required.

Level of Significance with Mitigation Incorporated

Not applicable.

Significant Unavoidable Impacts

All population, housing, and employment impacts associated with implementation of the proposed Specific Plan would be less than significant through implementation of General Plan policies and implementation measures. No significant unavoidable population, employment, and housing impacts would result from build-out of the proposed Specific Plan.

References

1 State Department of Finance Demographic Research Unit. Report E-5 Population and Housing Estimates for Cities, Counties, and the State, January 1, 2011-2016, with 2010 Benchmark. May 1, 2016

2 Southern California Association of Governments, 2016-2040 RTP/SCS Final Growth Forecast by Jurisdiction

3 State of California Employment Development Department, *Monthly Labor Force Data for Cities and Census Designated Places (CDP) April 2016, based on data from the 2009-2013 American Community Survey*

4 State Department of Finance Demographic Research Unit. Report E-5 Population and Housing Estimates for Cities, Counties, and the State, January 1, 2011-2016, with 2010 Benchmark. May 1, 2016

5 State Department of Finance Demographic Research Unit. Report E-5 Population and Housing Estimates for Cities, Counties, and the State, January 1, 2011-2016, with 2010 Benchmark. May 1, 2016

6 State Department of Finance Demographic Research Unit. Report E-5 Population and Housing Estimates for Cities, Counties, and the State, January 1, 2011-2016, with 2010 Benchmark. May 1, 2016

7 State Department of Finance Demographic Research Unit. Report E-5 Population and Housing Estimates for Cities, Counties, and the State, January 1, 2011-2016, with 2010 Benchmark. May 1, 2016

8 Natelson Company. Employment Density Study Summary Report, prepared for the Southern California Association of Governments. October 31, 2001

This section describes the visual and aesthetic resources evaluation in the certified General Plan EIR as it applies to the proposed Town Center Specific Plan. This section analyzes the potential impacts to scenic vistas and the potential for adverse changes in the visual character and quality of the Planning Area that could result from additional development under the proposed project.

The Initial Study prepared for the proposed Town Center Specific Plan determined that the project would not significantly damage scenic vistas or scenic resources and would not substantially degrade the existing visual character or quality of the Planning Area or surroundings. However, the certified General Plan EIR did analyze impacts related to the visual character and quality of the Planning Area and its surroundings, so that topic is included in this Supplemental EIR. Although the certified General Plan EIR did not address scenic vistas, impacts to scenic vistas were identified as potentially significant in the Initial Study prepared for the previously certified General Plan EIR, so that topic is also included in this Supplemental EIR.

Environmental Setting

The City of Duarte has a rich history from its time as Rancho de Azusa to its foundation as a health-centric community with present day premier medical institutions. Today, the City experiences growth and diversification of its commercial centers, the maturing of the urban landscape, and development of community centers and facilities, which all contribute to the aesthetic value of the community. The following discusses the elements that contribute to the City of Duarte's form and character.

Natural Features and Open Space

The northern portion of Duarte is bordered by the San Gabriel Mountains and the Angeles National Forest, which comprise approximately 2,331 acres or 53.6 percent of the total land area in the City. The Angeles National Forest and additional wilderness area are visual assets and natural recreational resources for residents. The San Gabriel Mountains are a source of identity for Duarte and provide a topographic northern boundary that classifies Duarte as a southern California foothill community. Additional open space and recreation exists throughout the urbanized area of the City in public parks, trails, and utility easements.

At its easterly border, the City contains a portion of the San Gabriel River. The river has become a landscaped buffer that over time has been fenced off, filled with flood control facilities, and walled by mining operations. However, this regional amenity remains unchanneled in the City and has the potential to support lush riparian vegetation and a wide variety of birds and wildlife.

Developed Areas

The urbanized, southern portion of Duarte is approximately 98 percent developed. According to the certified General Plan EIR, the City is in an ongoing process to improve the built environment.

Residential Areas

According to the certified General Plan EIR, approximately 20.73 percent of the total land in Duarte is developed with residential land uses. The residential distribution is characterized by very low density homes located in the foothills of the Angeles National Forest, low density single-family homes on smaller lots located in the lower hillside areas and throughout the urbanized portion of the City, medium density multi-family residential mostly located along Huntington Drive, and high density residential uses concentrated between Royal Oaks Drive and Huntington Drive, with smaller residential pockets located south of Duarte Road around Buena Vista Street.

Non-Residential Areas

According to the General Plan EIR, commercial, hospital, and industrial uses comprise approximately 6.43 percent of the total land within the City. Commercial land uses represent the largest portion of non-residential development and is typically located along main freeway corridors and arterials such as Huntington Drive. Industrial areas are located primarily in the center and easterly sections of the City. Major hospital land uses are concentrated in the southern portion of the City and along the western side of Buena Vista Street just north of Huntington Drive.

Light and Glare

Potential impacts caused by lighting can occur as a result of light emanating from the interior of structures passing through windows as well as from exterior sources, such as street lighting, security lighting, and landscape lighting. Unwanted or misdirected light may also "spillover" onto adjacent properties, causing adverse effects on landowners or occupants. In addition, glare effects may occur when luminance within the visual field is created that is significantly greater than the luminance to which one's eyes are adjusted. Glare effects may result in general annoyance, physical discomfort, or a temporary loss in visibility.

According to the certified General Plan EIR, exterior light sources in the City of Duarte are found along main arterials such as Huntington Drive, Buena Vista Street, Interstate 210, and Interstate 605. Glare is associated with buildings with exterior facades largely or entirely comprised of highly reflective glass. Sources of glare include windows and reflective building materials from uses along Huntington Drive and Buena Vista Street. Light and glare also results from the interiors and exteriors of commercial uses along Huntington Drive. Nearby hospital uses are a significant source of light and glare due to the size and height of buildings, operation of parking facilities, extended hours of operation, and 24-hour traffic generated by the facilities.

In the Specific Plan Area and as identified in the General Plan EIR, exterior light sources are located along main arterials such as Huntington Drive, Buena Vista Street, and Highland Avenue due to street lights and traffic. Sources of light and glare also result from the interiors and exteriors of buildings along these primary streets.

Shade and Shadow

Negative impacts from shade and shadow may occur when buildings or structures block direct sunlight from adjacent locations where sunlight is considered a benefit. The users or occupants of certain land uses, such as residential, recreational, churches, schools, outdoor restaurants, and pedestrian areas, have expectations for direct sunlight and warmth from the sun. These land uses are termed "shadow-sensitive."

According to the certified General Plan EIR, the City of Duarte does not have many large structures that cast shade or shadows on shadow-sensitive land uses. Large buildings are present within the two hospital sites. At this time no substantial shade and shadow issues on shadow-sensitive land uses have been identified.

In the Specific Plan Area, no substantial shade and shadow issues on shadow-sensitive land uses have been identified.

Existing Policies and Regulations

The following existing City policies, plans, and regulations are intended to protect and enhance the visual character of Duarte and ensure quality development.

General Plan

Land Use Element

The City of Duarte's General Plan Land Use Element influences the visual character of the City by determining the type, intensity, and location of development to occur within the City. The Land Use Element includes specific goals, policies, and implementation measures to ensure compatible development throughout the City.

Open Space and Conservation Element

The Open Space and Conservation Element allows the City to establish long-term goals and policies for the creation and preservation of open space areas (e.g., San Gabriel Mountains and local parks). Open space areas contribute to the visual quality of the City while providing recreational areas for residents and visitors.

Polices and Implementation Measures

P LU 2.1.1 New infill residential development should be compatible in design, bulk, and height with existing residential development located nearby.

IM Review the zoning ordinance and design guidelines to insure adequate development and aesthetic standards. Require all infill development projects to undergo review by the Architectural Design Review Board and be consistent with design guidelines. Work to prevent light spillage from one land use to another.

P LU 2.1.2 Permitted uses along Huntington Drive should accurately reflect economic market conditions and incompatible uses and activities should be eliminated.

P LU 2.1.6 Hillside development must be sensitive to the local views of the hills and to the natural environment.

P LU 2.1.7 Make every effort to ensure that industry and residences, where located in close proximity, will be compatible neighbors with non-industrial uses located nearby, and with neighboring cities as well.

IM Designate these uses as nonconforming land uses and initiate abatement procedures which will allow for their removal.

P LU 3.1.1 Develop Specific Pan areas which will provide the flexibility needed to make these places unique.

P LU 3.1.6 Promote the use of mixed land use techniques and construction methods to provide more housing and minimize housing costs without compromising basic health, safety and aesthetic qualities.

IM Provide for vertical and/or horizontal mixed use with unique parking and design standards. Encourage land use intensification of the proposed City Center area for mixed-use development with an emphasis on retail development on the ground floor and higher density residential on upper floors. Work to improve parking issues relative to overall numbers and proximity to businesses.

P HOU 1.1.1 Promote and encourage development of housing, which varies by size, type, design, and type of ownership.

P HOU 1.1.4 Promote the use of mixed land use techniques and construction methods to provide more housing and minimize housing costs without compromising basic health, safety and aesthetic qualities.

P HOU 1.1.5 Encourage use of innovative construction techniques, design standards, and energy conservation methods in new housing development, through revised zoning and subdivision and ordinances.

P CON 1.1.3 To preserve the characteristics of the mountains, river beds, and canyons and to protect the valuable watershed, grading of lots should be kept to a minimum. Streets should be carefully designed to reduce or eliminate the possibility of erosion in the hillside and mountainous areas.

IM Implement the General Plan land use policy. Implement the hillside ordinance.

P CON 6.1.1 Maintain very low densities in the northernmost portion of the city not included in the National Forest. Further development must be sensitive to the terrain, natural environment and aesthetics.

P ECON 2.1.1 Continue to improve landscaping and the visual character of the I-210 freeway corridor.

IM Devise a systematic program to monitor and maintain the visual character of the corridor.

P ECON 6.1.2 Assess the cost/benefits of providing City and/or Redevelopment Agency public improvements and assistance within a City Center area.

IM Continue to perform studies relative to land, relocation, demolition, remediation and construction cost. Identify potential businesses to locate in the City Center area.

Municipal Code

While the General Plan provides long-range, broad categories of land use, the City's Development Code (Title 19 of the Municipal Code) provides specific development requirements, such as regulations for density, height, size, and development character. Similar to the General Plan Land Use Diagram, a zoning map accompanies the Development Code, to define the boundaries of each zoning district. Zoning is an implementation tool that is required to be consistent with the City's General Plan. The Development Code also is intended to ensure that future development is attractive and compatible with conditions on surrounding properties.

Section 19.50.070 (Outdoor Lighting) of the Duarte Municipal Code establishes outdoor lighting standards to ensure that light trespass, light pollution, and glare have a negligible impact on surrounding properties. General standards for outdoor lighting include (1) confining glare and reflections by shielding or recessing lighting, (2) mandating that lights be the minimum height required to effectively illuminate an area without spillover of light and glare onto adjoining properties, and (3) limiting outdoor lighting intensity to 3.0 foot-candles over an entire parking area.

According to the previously certified General Plan EIR, because signs are intended to communicate visually, they have the potential to conflict with the goal of achieving visual and aesthetic quality in the environment.

Chapter 19.80 (Signs) of the Duarte Municipal Code requires that signs undergo design review in order (1) to protect the safety of users of the streets and highways, (2) to assure compatibility with the uses associated with signs, and (3) to avoid adverse effects on adjacent property values and living conditions.

Planned Communities and Areas/Specific Plans

The City has 15 approved Planned Communities and Areas as designated by the 1989 General Plan. As part of the General Plan Update and its EIR, these areas were designated as Specific Plans. Specific Plans establish the type, location, and character of development that occurs within designated geographical areas of the City. Although a Specific Plan allows flexibility in each development area in regard to exact land use and design concepts, overall development standards are required to be followed, ensuring land use compatibility. Development standards and design guidelines, including for landscaping, are typically written into a Specific Plan to provide a planning framework for clear design, direction, and quality development.

Redevelopment Project Area

Redevelopment plans were intended to revitalize and rehabilitate blighted areas. According to the previously certified General Plan EIR, in 1998 seven redevelopment project areas were merged together to become approximately one 600-acre redevelopment area.

As of February 1, 2012, the passage and subsequent State Supreme Court upholding of ABX1 26 dissolved redevelopment agencies and replaced them with Successor Agencies. The City of Duarte elected to become a Successor Agency by Resolution on January 24, 2012.

Thresholds of Significance

Aesthetics, light, and glare impacts resulting from the implementation of the proposed Specific Plan may be considered significant if they would result in the following:

- Substantially degrade the existing visual character or quality of the site and its surroundings;
- Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area;
- Have a substantial adverse effect on a scenic vista; and/or
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway (refer to Section 7.0, Effects Found Not to be Significant);
- Introduce shade and shadow effects onto adjacent buildings within the City.

Environmental Impacts

Impacts related to the visual quality and character of the surrounding urban environment would remain less than significant.

As discussed in the certified General Plan EIR, the City of Duarte is primarily built out, and land use plan changes associated with the General Plan Update would likely enhance the quality of the visual environment and character of Duarte. New projects would undergo design review by the Architectural Review Board on a project-by-project basis to ensure requirements are met and that the proposed development is conducive in design and function to the surrounding environment. Adherence with General Plan Land Use Element policies and the Development Code, and review by the Architectural Review Board, would ensure that future development would enhance the community image, streetscape, and private development by ensuring that all new development would be compatible and consistent with surrounding uses. The certified General Plan EIR determined that impacts related to visual quality and character would be less than significant.

The proposed Specific Plan Area is primarily built out, and implementation of the proposed Specific Plan would enhance the visual environment and character of the Planning Area. The proposed Specific Plan includes building form standards, development standards, design guidelines, and Area Objectives that would guide the scale and character of future development. Specific Plan Area Objectives relevant to visual quality and character are listed below.

Area 1 Objectives:

- Promote high-quality commercial development throughout the plan area, including retail, office and hotel uses at a scale that gives presence to this area as the entrance to the Town Center.
- Encourage development that is pedestrian friendly, with buildings forming a comfortable street wall near the sidewalk.
- Establish a gateway to direct people toward the Town Center from Central Avenue and the I-210 freeway.
- Protect and retain the historic Duarte School (existing Old Spaghetti Factory) building.

Area 2 Objectives:

- Promote mixed-use development throughout the area, with retail emphasis on ground floors nearest to Huntington Drive, to activate building edges, and housing or office above.
- Ensure adequate signage to enhance economic development opportunities for uses located farther from Huntington Drive.

Area 3 Objectives:

- Encourage redevelopment of properties at the intersection of Buena Vista Street and Huntington Drive with active uses such as a plaza with space for outdoor gathering and dining surrounded by retail uses.
- Enhance the area with the development of an active outdoor dining and café space, with the goal of establishing Duarte's restaurant row in this area.
- Provide additional housing options with three- to five-story residential development complete with open space and parking (subject to Tier 3 – Community Benefits Bonus minimum requirements).
- Increase the area's walkability through concentrated development of service and entertainment uses.

Area 4 Objectives:

- Encourage the improvement of underutilized properties through lot consolidation and higher density mixed-use development.
- Allow for additional stories (3 – 4 total stories maximum) for properties that consolidate to the minimum 80,000 square feet (Tier 2 – Lot Consolidation Bonus).
- Promote ground-floor retail with two to three levels of residential above.
- Ensure new development is compatible with surrounding residential properties.

Area 5 Objectives:

- Improve existing properties and ensure new development orients retail frontages toward Huntington Drive, with parking located in the rear or underneath.
- Activate the corner of Highland Avenue and Huntington Drive with new uses and active storefronts.
- Allow flexibility in parking regulations to facilitate the development of restaurants and retail uses in the short term.
- Explore the feasibility of a hotel or multi-story mixed use project to act as a gateway feature to the Town Center.

Area 6 Objectives:

- Create a gateway mixed-use development at the corner of Highland Avenue and Huntington Drive.
- Enhance existing development with façade and landscaping improvements.
- Promote mixed-use development, with retail emphasis on ground floors to activate building edges and housing and/or office above.
- Provide incentive to remove and replace under maintained residential property on Oak Avenue.

Area 7 Objectives:

- Encourage lot consolidation and improve underutilized space to transform the area into a vibrant residential node.
- Ensure that building massing along large blocks is broken up to allow passage or circulation through them with paths leading to destinations including outdoor plazas and outdoor spaces.

Area 8 Objectives:

- Preserve and enhance existing residential uses in the area.
- Strengthen the mix of residential densities and promote higher density development in proximity to the Duarte Metro Gold Line Station.

Area 9 Objectives:

- Stimulate property improvements to develop underutilized and vacant parcels to become two- to four-story multifamily residential or invigorated commercial uses.
- Promote the development of mixed-use at the corner of Huntington Drive and Highland Avenue.
- Allow higher density housing in proximity to the Duarte Metro Gold Line Station.

Area 10 Objectives:

- Continue to agglomerate civic uses at the center of the Town Center.
- Maintain and improve public amenities (plazas, aquatic center) within the Civic Center area.
- Allow for a variety of uses on underutilized Civic Center land.

Future development within the Specific Plan Area would be subject to review and approval by the Architectural Review Board to ensure that development complies with applicable Specific Plan standards and adheres to General Plan policies and the Development Code. Specific Plan Design Guidelines are encouraged to be utilized by all projects. The guidelines provide a framework for development design, with the intent of providing guidance toward high-quality architecture and context sensitivity. Therefore, impacts would remain less than significant.

Impacts due to light and glare affecting sensitive receptors would remain less than significant.

Lighting impacts are generally not a concern for daytime views because most sources of exterior lighting are turned off during the day. Lighting is a concern at night when excessive or inappropriately mounted lighting can impact views of the night sky and create an annoyance on adjacent properties. Conversely, glare is generally a daytime issue, when reflective building and automobile materials (e.g., glass or polished metal) reflect sufficient sunlight to create glare. Impacts associated with glare range from nuisance to potentially dangerous situations (e.g., if glare is directed into the eyes of motorists).

The primary sources of glare are often concentrated in commercial areas containing large surfaces of reflective materials, such as glass building facades. Glare can occur at night from unshielded or misdirected lighting sources. Glare can also cause excessive heating of nearby buildings if the glare is directed towards them.

As discussed in the certified General Plan EIR, the City of Duarte is primarily built out; therefore, new substantial sources of light and glare are not expected. Although new developments under the General Plan would incrementally contribute to the existing built environment, future development projects would be subject to review and approval of the Architectural Review Board. This design review would evaluate and mitigate street lighting, building design, height limitations, and landscaping to ensure that all Development Code standards and ordinances are met. The certified General Plan EIR determined that impacts related to light and glare would be less than significant.

Consistent with the certified General Plan EIR, the Planning Area is developed with existing buildings and uses throughout the Planning Area, and new substantial sources of light and glare are not expected to be significantly different from those existing on the ground today.

Section 19.50.070 of the City's Municipal Code, which regulates glare and outdoor lighting, would continue to apply in the Planning Area. Section 19.50.070 standards for outdoor lighting include (1) confining glare and reflections by shielding or recessing lighting, (2) mandating that lights be the minimum height required to effectively illuminate an area without spillover of light and glare onto adjoining properties, and (3) limiting outdoor lighting intensity to 3.0 foot-candles over an entire parking area. Future development projects in the Planning Area would continue to be subject to review and approval of the Architectural Review Board. The Specific Plan Design Guidelines include both pedestrian lighting design guidelines and exterior building lighting design guidelines. The Design Guidelines identify specific pedestrian lights for installation in the public right-of-way, to be high-efficiency and low-glare. Exterior building lighting design guidelines focus on providing visibility and safety as well as creating ambiance. Impacts related to light and glare would remain less than significant.

Impacts related to shade and shadow effects on adjacent buildings would remain less than significant.

As discussed in the certified General Plan EIR, the City of Duarte is nearly built out. Future development would be subject to the Development Code and Building Code, which include standards on building height and lot configuration with the consideration of shade and shadow effects on adjacent properties. All new development would be evaluated on a project-by-project basis by the City's Architectural Review Board, which would evaluate the development for

shade and shadow impacts on surrounding conditions. The certified General Plan EIR determined that impacts related to shade and shadow effects on adjacent shadow-sensitive uses such as residential uses, recreational uses, churches, schools, outdoor restaurants, and pedestrian areas would be less than significant.

The proposed Specific Plan includes building form standards, development standards, and Area Objectives that would guide the scale and character of future development. The proposed Specific Plan establishes maximum heights for residential, commercial, hotel, and public facility uses within the Planning Area, by Development Area. Heights are generally limited to 50 feet for new commercial, residential, and mixed-use development. Public facility uses are limited to 75 feet in height. Hotel uses within Area 1 are limited to 90 feet in height. Architectural features are allowed to project up to a maximum of 10 feet above the maximum allowed height, subject to Design Review.

The Specific Plan includes required building setbacks and stepbacks to reduce the bulk and massing of buildings. For all buildings that are three stories or taller, all stories above the third story are required to stepback an average of at least 12 feet from the front property line. In addition, where a building is adjacent to an existing R-1 zoned parcel, the first two stories of a structure shall be set back a minimum of ten feet from the side and/or rear property line and the building shall stepback a minimum of 30 feet from the adjacent side and/or rear property line for the third story and any higher stories.

Future development would be subject to Specific Plan building height and lot configuration standards, as well as review and approval by the Architectural Review Board. The Architectural Review Board would be responsible for ensuring that building form and scale complies with Specific Plan standards and that shade and shadow impacts on surrounding uses would be minimized. Impacts related to shade and shadow would remain less than significant.

Implementation of the proposed Specific Plan would not result in adverse impacts on a scenic vista. Impacts would be less than significant.

As described in the General Plan EIR, the San Gabriel Mountains are located at the northern portion of the City and represent approximately 2,331 acres of open space. The Angeles National Forest and additional wilderness area are a visual asset and natural recreational resource for residents.

The proposed Specific Plan is based on a tiered land use and zoning system that establishes development standards by Development Area (see Exhibit 3-3, Duarte Town Center Development Areas). Heights allowed by the proposed Specific Plan are generally limited to 50 feet for new commercial, residential, and mixed-use development. New public facility uses would be limited to 75 feet in height. Hotel uses within Area 1 would be limited to 90 feet in height. Architectural features would be allowed to project up to a maximum of 10 feet above the maximum allowed height, subject to Design Review in all areas. Redevelopment within the Planning Area pursuant to the development standards and design guidelines of the Specific Plan would result in increased height and mass in the Planning Area and therefore would result in increased obstruction of views of the San Gabriel Mountains from within and outside the Planning Area.

Views of the San Gabriel Mountains from within the Planning Area are intermittently obstructed by existing development but generally are prevalent from all vantage points. Existing development within the Planning Area is generally one to three stories in height. As shown in Exhibit 4.3-1 (Photographic Survey), views of the San Gabriel Mountains are most prevalent when facing north along a north-south roadway. Future development within the Planning Area would remain within the existing block pattern and on existing properties, thereby not resulting in substantially different views of the San Gabriel Mountains from those that exist today.

The General Plan EIR states that the City recognizes the importance of its image through the development of public spaces, building design, and site planning. Any mix of use or increase in density is regulated by the General Plan and Development Code, and reviewed by the City's Architectural Review Board. Implementation and adherence to General Plan policies and implementation measures, Specific Plan development standards and design guidelines, and design review by the Architectural Review Board would result in less than significant impacts.

Mitigation Measures

No mitigation measures are required.

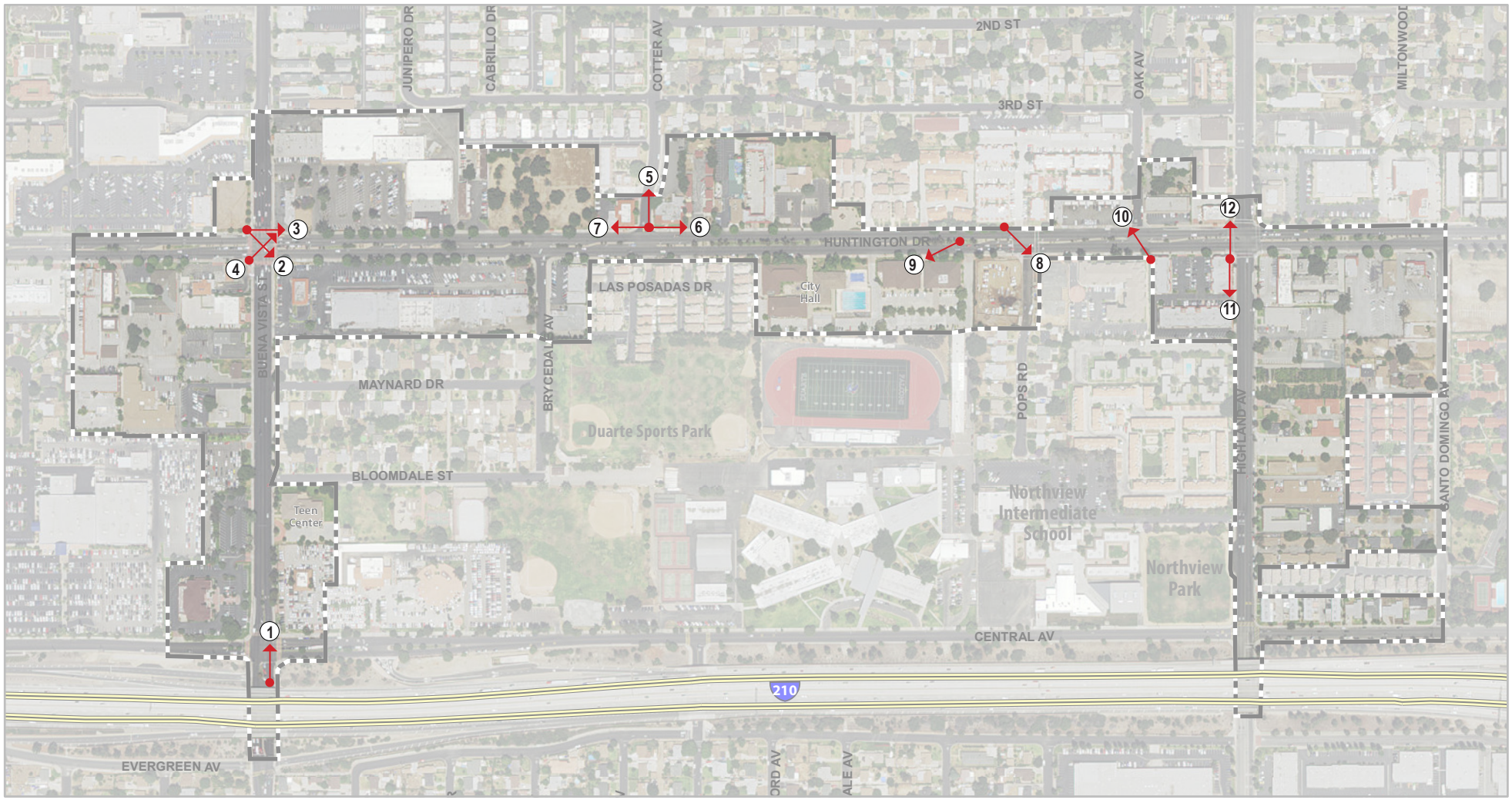
Significance with Mitigation Incorporated

Not applicable.

Significant Unavoidable Impacts

All aesthetic, light and glare, and shade and shadow impacts associated with implementation of the proposed Specific Plan would remain less than significant through compliance with General Plan policies and implementation measures, proposed Specific Plan design guidelines, and design review by the Architectural Review Board. No significant unavoidable aesthetic impacts would result from the proposed Specific Plan.

This Page Intentionally Left Blank



Legend

Town Center Specific Plan Boundary

N

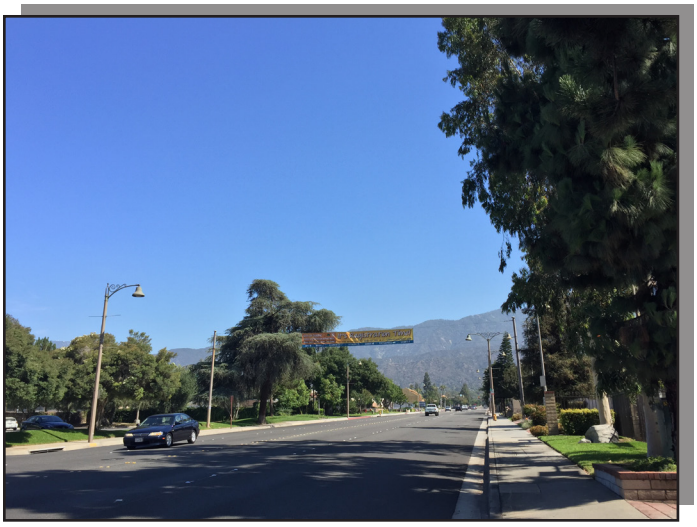
0 125 250 500 750 Feet

Exhibit 4.3-1 Photo Location Map

General Plan Supplemental EIR for the Town Center Specific Plan

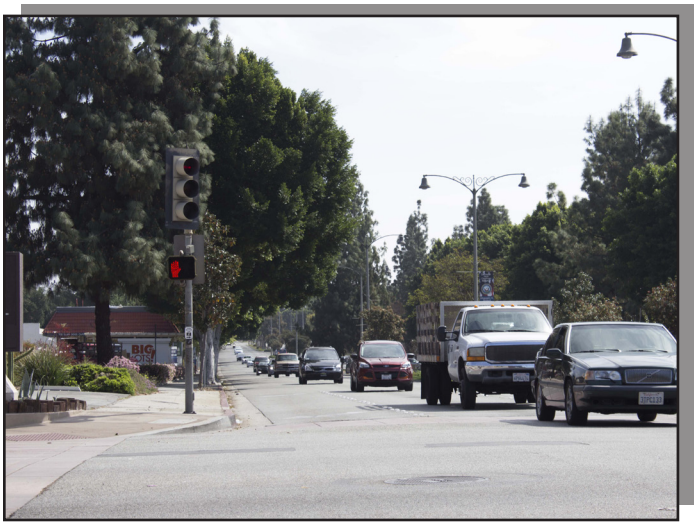
City of Duarte, California

This Page Intentionally Left Blank



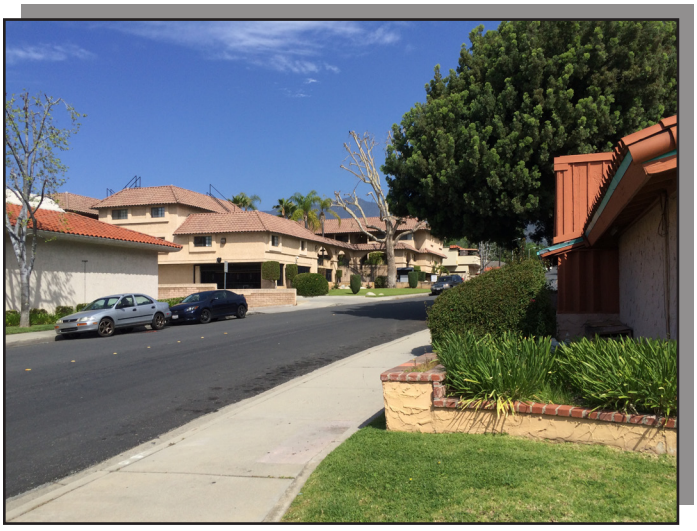
1

2



3

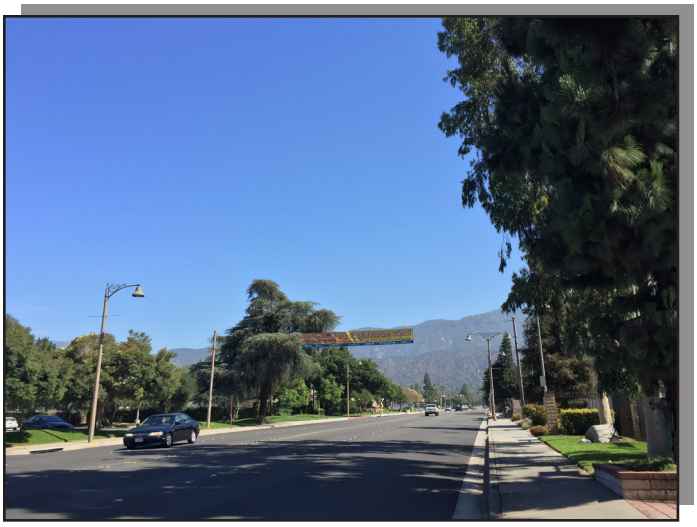
4



5

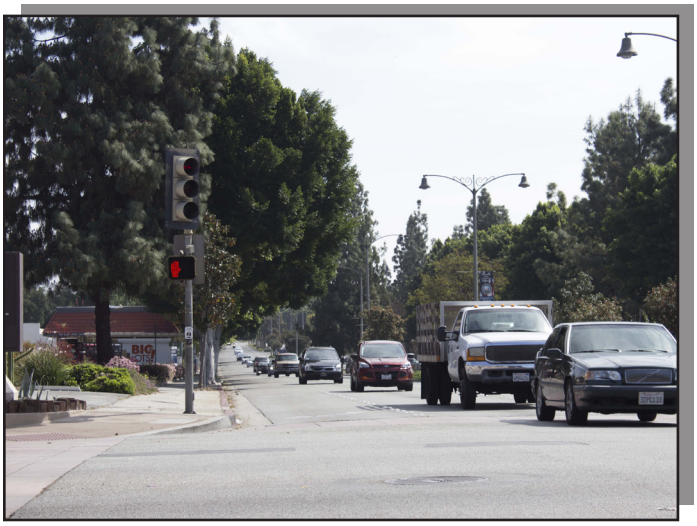
6

This Page Intentionally Left Blank



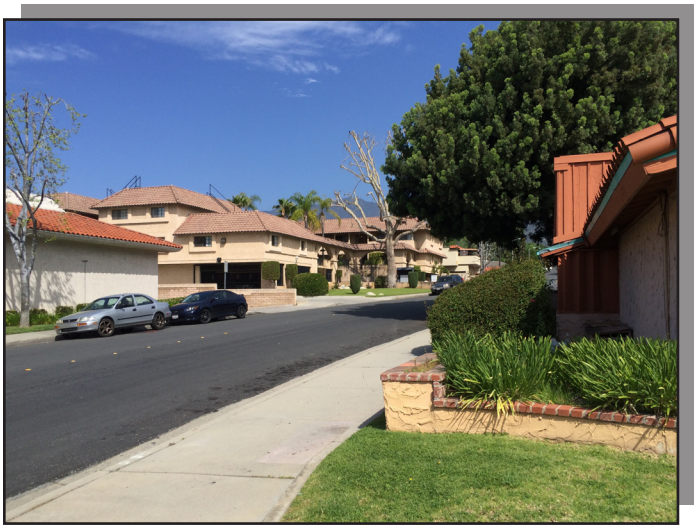
1

2



3

4



5

6

This Page Intentionally Left Blank

4.4 Traffic and Circulation

Duarte's traffic and circulation system includes a hierarchy of local streets and major arterial roadways. Coordination with other transportation agencies such as the Los Angeles County Metropolitan Transportation Authority (Metro) and Caltrans is critical to ensure the efficient operation of Duarte's circulation. This section analyzes traffic impacts as evaluated under the certified General Plan EIR as well as with respect to the proposed Town Center Specific Plan. This section also describes the potential impacts on traffic and circulation within the Planning Area that could result from the adoption of the proposed Specific Plan. This discussion is based on the traffic study prepared by Cambridge Systematics, Inc. (Appendix D).

The Initial Study prepared for the proposed Town Center Specific Plan determined that there would be no impact related to changes in air traffic patterns or increases in hazards due to a design feature. However, the certified General Plan EIR analyzed impacts related to increase in hazards due to a design feature, so impacts are analyzed in this Supplemental EIR. The certified General Plan EIR determined that no impact to air traffic patterns would result. Impacts related to air traffic patterns are therefore not addressed in this Supplemental EIR.

Environmental Setting and Existing Circulation System

The City of Duarte is bordered by the City of Irwindale to the south, the City of Monrovia to the west, the community of Bradbury and the Angeles National Forest to the north, and the City of Azusa to the east. Many of the arterial roadways through Duarte extend beyond the City boundaries into neighboring cities. Circulation issues and travel patterns therefore extend beyond the Duarte City limits. The land use decisions and traffic patterns in these other jurisdictions have the potential to affect the quality of traffic flow and mobility in the City of Duarte, and conversely, traffic conditions and decisions made by the City of Duarte can affect its neighbors.

Regional Access

Two major freeways provide regional access to Duarte. The Foothill Freeway (Interstate 210, I-210) provides east-west regional circulation through the southern portion of the City and acts as a barrier that divides the City into north and south areas.

The San Gabriel Freeway (Interstate 605, I-605) provides north-south regional circulation and terminates at the I-210 within the southeastern portion of the City. Arterials extending through and beyond the City of Duarte are Huntington Drive, which is an east-west roadway and included as a component of Historic U.S. Route 66, and Mountain Avenue and Buena Vista Avenue, which are north-south roadways.

The Planning Area is connected to the region via the I-210 and Huntington Drive.

Local Access

The roadway network that serves the City of Duarte is essentially a grid system of north-south and east-west roads. Smaller collector and local streets connect neighborhoods and other land uses to the arterial street system.

The Planning Area is served by a Principal Arterial, Huntington Drive, two north-south minor arterials, Buena Vista Street and Highland Avenue, and one north-south collector street, Cotter Avenue.

Roadway Functional Classification System

The City of Duarte circulation system consists of a network of local neighborhood streets providing access to the arterial street system, which in turn provides access to the regional freeway system. This network serves two distinct and equally important functions: it provides access to adjacent land uses, and it facilitates the movement of persons and goods to and from, within and through the City. The design and operation of each street is determined by the importance placed on each of these functions. Streets that have a mobility and/or regional access function will have

more lanes, higher speed limits, and fewer driveways. Where access to properties is required, streets will have fewer lanes, lower speeds, parking, and more frequent driveways to serve abutting properties.

Duarte uses a functional classification system as outlined in the 1989 General Plan:

- Freeway;
- Arterial Roadway;
- Collector Street; and
- Local Street.

The roadways in Duarte have also been classified by the Highway Performance Monitoring System (HPMS), which is administered by the California Department of Transportation (Caltrans). According to the HPMS, the roadways in Duarte are categorized into five functional classifications:

- Principal Arterial Interstate;
- Other Principal;
- Minor Arterial;
- Collector; and
- Local.

Principal Arterial Interstate

A Principal Arterial Interstate is a freeway that is included as part of the interstate highway system. It is a controlled access, divided highway that is intended to accommodate high-speed regional travel. The freeways that provide regional access to Duarte are the Foothill Freeway (I-210) and the San Gabriel River Freeway (I-605). According to Caltrans, the I-210 Freeway carried 254,000 average daily trips in 2004 through Duarte. Planning, design, construction, and maintenance of freeways in California are the responsibility of Caltrans.

The I-210 provides direct access to the southern end of the Planning Area. There are no other principal arterial interstates which bisect, are adjacent to, or connect directly to the Planning Area.

Other Principal Arterial

The Other Principal Arterial category is comparable to a major arterial roadway. It accommodates regional, sub-regional, and intercity travel and generally has four to six through travel lanes with a raised median and/or a center left-turn lane. The Other Principal Arterials in Duarte are Huntington Drive, which is an east-west roadway, and Mountain Avenue, which is a north-south roadway.

The Other Principal Arterial in the Planning Area is Huntington Drive.

Minor Arterial

A Minor Arterial is an arterial roadway that has less of a regional significance than Other Principal Arterial roadways. It accommodates sub-regional and intercity travel and generally has four to six through travel lanes with a raised median and/or a center left-turn lane. The east-west Minor Arterial roadways in Duarte are Duarte Road and Royal Oaks Drive. The north-south Minor Arterial roadways in Duarte are Buena Vista Street, Highland Avenue, Las Lomas Road, Mount Olive Drive and Mountain Avenue south of Duarte Road.

The Minor Arterial roadways in the Planning Area are Buena Vista Street and Highland Avenue.

Collector Street

A Collector is a street that is intended to serve as an intermediate route to accommodate travel between local streets and arterial roadways and to provide access to the abutting properties. Collector streets generally have two travel

lanes, although four lanes may be provided at certain locations. The east-west collector streets in Duarte are Central Avenue, Evergreen Street, Fernley Drive, Fish Canyon Road, Galen Street, Hurstview Street, and Royal Oaks Drive east of Las Lomas Road. The north-south collector streets in Duarte are Bradbourne Avenue, Cotter Avenue, Hurlock Avenue, part of Fernley Drive, and Las Lomas Road south of Huntington Drive.

There is a single Collector street in the Planning Area, Cotter Avenue.

Local Street

A Local Street is a low speed street that is primarily intended to provide direct access to the abutting properties. Local streets generally have two travel lanes with parking along both sides of the street. Most of the streets in Duarte and in the Planning Area that are not otherwise classified as Arterial roadways or Collector streets are included in the Local street category.

Existing Operating Conditions

Level of Service Definition for Roadways

According to the traffic study prepared by Cambridge Systematics (see Appendix D) for the Duarte Town Center Specific Plan, Level of Service (LOS) is a qualitative indicator that is used to describe the prevailing operating conditions on a roadway. It is a comprehensive measure that is representative of the various levels of congestion and delay experienced by motorists. Level of Service ranges from LOS A (excellent conditions) to LOS F (extreme congestion), with LOS A through D generally considered to represent acceptable conditions in an urban area. Table 4.4-1 (Level of Service Descriptions) presents a description of the six levels of service and shows the relationship between LOS and volume/capacity ratios and delay for intersections. Generally, "volume/capacity ratio" refers to what proportion of the roadway's vehicle capacity is being utilized, and "delay" refers to the average vehicle wait time at an intersection.

Table 4.4-1
Level of Service Descriptions

Level of Service	Description	Volume/Capacity Ratio or Seconds of Delay
A	Excellent operation. Little or no congestion and delay. Turning movements are easily made and most drivers have freedom of movement in traffic. All approaches to the intersections appear quite open.	< 0.60 v/c or ≤ 10.0 seconds of delay
B	Very good operation. Little congestion and delay. Many drivers begin to feel somewhat restricted within platoons of vehicles. Approaches to the intersections may occasionally be fully utilized and traffic queues start to form.	0.61 to 0.70 v/c 10.1 to 20.0 seconds
C	Good operation. Light congestion and minor delays. Occasional backups on critical approaches at intersections. Occasionally drivers may have to wait more than 60 seconds and backups may develop behind turning vehicles. Most drivers feel somewhat restricted.	0.71 to 0.80 v/c 20.1 to 35.0 seconds
D	Fair operation. Congestion and delays on critical approaches, but intersections functional. Vehicles are sometimes required to wait more than 60 seconds during short peaks and wait through more than one signal cycle. There are no long-standing traffic queues.	0.81 to 0.90 v/c 35.1 to 55.0 seconds
E	Poor operation. Severe congestion and long delays. Some long-standing vehicular queues develop on critical approaches to intersections. Delays may be up to several minutes. Blockage of intersections may occur.	0.91 to 1.00 v/c 55.1 to 80.0 seconds
F	Forced flow. Jammed conditions. Total breakdown of traffic flows with stop- and-go operation. Backups from downstream locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approach lanes.	> 1.00 v/c > 80.0 seconds

Existing Traffic Conditions on Roadways

The certified General Plan EIR analyzed existing traffic conditions on Arterial roadways and Collector streets in Duarte and evaluated conditions in terms of daily traffic volumes, roadway capacities, and levels of service. The certified General Plan EIR traffic volume counts were taken in November 2005.

As reiterated in the Duarte Town Center Specific Plan Traffic Study (2016), below is a summary of the 2007 average daily traffic (ADT) counts and projections for key Arterials as of the date of the General Plan as well as the General Plan 2020 projections.

As shown, the highest volume street in the study area is Huntington Drive, with nearly 24,000 vehicles per day in 2005 and a projected volume of nearly 31,000 vehicles by 2020.

2007 General Plan Existing Traffic Counts

- Huntington Drive between Buena Vista Street and Highland Avenue – 23,810 ADT.
- Buena Vista Street between I-210 Freeway and Huntington Drive – 18,860 ADT.
- Buena Vista Street north of Huntington Drive – 11,310 ADT.
- Highland Avenue between I-210 Freeway and Huntington Drive – 11,480 ADT.
- Highland Avenue north of Huntington Drive – 3,750 ADT.

2020 General Plan Traffic Projections

- Huntington Drive between Buena Vista Street and Highland Avenue – 30,900 ADT.
- Buena Vista Street between I-210 Freeway and Huntington Drive – 23,600 ADT.
- Buena Vista Street north of Huntington Drive – 13,800 ADT.
- Highland Avenue between I-210 Freeway and Huntington Drive – 14,600 ADT.
- Highland Avenue north of Huntington Drive – 5,100 ADT.

The Town Center Specific Plan Traffic Study analyzed the current (2015 and 2016) operational performance of ten intersections within the Planning Area. The study intersections analyzed are the following:

- Huntington Drive and Mountain Avenue. Signalized intersection.
- Huntington Drive and Buena Vista Street. Signalized intersection.
- Huntington Drive and Highland Avenue. Signalized intersection.
- Huntington Drive and Mount Olive Street. Signalized intersection.
- Central Avenue and Buena Vista Street. Signalized intersection.
- I-210 WB On-Ramp and Buena Vista Street. Signalized intersection.
- I-210 EB On-Ramp and Buena Vista. Signalized intersection.
- Huntington Drive and Cotter Avenue. Unsignalized intersection.
- Central Avenue and Highland Avenue. Signalized intersection.
- Central Avenue and I-210 WB Off-Ramp. Unsignalized intersection.

To update the General Plan traffic information, traffic counts within the Planning Area were taken by Cambridge Systematics in May 2015. The counts covered two hours in the AM peak hour and one hour and 30 minutes in the PM peak hour. From there, AM and PM peak hour traffic was calculated by using the highest consecutive hourly traffic flows for every intersection. The count data is summarized in Table 4.4-2 (Traffic Counts [May 2015]).

Table 4.4-2
Traffic Counts (May 2015)

AM Peak Hour Volume													
ID	Intersection	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	*Huntington Ave & Mountain Ave*	208	453	94	96	358	71	87	322	83	131	1249	292
2	*Huntington Ave & Bella Vista S*	141	228	71	47	193	80	71	271	117	88	1449	74
3	*Huntington Ave & Highland Ave*	85	72	183	67	143	32	28	311	78	405	1455	60
4	*Huntington Ave & Mt Olive St*	715	131	212	46	342	85	60	265	194	366	1126	99
5	*Central Ave & Buena Vista St*	40	291	251	38	422	8	3	15	41	348	160	235
6	*I-210 WB On Ramp & Buena Vista*	86	588	0	0	572	229	0	0	0	0	0	0
7	*I-210 EB On Ramp & Buena Vista*	0	439	172	250	369	0	324	12	304	0	0	0
8	*Huntington Ave & Cotter Ave*	30	0	7	8	0	56	30	335	2	7	1593	6
9	*Central Ave & Highland Ave*	83	153	116	67	429	114	39	97	76	243	242	62
10	*Central Ave & I-210 WB Off Ramp*	287	0	96	1	0	5	4	328	0	0	488	6
PM Peak Hour Volume													
ID	Intersection	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	*Huntington Ave & Mountain Ave*	135	356	160	251	457	49	61	1164	240	164	488	138
2	*Huntington Ave & Bella Vista S*	161	242	121	168	267	73	105	1238	189	110	484	67
3	*Huntington Ave & Highland Ave*	100	115	281	63	55	36	22	1243	107	100	467	41
4	*Huntington Ave & Mt Olive St*	242	199	697	101	290	54	80	948	602	204	399	20
5	*Central Ave & Buena Vista St*	62	375	191	66	533	24	5	51	126	259	75	283
6	*I-210 WB On Ramp & Buena Vista*	279	611	0	0	645	252	0	0	0	0	0	0
7	*I-210 EB On Ramp & Buena Vista*	0	592	358	236	416	0	304	315	92	0	0	0
8	*Huntington Ave & Cotter Ave*	1	0	9	8	1	41	62	1413	9	5	635	24
9	*Central Ave & Highland Ave*	63	366	362	42	124	58	54	221	24	55	81	29
10	*Central Ave & I-210 WB Off Ramp*	330	5	61	5	0	19	12	296	1	0	236	1

Source: Cambridge Systematics, Inc. Technical Memorandum: Duarte Town Center Existing Transportation Conditions Report. December 2015

This Page Intentionally Left Blank

Intersection Analysis Findings

Results of the intersection analysis for the proposed Specific Plan show that the majority of the intersections analyzed within the Planning Area operate at LOS D or better as of 2015, indicating generally good traffic operation conditions throughout the Planning Area. The exceptions are two intersections that operate at LOS E: Huntington Drive and Cotter Avenue during the AM peak hour, and Huntington Drive and Mount Olive Street during the PM peak hour.

The following is the detailed analysis from both the AM and PM peak hour intersection analysis.

AM Peak Hour

AM peak hour operations are summarized in Table 4.4-3 (AM Peak Hour Intersection Operations). During the AM peak hour, all intersections but one operates at LOS D or better. The unsignalized intersection of Huntington Avenue and Cotter Avenue, located at the core of the Planning Area, is the only intersection operating at LOS E. As this is an unsignalized location, the LOS E result is likely due to vehicles on Cotter Avenue being required to wait for acceptable gaps in traffic on Huntington Drive before proceeding through the intersection, which leads to a higher average vehicle delay.

Table 4.4-3
AM Peak Hour Intersection Operations (2015)

ID	Intersection	Traffic Control	Volume/ Capacity	Delay (seconds/vehicle)	Level of Service
1	Huntington Drive and Mountain Avenue	Signalized [a]	0.769	--	C
2	Huntington Drive and Buena Vista Street	Signalized [a]	0.731	--	C
3	Huntington Drive and Highland Avenue	Signalized [a]	0.688	--	B
4	Huntington Drive and Mount Olive Street	Signalized [b]	0.768	35.4	D
5	Central Avenue and Buena Vista Street	Signalized [b]	0.434	22.6	C
6	I-210 WB On-Ramp and Buena Vista Street	Signalized [b]	0.288	3.6	A
7	I-210 EB On-Ramp and Buena Vista Street	Signalized [b]	0.499	24.8	C
8	Huntington Drive and Cotter Avenue	Unsignalized [c]	0.271	42.3	E
9	Central Avenue and Highland Avenue	Signalized [c]	0.479	--	A
10	Central Avenue and I-210 WB Off-Ramp	Unsignalized [c]	0.721	28.0	D

[a] Analysis based on ICU
[b] Analysis based on 2000 HCM Operations
[c] Analysis based on 2000 HCM Unsignalized

Source: Cambridge Systematics, Inc. Duarte Town Center Specific Plan Traffic Study. May 2016

PM Peak Hour

PM peak hour operations are summarized in Table 4.4-4 (PM Peak Hour Intersection Operations). During the PM peak hour, all intersections but one operates at LOS D or better. The signalized intersection of Huntington Avenue and Mount Olive Street is the only intersection operating at LOS E during the PM peak. The poor operational performance of the intersection can be attributed to high traffic volumes coming from the I-210 off-ramp and conflicting with East Huntington Drive traffic.

Table 4.4-4
PM Peak Hour Intersection Operations (2015)

ID	Intersection	Traffic Control	Volume/ Capacity	Delay (seconds/vehicle)	Level of Service
1	Huntington Drive and Mountain Avenue	Signalized [a]	0.844	--	D
2	Huntington Drive and Buena Vista Street	Signalized [a]	0.722	--	C
3	Huntington Drive and Highland Avenue	Signalized [a]	0.726	--	C
4	Huntington Drive and Mount Olive Street	Signalized [b]	1.115	71.0	E
5	Central Avenue and Buena Vista Street	Signalized [b]	0.478	26.4	C
6	I-210 WB On-Ramp and Buena Vista Street	Signalized [b]	0.427	9.1	A
7	I-210 EB On-Ramp and Buena Vista Street	Signalized [b]	0.603	24.5	C
8	Huntington Drive and Cotter Avenue	Unsignalized [c]	0.097	23.5	C
9	Central Avenue and Highland Avenue	Signalized [c]	0.480	--	A
10	Central Avenue and I-210 WB Off-Ramp	Unsignalized [c]	0.67	23.2	C

[a] Analysis based on ICU
[b] Analysis based on 2000 HCM Operations
[c] Analysis based on 2000 HCM Unsignalized

Source: Cambridge Systematics, Inc. Duarte Town Center Specific Plan Traffic Study. May 2016

Public Transportation Services

According to the certified General Plan EIR, the City of Duarte operates a fixed route commuter bus transit system. The two main transit routes are the Blue line and Green line. Each route connects with the transit routes operated by Foothill Transit and Metro.

Currently, Foothill Transit operates several bus routes within the Planning Area, including Routes 187, 272, and 494, all of which operate along a portion of Huntington Drive. Foothill Transit Route 187 is a local bus route operating seven days a week, with the schedule changing on the weekend. This route goes west to Pasadena and east to the Montclair Transit Center. The frequency of scheduled times during peak times on weekdays is at intervals of 15 minutes.

Route 272 is a local bus route operating seven days a week with the schedule changing on the weekends. This route originates in Duarte and travels southeast to The Plaza at West Covina via the Baldwin Park Metrolink. Route 494 is a commuter route, traveling west to the El Monte Station where passengers transfer to an express bus serving downtown Los Angeles via the I-10. To the east, the route terminates at the San Dimas Park and Ride. This route operates on weekdays only. Metro (Los Angeles) operates one route in the City which originates at the City of Hope in Duarte.

The City of Duarte has operated a free, fixed-route bus system since 1984. The buses operate Monday through Saturday and have a current ridership of more than 24,400 per month. The Duarte Transit Green Route buses travel in a counterclockwise direction around the City, and complete the route once each hour. The Green Route's hours of operation are 5:45 a.m. to 7:15 p.m. Saturday service is provided on the Green Route from 7:45 a.m. to 6:15 p.m. The Blue route buses travel in a clockwise direction around the City, and complete the route once each hour. The route's hours of operation are 7:00 a.m. to 7:00 p.m., Monday through Friday. The green and blue routes are essentially circular, coming within a few blocks of any point in the City. During the week, the two buses travel in opposite directions, thereby allowing passengers to move either way along the route.

In addition to bus transit, a new Gold Line light rail transit station opened south of the Planning Area in March 2016. The new station is located at the northwest corner of Duarte Road and Highland Avenue, just south of the I-210 freeway. Duarte Transit realigned its routes to better serve the new station, thus providing bus access to the Town Center area from the Metro Gold Line Duarte Station.

Bicycle Facilities

According to the General Plan EIR, the City of Duarte has a bike trail which extends primarily along Royal Oaks Drive and is 1.6 miles in length. The majority of the trail is a Class 1 bike trail (intended for the exclusive use of bicycles and separated from motor vehicle traffic by lateral space or a physical barrier) and is improved with asphalt with parallel dirt treadway from Buena Vista Street to Vineyard Avenue.

There are currently no designated bicycle facilities within the Planning Area. Bicycle counts taken in May 2015 show that there are currently less than 10 bicycle riders per hour per direction on Huntington Drive, Buena Vista Street, and Highland Avenue within the Planning Area.

The City of Duarte has adopted a Bicycle Master Plan that is intended to develop a recommended bicycle route system for the City. The Duarte Town Center Specific Plan is consistent with the Citywide Bicycle Master Plan, and proposes the following additional bicycle facilities within the Planning Area:

- Buena Vista Street – Implement Class II on-street bike lanes on Buena Vista Street from north of Central Avenue to Huntington Drive and a Class II or Class III bike lane north of Huntington Drive to the Royal Oaks Bike Trail. These lanes should be implemented within the current roadway curb-to-curb travelled way.
- Highland Avenue – Implement Class II on-street bike lanes from Evergreen Street north to Huntington Drive and a Class II or Class III bike lane south of Central Avenue to the Duarte Gold Line Station. These lanes should be implemented within the current roadway curb-to-curb travelled way.
- Central Avenue – Implement a Class III bike route from Buena Vista Street to Highland Avenue.

The routes on Buena Vista Street and Highland Avenue would connect to the Metro Gold Line Duarte Station south of the Planning Area as well as to the Duarte Bike Trail to the north.

Truck Routes

According to the General Plan EIR, Chapter 11.08.020 of the Duarte Municipal Code designates the following streets as truck routes throughout the City:

- Huntington Drive (entire distance through City)
- Duarte Road (between Mountain Avenue and Highland Avenue)
- Mountain Avenue (between Huntington Drive and Duarte Road)
- Evergreen Street (between Mountain Avenue and Buena Vista Street)
- Buena Vista Street (between Huntington Drive and the southerly City limits)
- Highland Avenue (between Huntington Drive and Duarte Road)
- Central Avenue (between Highland Avenue and Crestfield Drive)

Regulatory Framework

Transportation issues extend beyond the Duarte City limits. As a result, regional agencies have developed programs to forecast and manage Countywide and region-wide traffic. The City must consider other transportation system planning efforts as it plans to implement the proposed Specific Plan.

Congestion Management Program (CMP)

According to the General Plan EIR, in June 1990, California voters approved Proposition 111, which established a nine percent per gallon gas tax staged over a five-year period to fund statewide transportation-related improvements. In order to be eligible for the revenues associated with Proposition 111, the Congestion Management Program (CMP) legislation requires urbanized counties in California to each adopt a Congestion Management Program. The Los Angeles County Metropolitan Transportation Authority (Metro) is designated as the Congestion Management Agency for the County of Los Angeles and is responsible for the implementation of the Los Angeles County CMP. The CMP

was created to link local land use decisions with their impacts on regional transportation and air quality and to develop a partnership between transportation decision makers to generate appropriate transportation solutions that include all modes of travel. Metro adopted its most recent CMP in 2010.

The goal of the CMP is to promote a more coordinated approach to land use and transportation decisions. The law requires that the traffic generated by individual development projects be analyzed for potential impacts to the regional roadway system. According to the CMP, projects that meet the following criteria are required to be evaluated:

- All CMP arterial monitoring intersections, including monitored freeway on- or off-ramp intersections, where the proposed project will add 50 or more trips during either the AM or PM weekday peak hour (of adjacent street traffic).
- Mainline freeway monitoring locations where the project will add 150 or more trips, in either direction, during either the AM or PM weekday peak hour.

According to the certified General Plan EIR, two CMP highways, I-210 and I-605, are located within or near Duarte. There are no CMP arterial roadways in Duarte. The CMP also requires that local jurisdictions (cities and counties) maintain CMP conformance by monitoring development activity, reporting the results annually to Metro, and adopting a CMP transportation demand management ordinance. Compliance with the CMP provisions include:

- Continued land use coordination through the utilization of standardized traffic impact analysis methodologies;
- Implementation and enforcement of Transportation Demand Management (TDM) strategies;
- Maintenance of transit service standards;
- Demonstrated transportation modeling consistency with the Countywide computer model;
- Monitoring of CMP highway system levels of service;
- Development of level of service deficiency plans where applicable;
- Development of five-year capital improvement programs; and
- Monitoring and conformance with all CMP provisions.

Long Range Transportation Plan (LRTP)

The Long Range Transportation Plan (LRTP), prepared by Metro, is the long range plan that responds to emerging environmental challenges through the provision of new initiatives and recommendations that include driving alternatives, mobility improvements, enhanced public transit, expanded rail, and the development of major corridor projects in Los Angeles County.

Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)

The Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), prepared by the Southern California Association of Governments (SCAG), has numerous goals to increase mobility for the region's residents and visitors, and an emphasis on sustainability and integrated planning to collectively improve the region's mobility, economy, and sustainability. The RTP/SCS must be approved by Federal agencies in order to receive Federal transportation funds. Only projects and programs included in the RTP are eligible for Federal funding. SCAG adopted the 2016-2040 RTP/SCS in April 2016.

Regional Comprehensive Plan

According to the certified General Plan EIR, the Regional Mobility Plan (RMP) is part of an overall regional planning process that is linked directly to SCAG's Growth Management Plan, the Housing Allocation Process, and the South Coast Air Quality Management District's Air Quality Management Plan. The last RCP was adopted by SCAG in 2008 and includes elements on Land Use and Housing, Open Space and Habitat, Water, Energy, Air Quality, Solid Waste, Transportation, and Security and Emergency Preparedness.

Highway Performance Monitoring System (HPMS)

The Highway Performance Monitoring System (HPMS) is a Federally mandated inventory system and planning tool designed to assess the nation's highway system. HPMS is used as a management tool by the Federal and State governments and local agencies to analyze the system's condition and performance. The HPMS data are used for allocation of Federal funds, identification of travel trends and future forecasts, Environmental Protection Agency air quality conformity tracking, and biennial reports to the United States Congress on the state of the nation's highways. The HPMS is administered by Caltrans, with technical data provided by local agencies.

Foothill Transit

Foothill Transit, created in 1988, provides bus service to the San Gabriel and Pomona Valleys. The agency contracts out all services – from administration to bus driving and maintenance. The agency is governed by a five-person Executive Board.

Access Services

Access Services is a State-mandated local governmental agency created by Los Angeles County's public transit agencies to administer and manage the delivery of regional American with Disabilities Act (ADA) paratransit service. Access Services was established by 44 public fixed route transit operators in Los Angeles County. It is governed by a nine-member board appointed by the Los Angeles County municipal fixed route operators, the City of Los Angeles, the County of Los Angeles, the Transportation Corridor Representatives of the Los Angeles branch of the League of Cities, the Los Angeles County Commission on Disabilities, and the Coalition of Independent Living Centers.

General Plan

The General Plan includes the following policies and implementation measures pertaining to circulation and mobility.

P Circ 1.1.1 Develop, implement, and refine local east/west traffic flow elements to allow traffic to move through and within Duarte in an expeditious manner including improving the Huntington Drive bridge over the San Gabriel River.

IM Monitor traffic conditions on Huntington Drive, Royal Oaks Drive, Duarte Road, Evergreen Street, and Central Avenue and develop measures to improve traffic flow and mitigate adverse traffic impacts where necessary. Install protected/permissive left-turn phases at the left-turn lanes of signalized intersections, where feasible, so that the signal would display a green arrow followed by a green ball to increase the capacity of the left-turn movements. Continue to work with MTA [i] and LA County Department of Public Works to employ strategies to enhance traffic flow on Duarte streets at times when freeway traffic is diverted onto the city streets during incidents.

P Circ 1.1.2 Implement the roadway plan provided in the Circulation Element to meet the transportation needs of the citizens.

IM Evaluate roadways that are not constructed to General Plan standards and program improvements into the city's capital improvements program (CIP) that are necessary to render the roadways consistent with the General Plan. Incorporate design features and measures to preserve and maintain adequate visibility at intersections. Seek to stager school hours where traffic conflicts exist between schools.

[i] *The Los Angeles County Metropolitan Transit Agency was referred to as MTA at the time of the 2007 General Plan and EIR writing. As of the time of the Supplemental EIR writing, this agency had completed a re-branding and is referred to as Metro.*

P Circ 1.1.3 Widen substandard streets and alleys to meet the city standards where feasible.

P Circ 1.1.4 Evaluate the traffic impacts of new development and require developers to employ appropriate mitigation measures to reduce traffic or improve roadway and traffic conditions.

IM Traffic impacts from proposed development projects should be analyzed and any significant adverse impacts shall be mitigated in accordance with the California Environmental Quality Act (CEQA) and the Los Angeles County Congestion Management Program (CMP).

P Circ 1.1.5 Evaluate the traffic impacts from development projects in adjacent cities and work cooperatively with those cities to develop mitigation measures that will improve traffic conditions in Duarte.

IM Evaluate the traffic impacts from proposed development projects in adjacent cities as part of the environmental (CEQA) and project review process and implement measures to mitigate any significant traffic impacts.

P Circ 1.1.6 Pursue and provide adequate right-of-way to accommodate future circulation system improvements.

IM Require developers/property owners to dedicate sufficient right-of-way, in conjunction with proposed development projects, where current right-of-way widths are substandard according to the General Plan.

P Circ 2.1.1 Discourage through traffic on local streets that are located in residential neighborhoods.

IM Establish an acceptable level of service or traffic volume on local residential streets. If these standards are exceeded, traffic reduction and/or traffic calming measures may be considered. Such measures may include but are not limited to lane narrowing, pedestrian crossing lights in the pavement, stop signs, specialized pavement design (color and texture), lane and/or crosswalk striping, and turn restrictions. Strictly enforce posted or prima facie speed limits in residential neighborhoods.

P Circ 2.1.2 Restrict heavy duty truck traffic to arterial roadways.

IM Post signs to designate the arterial roadways that are legal truck routes and strictly enforce all truck route laws on city streets.

P Circ 2.1.3 Continue the practice of responding to resident complaints and requests regarding residential street traffic problems.

IM In response to resident complaints or requests, conduct neighborhood traffic studies to determine the nature and extent of actual and perceived traffic problems and consider implementing traffic control and/or traffic calming measures where appropriate.

P Circ 2.1.4 Discourage non-resident motorists from traveling through residential neighborhoods.

P Circ 2.1.5 Appropriate mitigation measures should be implemented to ensure that the adverse impacts from trucks and employee traffic can be reduced.

IM As part of the environmental review process, project generated traffic must be reduced through appropriate mitigation measures.

P Circ 3.1.1 Continue to promote the development of the MTA Gold Line and a Duarte station.

IM Actively participate as a prime advocate in the planning process undertaken by MTA to develop and implement the Gold Line rail transit facility with a station in Duarte.

P Circ 3.1.2 Coordinate Duarte Transit System with MTA, Foothill Transit and to service major destinations within Duarte including City of Hope, Duarte Gold Line Station and proposed City Center area.

IM Continue to assess transit dependent needs to better serve patrons wishing to travel between major destinations and adjust transit routes accordingly.

P Circ 3.1.3 Promote the linking of local public transit routes with that of adjacent jurisdictions and other transit agencies.

IM Duarte will continue to cooperate with surrounding cities, MTA, and Foothill Transit in developing schedules and routes for the Duarte Transit System. If an when the MTA Gold Line station is developed in Duarte, the Duarte Transit System should modify the schedules and routes as needed to serve as a feeder to the rail transit station.

P Circ 3.1.4 Ensure that new developments incorporate both local and regional transit measures into the project design that promote the use of alternate modes of transportation.

IM Major developments in Duarte should be required to provide bike racks, bus stops and shelters where appropriate, and information regarding the availability of transit systems and rideshare services. Incorporate local and regional transit measures into the design and implementation of development projects.

P Circ 3.1.5 Provide incentives for appropriate pedestrian and bicycle facilities throughout Duarte, particularly for bike lanes to the Gold Line Station.

IM Include the installation of sidewalks in all future roadway widening and new construction projects to provide a continuous and convenient link for pedestrians. Require applicants to provide sidewalks adjacent to the project site along the frontage of all development projects and to provide pedestrian walkways to serve as links between the public sidewalks and the on-site developments. Support programs and projects to provide convenient pedestrian linkages between adjacent properties, within individual developments, and from the public right-of-way to the private developments. Prepare a bicycle plan and implement it as availability arises in conjunction with private development, street improvement projects, and funding grants. Incorporate the construction of bicycle routes or bike lanes into future roadway improvements projects, where feasible. Incorporate measures into the public right-of-way and the private development projects to ensure that the Duarte downtown area is pedestrian friendly.

P Safe 1.1.4 Enforce requirements that all development proposals be reviewed in order that they may be analyzed for safety implications.

Thresholds of Significance

Traffic and circulation impacts resulting from the implementation of the proposed Specific Plan may be considered significant if they would result in the following:

- Conflict with an applicable plan, ordinance or policy establishing the measures of effectiveness for the performance of the effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit;
- Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways;
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks (refer to Section, 7.0 Effects Found Not to be Significant);
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);
- Result in inadequate emergency access;
- Result in inadequate parking capacity (refer to Section 7.0, Effects Found Not to be Significant); and/or
- Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).

To determine whether the addition of project-generated trips at a signalized study intersection results in a significant impact, the following threshold of significance consistent with the Los Angeles CMP is applied:

- A significant traffic impact occurs when a proposed project increases traffic demand at a signalized study intersection by two percent or more of capacity (V/C > 0.02), causing or worsening LOS F (V/C > 1.99).

While the City of Duarte has not established thresholds of significance for unsignalized intersections, the following threshold of significance is assumed for this study:

- A significant impact occurs at an unsignalized intersection when a proposed project increases the delay at an unsignalized intersection causing or worsening LOS E or F.

Environmental Impacts

2020 Traffic Volumes

Horizon year 2020 traffic volumes projected in the General Plan EIR were based on overall regional ambient growth factors, the traffic that would be generated by several proposed short-range development projects, and the traffic that would be generated by three potential long-range development concepts.

2036 Traffic Volumes

To derive forecast year 2036 traffic volumes (20-year horizon for the Specific Plan), an annual growth rate of approximately 0.82 percent per year (18 percent total growth) was applied to existing (2015) traffic volumes to account for cumulative traffic growth and background regional traffic growth.

Implementation of the proposed Specific Plan would not result in an increase in traffic volumes which would impact the level of service within the Planning Area. Impacts would remain less than significant.

As discussed in the certified General Plan EIR, build-out of the General Plan in addition to regional growth would result in all 34 studied roadway segments operating at acceptable levels of service (LOS), with the exception of the following:

- Huntington Drive between Mountain Avenue and Buena Vista Street (LOS E)
- Huntington Drive between Highland Avenue and Bradbourne Avenue (LOS F)
- Huntington Drive between Bradbourne Avenue and Mt. Olive Drive (LOS F)
- Huntington Drive between Mt. Olive Drive and Las Lomas Road (LOS E)

- Huntington Drive east of Las Lomas Road (LOS E)
- Mountain Avenue between I-210 and Duarte Road (LOS F)

Because these roadway segments were projected to operate slightly above capacity levels, it was determined that widening of those roadways would not be necessary. It was recommended that measures be taken to increase the capacity and enhance traffic flow along Huntington Drive and Mountain Avenue. Such measures, implemented by the General Plan EIR as Mitigation Measures TR-1 through TR-3, would include consideration of peak period parking restrictions, intersection improvements, and traffic signal coordination, respectively. In addition, General Plan policies and implementation measures require evaluation of traffic impacts from development projects, widening of substandard streets, implementation of the roadway plan provided in the Circulation Element, and encouragement of alternative transportation. The General Plan EIR noted that projected traffic increases would be the result of build-out of vacant and underutilized parcels within the City as well as regional growth, all of which would not occur for some time, if at all. (Within the City, limited development has occurred since the General Plan was completed in 2007, largely due to the economic downturn that began that same year. In addition, estimated population levels (2016) are lower than those indicated in 2007, indicating no new substantial residential growth.) The General Plan EIR determined that impacts would be less than significant with implementation of General Plan policies, implementation measures, and mitigation measures.

According to the traffic study prepared for the proposed Specific Plan (see Appendix D), build-out of the proposed project would result in a net increase of 215 AM peak hour trips and 916 PM peak hour trips. The traffic study analyzed impacts on intersection operations for horizon year 2036 within the Planning Area for the AM and PM peak hours. Table 4.4-5 (Future 2036 Without Project Conditions) summarizes results of the 2036 without project analysis – that is, the resulting LOS associated with regional growth only at each intersection. Results of the intersection analysis show that all study locations would experience higher volume/capacity ratios and in some cases a worsening of LOS due to the background future growth that is expected to occur within the next 20 years. The following intersections are anticipated to result in inadequate LOS E and LOS F under the 2036 without project scenario:

- Huntington Drive and Cotter Avenue (AM and PM)
- Central Avenue and I-210 westbound off-ramp (AM and PM)
- Huntington Drive and Mountain Avenue (PM)
- Huntington Drive and Mt. Olive Street (PM)

Table 4.4-5
Future 2036 Without Project Conditions

			AM Peak Hour			PM Peak Hour		
ID	Intersection	Traffic Control	V/C	Delay	LOS	V/C	Delay	LOS
1	Huntington Drive and Mountain Avenue	Signalized [a]	0.896	--	D	0.986	--	E
2	Huntington Drive and Buena Vista Street	Signalized [a]	0.851	--	D	0.842	--	D
3	Huntington Drive and Highland Avenue	Signalized [a]	0.802	--	D	0.846	--	D
4	Huntington Drive and Mount Olive Street	Signalized [b]	0.907	44.0	D	1.316	112.5	F
5	Central Avenue and Buena Vista Street	Signalized [b]	0.512	23.4	C	0.564	27.7	C
6	I-210 WB On-Ramp and Buena Vista Street	Signalized [b]	0.340	3.7	A	0.504	9.7	A
7	I-210 EB On-Ramp and Buena Vista Street	Signalized [b]	0.589	26.1	C	0.712	26.6	C
8	Huntington Drive and Cotter Avenue	Unsignalized [c]	0.527	91.9	F	0.187	35.5	E
9	Central Avenue and Highland Avenue	Signalized [a]	0.566	--	A	0.566	--	A
10	Central Avenue and I-210 WB Off-Ramp	Unsignalized [c]	1.013	69.0	F	0.905	46.7	E

[a] Analysis based on ICU
[b] Analysis based on 2000 HCM Operations
[c] Analysis based on 2000 HCM Unsignalized

Source: Cambridge Systematics, Inc. Duarte Town Center Specific Plan Traffic Study. May 2016

Table 4.4.-6 (Future 2036 With Project Conditions) summarizes results of the 2036 with project analysis. The following intersections are projected to be significantly impacted:

- Huntington Drive and Mountain Avenue (AM and PM)
- Huntington Drive and Buena Vista Street (PM)
- Huntington Drive and Mt. Olive Street (PM)
- Huntington Drive and Cotter Avenue (AM and PM)
- Central Avenue and I-210 westbound off-ramp (AM and PM)

Table 4.4-6
Future 2036 With Project Conditions

			AM Peak Hour			PM Peak Hour		
ID	Intersection	Traffic Control	V/C	Delay	LOS	V/C	Delay	LOS
1	Huntington Drive and Mountain Avenue	Signalized [a]	0.906	--	E	1.040	--	F
2	Huntington Drive and Buena Vista Street	Signalized [a]	0.858	--	D	1.008	--	F
3	Huntington Drive and Highland Avenue	Signalized [a]	0.820	--	D	0.885	--	D
4	Huntington Drive and Mount Olive Street	Signalized [b]	0.925	46.8	D	1.361	117.0	F
5	Central Avenue and Buena Vista Street	Signalized [b]	0.526	23.4	C	0.614	27.6	C
6	I-210 WB On-Ramp and Buena Vista Street	Signalized [b]	0.357	3.6	A	0.533	9.1	A
7	I-210 EB On-Ramp and Buena Vista Street	Signalized [b]	0.612	26.3	C	0.750	28.1	C
8	Huntington Drive and Cotter Avenue	Unsignalized [c]	0.657	134.1	F	0.341	69.3	F
9	Central Avenue and Highland Avenue	Signalized [a]	0.573	--	A	0.582	--	A
10	Central Avenue and I-210 WB Off-Ramp	Unsignalized [c]	1.042	75.5	F	1.003	65.5	F

[a] *Analysis based on ICU*
[b] *Analysis based on 2000 HCM Operations*
[c] *Analysis based on 2000 HCM Unsignalized*

Source: Cambridge Systematics, Inc. Duarte Town Center Specific Plan Traffic Study. May 2016

In order to reduce impacts to less than significant levels, Specific Plan Mitigation Measures TR-4 through TR-7 are applicable to the Specific Plan (see "Mitigation Measures," below). Mitigation Measure TR-4 requires the installation of traffic signals when warranted for Huntington Drive at Cotter Avenue and Central Avenue at the I-210 westbound off-ramp. Traffic conditions at these intersections shall be monitored over time as Specific Plan land uses are implemented, and traffic signal warrants shall be reviewed. Mitigation Measure TR-5 requires, when appropriate, the addition of a fourth northbound land to create dual right turn lanes, a left turn lane, and a shared through/left turn lane at Huntington Drive at Mount Olive Street. When traffic volumes and conditions warrant, Mitigation Measure TR-6 requires double southbound left turn lanes at the intersection of Huntington Drive and Buena Vista Street. Mitigation Measure TR-7 requires that double southbound left turn lanes be provided at the intersection of Huntington Drive and Mountain Avenue when traffic volumes and conditions warrant. With implementation of Mitigation Measures TR-4 through TR-7, impacts would remain less than significant.

Implementation of the proposed Specific Plan would not result in inconsistencies with the CMP, AQMP, or RCP. Impacts would remain less than significant.

As discussed in the certified General Plan EIR, the City of Duarte is required to show compliance with the Congestion Management Plan (CMP), the Air Quality Management Plan (AQMP), and the Regional Comprehensive Plan (RCP). The only CMP facilities within the City are the I-210 and I-605. The CMP is directly linked to transportation issues, with requirements that all new developments mitigate their traffic impacts on the surrounding street system. The CMP includes issues such as LOS standards, coordination with other jurisdictions, TDM ordinances and application, monitoring conditions, and mitigation of impacts. The AQMP supplements the CMP program. The goal of the RCP is to provide for a more efficient transportation system that reduces and better manages vehicle activity.

Overall, these programs along with the RTP/SCS (2016) acknowledge that land use, transportation, and air quality issues are all interrelated. The requirements under each of these programs serve to ensure a safe and efficient transportation system, which is a primary goal of the General Plan Circulation Element. Therefore, the certified General Plan EIR determined that impacts would be less than significant with implementation of General Plan policies and mitigation measures.

There are no CMP arterial roadways within the Planning Area, and no CMP arterial monitoring intersections would experience 50 or more trips due to the proposed Specific Plan. There are three freeway monitoring locations in the vicinity of the Planning Area: I-210 to the west, I-210 to the east, and I-605 to the south. None of these three CMP freeway monitoring locations would experience 150 or more project related trips in either direction during either peak hour. As noted in the certified General Plan EIR, the AQMP supplements the CMP program. Therefore, the proposed Specific Plan would not conflict with the Los Angeles County CMP or the AQMP. The goal of the RMP is to improve transportation mobility levels with the intent of giving priority to all transit and ride sharing projects. The proposed Specific Plan includes mobility objectives which include improving pedestrian facilities, optimizing street right-of-ways to accommodate multimodal services, improving connectivity, and enhancing transit stops. Incentives are provided in the Specific Plan for enhanced transportation demand management. Future development within the Planning Area would also be subject to General Plan Circulation Element policies and implementation measures, which are consistent with the overall intent of the CMP, AQMP, and RMP to ensure a safe and efficient transportation system. Therefore, the implementation of the proposed Specific Plan would not result in inconsistencies with the CMP, AQMP, or the RMP. Impacts would remain less than significant.

Implementation of the proposed Specific Plan would not result in inadequate emergency access. Impacts would remain less than significant.

As discussed in the certified General Plan EIR, future development would be required to comply with the City's standard, mandatory development review process and all applicable fire code and ordinance requirements for construction and access to project sites. Individual projects would be reviewed by the Los Angeles County Fire Department to ensure compliance with applicable requirements. Any modifications to existing roadways would be reviewed by the City and the Los Angeles County Fire Department to ensure that adequate emergency access and emergency response would be maintained. In addition, emergency evacuation procedures would be coordinated through the City in coordination with the police and fire departments. The certified General Plan EIR determined that impacts would be less than significant.

Future development projects facilitated by the Specific Plan would be subject to all standard, mandatory, applicable City and fire code requirements and would be subject to review by the Los Angeles County Fire Department. The Specific Plan addresses key issues and opportunities related to automobile, bicycle, and pedestrian circulation throughout the Planning Area. Future improvements to Huntington Drive, Buena Vista Street, and Highland Avenue include narrowing travel lanes from 14 feet to 12 feet and an option for reconfiguring the four-lane undivided Highland Avenue to one northbound lane, one southbound lane, and one center two-way turn lane. These envisioned improvements would not result in inadequate emergency access because these improvements would not result in termination of any roadways or narrowing of roadways to widths that are insufficient for emergency vehicles and access. In addition, the anticipated daily traffic levels would not exceed roadway capacity amounts. When future improvements to these roadways are proposed, plans would be subject to review by the City Engineer and the Los Angeles County Fire Department to ensure adequate emergency access. Impacts would remain less than significant.

Implementation of the proposed Specific Plan would not result in inadequate design features or incompatible uses. Impacts would remain less than significant.

Access to specific development sites would be required to comply with all mandatory City design standards and would be reviewed by the City and the Los Angeles County Fire Department to ensure that inadequate design features or incompatible uses do not occur. The City and the Los Angeles County Fire Department would review any

development involving new roadways or existing roadways to ensure that they are designed to meet adopted standards and provide adequate emergency access. In addition, General Plan Safety Element Policy 1.1.4 requires project review for safety implications. The certified General Plan EIR determined that impacts would be less than significant.

One of the overarching objectives of the proposed Specific Plan is to ensure that new uses are compatible, harmonious, and complement the surrounding area. Future improvements to Huntington Drive, Buena Vista Street, and Highland Avenue include narrowing travel lanes from 14 feet to 12 feet. In conjunction with the lane width reductions, bulbouts would be installed along Huntington Drive and bike lanes are proposed on Buena Vista Street and Highland Avenue. A potential option for Highland Avenue is proposed that reconfigures the roadway from four lanes to one northbound lane, one southbound lane, and one center two-way turn lane. When future improvements to these roadways are proposed, plans would be subject to standard, mandatory review by the City Engineer to ensure that improvements would not result in inadequate design features. In addition, future development within the Planning Area would be subject to General Plan policies including Safety Element Policy 1.1.4, which requires project review for safety implications. Impacts would remain less than significant.

Impacts related to demand for transit service and alternative transportation-supporting policies would remain less than significant.

As future development occurs and population and employment within the City increase, it is expected that public transit ridership would increase. According to the certified General Plan EIR, it was anticipated that Foothill Transit and Metro would increase their public transit services as demand increases. In addition, as of 2006, the Metro Gold Line system had not been completed. It was assumed that the establishment of the Gold Line station in Duarte would provide additional transit ridership opportunities beyond those that existed. Build-out of the General Plan would potentially involve development of mixed-use transit oriented developments near the proposed Gold Line station. In addition, the sidewalk system within the City links schools, community and civic centers, parks, employment centers, and bike paths. Implementation of General Plan Circulation Element Policies 3.1.1 through 3.1.5 would enhance the use of alternative forms of transportation. The certified General Plan EIR determined that impacts would be less than significant.

Since certification of the General Plan EIR, the Metro Gold Line Duarte station opened (March 2016) approximately 0.25 mile south of the Planning Area. The station is located at the northwest corner of Duarte Road and Highland Avenue, south of the I-210 freeway. The City of Duarte conducted a Transit Study[1] to assess service improvement strategies to Duarte Transit bus service, especially in light of the new Gold Line station's 2016 opening. As a result of the study, Duarte Transit realigned its routes to better serve the new station, thus providing key bus access to the Planning Area from the Metro Gold Line. The Specific Plan identifies mobility objectives that include enhancing transit stops and improving connectivity to the Metro Gold Line Duarte station to increase transit ridership. Impacts would remain less than significant.

Mitigation Measures

Related to traffic impacts, the General Plan EIR required the following mitigation that remains applicable to the proposed Specific Plan.

TR-1 For the entire length of Huntington Drive, for Mountain Avenue between Huntington Drive and Duarte Road, and for any other arterial roadways that are determined to operate at unacceptable conditions, measures shall be taken to increase the capacity and enhance traffic flow during peak periods.

TR-2 Right-of-way dedications shall be required of development applicants to accommodate the recommended roadway cross-sections and the enhanced intersection improvements at major intersections.

TR-3 The City of Duarte shall consider the implementation of a traffic impact fee program that would require developers to provide a fair-share contribution to a pool of funds that could be used for future transportation system improvements.

Related to traffic impacts resulting from the proposed Specific Plan, the following mitigation measures are required.

TR-4 Huntington Drive/Cotter Avenue and Central Avenue/I-210 WB Freeway off-ramp – Install traffic signal controls when warranted and approved by the City Traffic Engineer and Caltrans (Caltrans approval for the Central Avenue/I-210 WB off-ramp location). Traffic conditions shall be monitored over time as the Specific Plan land uses are implemented, and traffic signal warrants shall be reviewed periodically, to determine if or when applicable warrants are met and the locations satisfy the standards for installation of a traffic signal.

TR-5 Huntington Drive/Mount Olive Street – Add a fourth northbound lane to create a dual right turn lane in addition to a left turn lane and a shared/through left turn lane.

TR-6 Huntington Drive/Buena Vista Street – At the appropriate time and when traffic volumes and conditions warrant in the future, provide double southbound left turn lanes.

TR-7 Huntington Drive/Mountain Avenue – At the appropriate time and when traffic volumes and conditions warrant, provide double southbound left turn lanes.

Level of Significance with Mitigation Incorporated

The following impacts would remain less than significant: consistency with the CMP, AQMP, and RCP; emergency access; design features or incompatible uses; and alternative transportation. Impacts related to traffic impacts would remain less than significant with incorporation of General Plan Mitigation Measures TR-1 through TR-7.

Significant Unavoidable Impacts

Traffic and circulation impacts resulting from the proposed Specific Plan would remain less than significant with implementation of General Plan policies and implementation measures, General Plan EIR Mitigation Measures TR-1 through TR-3, Specific Plan Mitigation Measures TR-4 through TR-7, and standard, mandatory review procedures and regulations. No significant unavoidable traffic and circulation impacts would result from the proposed Specific Plan.

References

[1] City of Duarte and IBI Group. Duarte Gold Line Station Transit Station Analysis – Final Report. June 2015.

4.5 Air Quality

This section analyzes the potential direct and cumulative air quality impacts as evaluated in the General Plan EIR as they apply to the proposed Specific Plan and determines whether the Specific Plan would result in air emissions that exceed applicable air quality standards, cause cumulatively considerable increases in criteria pollutants, or significantly impact any sensitive receptors. As evaluated in the Initial Study (Appendix B) prepared for the Town Center Specific Plan, the proposed project would not create objectionable odors. Therefore, odors will not be further analyzed in this Supplemental EIR.

Environmental Setting

Air Quality

South Coast Air Basin

The Town Center Planning Area is located within the South Coast Air Basin (Basin).[1] The Basin includes Orange County and the non-desert portions of Los Angeles, San Bernardino, and Riverside Counties. The San Gabriel, San Bernardino, and San Jacinto Mountains bound the Basin to the north and east that trap ambient air and pollutants within the Los Angeles and Inland Empire valleys below. The South Coast Air Quality Management District (SCAQMD) has jurisdiction over the Basin. Pursuant to the California Clean Air Act (CCAA), SCAQMD is responsible for bringing air quality within the Basin into conformity with Federal and State air quality standards by reducing existing emission levels and ensuring that future emission levels meet applicable air quality standards. SCAQMD works with Federal, State, and local agencies to reduce pollutant sources through the development of rules and regulations. A brief description of each criteria pollutant is provided below.

Ozone. Ozone is a pungent, colorless, and highly reactive gas that forms from the atmospheric reaction of organic gases with nitrogen oxides in the presence of sunlight. Ozone is most commonly associated with smog. Ozone precursors such as reactive organic gases (ROG) and oxides of nitrogen (NO_X) are released from mobile and stationary sources. Ozone is a respiratory irritant and can cause cardiovascular diseases, eye irritation, and impaired cardiopulmonary function. Ozone can also damage building materials and plant leafs.

Carbon Monoxide. Carbon monoxide is primarily emitted from vehicles due to the incomplete combustion of fuels. Carbon monoxide has wide ranging impacts on human health because it combines with hemoglobin in the body and reduces the amount of oxygen transported in the bloodstream. Carbon monoxide can result in reduced tolerance for exercise, impairment of mental function, impairment of fetal development, headaches, nausea, and death at high levels of exposure.

Nitrogen Dioxide. Nitrogen dioxide and other oxides of nitrogen (NO_X) contribute to the formation of smog and results in the brownish haze associated with it. They are primarily emitted from motor vehicle exhaust but can be omitted from other high-temperature stationary sources. Nitrogen oxides can aggravate respiratory illnesses, reduce visibility, impair plant growth, and form acid rain.

Particulate Matter. Particulate matter is a complex mixture of small-suspended particles and liquid droplets in the air. Particulate matter between ten microns and 2.5 microns is known as PM_{10}, also known as coarse or inhalable particulate matter. PM_{10} is emitted from diverse sources including road dust, diesel soot, combustion products, abrasion of tires and brakes, construction operations, and windstorms. PM_{10} can also be formed secondarily in the atmosphere when NO_2 and SO_2 react with ammonia. Particulate matter less than 2.5 microns in size are called $PM_{2.5}$ or fine particulate matter. $PM_{2.5}$ is primarily emitted from point sources such as power plants, industrial facilities, automobiles, wood-burning fireplaces, and construction sites. Particulate matter is deposited in the lungs and cause permanent lung damage, potentially resulting in lung disease and respiratory symptoms like asthma and bronchitis. Particulate matter has also been linked to cardiovascular problems such as arrhythmia and heart attacks. Particulate matter can also interfere with the body's ability to clear the respiratory tract and can act as a carrier of absorbed toxic substances. Particulate matter causes welfare issues because it scatters light and reduces visibility, causes

environmental damage such as increasing the acidity of lakes and streams, and can stain and damage stone, such as that applied in statues and monuments.

Sulfur Dioxide. Sulfur dioxide and other oxides of sulfur (SO_X) are reactive gases emitted from the burning of fossil fuels, primarily from power plants and other industrial facilities.[2] Other less impacting sources include metal extraction activities, locomotives, large ships, and off-road equipment. Human health impacts associated with SO_X emissions include bronchoconstriction and increased asthma symptoms.

Lead. Lead is primarily emitted from metal processing facilities (i.e. secondary lead smelters) and other sources such as manufacturers of batteries, paints, ink, ceramics, and ammunition. Historically, automobiles were the primary sources before lead was phased out of gasoline. The health effects of exposure to lead include gastrointestinal disturbances, anemia, kidney diseases, and potential neuromuscular and neurologic dysfunction. Lead is also classified as a probable human carcinogen.

Climate

The climate in the Basin is characterized by moderate temperatures and comfortable humidities with precipitation limited to a few storms during the winter season (November through April).

The proposed project is located in the City of Duarte, Los Angeles County, California. The City of Duarte and the broader Los Angeles Basin are defined by a Mediterranean climate with dry summers and rainy winters. Annual rainfall averages 18.96 inches with the rainy season occurring during the winter.[3] The coolest month of the year is December with an average monthly low of 39.6° Fahrenheit (F). The warmest month is August with an average monthly high of 91.9° F. The annual average maximum temperature is 77.8° F and the annual average minimum temperature is 47.7° The Planning Area is located at an elevation of approximately 500 feet above mean sea level (AMSL) at the southern portion of the Planning Area to about 520 feet AMSL at the northern portion of the Planning Area.[4]

Sunlight

The presence and intensity of sunlight are necessary prerequisites for the formation of photochemical smog. Under the influence of the ultraviolet radiation of sunlight, certain original, or "primary" pollutants (mainly reactive hydrocarbons and oxides of nitrogen) react to form "secondary" pollutants (primarily oxidants). Since this process is time dependent, secondary pollutants can be formed many miles downwind from the emission sources. Because of the prevailing daytime winds and time-delayed nature of photochemical smog, oxidant concentrations are highest in the inland areas of Southern California.

Temperature Inversions

Under ideal meteorological conditions and irrespective of topography, pollutants emitted into the air would be mixed and dispersed into the upper atmosphere. However, the Southern California region frequently experiences temperature inversions in which pollutants are trapped and accumulate close to the ground. The inversion, a layer of warm, dry air overlaying cool, moist marine air, is a normal condition in the southland. The cool, damp and hazy sea air capped by coastal clouds is heavier than the warm, clear air that acts as a lid through which the marine layer cannot rise. The height of the inversion is important in determining pollutant concentration. When the inversion is approximately 2,500 feet above sea level, the sea breezes carry the pollutants inland to escape over the mountain slopes or through the passes. At a height of 1,200 feet, the terrain prevents the pollutants from entering the upper atmosphere, resulting in a settlement in the foothill communities. Below 1,200 feet, the inversion puts a tight lid on pollutants, concentrating them in a shallow layer over the entire coastal basin. Usually, inversions are lower before sunrise than during the daylight hours. Mixing heights for inversions are lower in the summer and more persistent, being partly responsible for the high levels of ozone observed during summer months in the Basin. Smog in Southern California is generally the result of these temperature inversions combining with coastal day winds and local mountains to contain the pollutants for long periods of time, allowing them to form secondary pollutants by reacting with sunlight. The Basin has a limited ability to disperse these pollutants due to typically low wind speeds.

Existing Criteria Pollutant Emissions

The General Plan EIR calculated city-wide criteria pollutant emissions based on existing land uses within the City utilizing the URBEMIS 2002 model. Emissions are summarized in Table 4.5-1 (City of Duarte Existing Year 2007 Air Emissions).

Table 4.5-1
City of Duarte Existing Year 2007 Air Emissions

Project	Pollutant (pounds/day)				
	ROG	NO_X	CO	SO_X	PM_{10}
Area Source Emissions	669.60	155.98	264.79	1.84	0.93
Vehicle Emissions	853.74	732.63	8,507.28	13.62	2,072.77
Total Unmitigated Emissions	*1,523.34*	*888.61*	*8,772.08*	*15.46*	*2,073.69*
SCAQMD Threshold	55	55	550	150	150
Is Threshold Exceeded?	Yes	Yes	Yes	No	Yes
Source: City of Duarte. Duarte General Plan Update Environmental Impact Report. August 2007					

The URBEMIS model is no longer supported by SCAQMD. Emissions for existing year 2015 have been modeled for the Planning Area utilizing the California Emissions Estimator Model (CalEEMod) based on existing land use conditions within the Planning Area and summarized in Table 4.5-2 (Planning Area Existing Year 2015 Air Emissions).

Table 4.5-2
Planning Area Existing Year 2015 Air Emissions

Emissions	Pollutant (pounds/day)					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area	86.38	1.88	144.88	0.20	18.98	18.98
Energy	0.31	2.78	1.96	0.02	0.21	0.21
Mobile	70.27	168.62	714.78	1.58	107.34	30.21
Total Unmitigated Emissions	*156.96*	*173.28*	*861.62*	*1.80*	*126.53*	*49.41*
SCAQMD Threshold	55	55	550	150	150	55
Is Threshold Exceeded?	Yes	Yes	Yes	No	No	No

Monitored Air Quality Levels

The City of Duarte is located within the South Coast Air Basin (SCAB), which is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). Duarte is located in the East San Gabriel Valley monitoring area known as Source Receptor Area (SRA 9). The air quality in SRA 9 is monitored at Station 060 and Station 591. Air monitoring results for SRA 9 over the last three years of available data are summarized in Table 4.5-3 (2012-2014 Local Air Quality).[5] [6] [7] Note that PM_{10} and $PM_{2.5}$, are not measured at Station 591, and lead is not monitored at Station 060 or Station 591. Table 4.5-4 (2012-2014 Air Quality Standards Exceedance) summarizes the number of days for each monitoring year that air quality standards were exceeded. Based on the 2012-2014 air quality monitoring data, the East San Gabriel Valley area experiences ozone pollution, with up to 60 days exceeding the State 8-hour standard in 2014 at Station 591, and particulate matter pollution, with up to 22 days exceeding the State 24-hour standard in 2014 at Station 060.

This Page Intentionally Left Blank

Table 4.5-3
2012-2014 Local Air Quality

Monitoring Station	CO		O_3 (PPM)		NO_2 (PPB)		PM_{10} (µg/m³)		$PM_{2.5}$ (µg/m³)		TSP (µg/m³)		Pb (µg/m³)		SO_4 (µg/m³)
	Max 1-hr	Max 8-hr	Max 1-hr	Max 8-hr	Max 1-hr	AAM	Max 24-hr	AAM	Max 24-hr	AAM	Max 24-hr	AAM	Max Month	Max Qtr	Max 24-hr
East San Gabriel Valley 1 (Station 060)															
2014	2	1.9	0.123	0.092	70.2	17.8	96	44.1	32.4	11.63	--	--	--	--	14.3
2013	--	1.7	0.115	0.085	76.9	17.7	76	33.0	29.6	10.54	--	--	--	--	4.8
2012	--	1.2	0.134	0.095	71.8	19.5	78	30.3	39.6	11.02	175	67.1	--	--	5.2
East San Gabriel Valley 2 (Station 591)															
2014	1	0.7	0.133	0.101	65.7	13.1	--	--	--	--	--	--	--	--	--
2013	--	0.8	0.135	0.100	55.7	13.0	--	--	--	--	--	--	--	--	--
2012	--	1.1	0.147	0.11	60	14.2	--	--	--	--	--	--	--	--	--

Source: SCAQMD 2012-2014
-- pollutant not monitored
PPM, parts per million
µg/m³, micrograms per cubic meter
AAM, annual arithmetic mean

Table 4.5-4
2012-2014 Air Quality Standards Exceedance

Year	O_3 (PPM)			PM_{10} (µg/m³)		$PM_{2.5}$ (µg/m³)
	Fed* 8-hr	State 1-hr	State 8-hr	Fed 24-hr	State 24-hr	Fed^ 24-hr
East San Gabriel Valley 1 (Station 060)						
2014	11	11	20	0	22	0
2013	6	7	15	0	6	0
2012	10	18	18	0	6	1
East San Gabriel Valley 2 (Station 591)						
2014	38	41	60	--	--	--
2013	24	24	43	--	--	--
2012	45	45	57	--	--	--

Source: SCAQMD 2012-2014

-- pollutant not monitored
** 0.075 ppm*
^35 µg/m³

This Page Intentionally Left Blank

Global Climate Change

Defining Climate Change

Climate change is the distinct change in measures of climate over a long period of time. Climate change can result from natural processes and from human activities. Natural changes in the climate can be caused by indirect processes such as changes in the Earth's orbit around the Sun or direct changes within the climate system itself (i.e., changes in ocean circulation). Human activities can affect the atmosphere through emissions of gases and changes to the planet's surface. Emissions affect the atmosphere directly by changing its chemical composition, while changes to the land surface indirectly affects the atmosphere by changing the way the Earth absorbs gases from the atmosphere. The term *climate change* is preferred over the term *global warming* because *climate change* conveys the fact that other changes can occur beyond just average increase in temperatures near the Earth's surface. Elements that indicate that climate change is occurring on Earth include:

- Rising of global surface temperatures by 1.3° Fahrenheit (F) over the last 100 years
- Changes in precipitation patterns
- Melting ice in the Arctic
- Melting glaciers throughout the world
- Rising ocean temperatures
- Acidification of oceans
- Range shifts in plant and animal species

Climate change is intimately tied to the Earth's greenhouse effect. The greenhouse effect is a natural occurrence that helps regulate the temperature of the planet. The majority of radiation from the Sun hits the Earth's surface and warms it. The surface in turn radiates heat back towards the atmosphere, known as infrared radiation. Gases and clouds in the atmosphere trap and prevent some of this heat from escaping back into space and re-radiate it in all directions. This process is essential to supporting life on Earth because it keeps the planet approximately 60° F warmer than without it. Emissions from human activities since the beginning of the industrial revolution (approximately 150 years) are adding to the natural greenhouse effect by increasing the gases in the atmosphere that trap heat, thereby contributing to an average increase in the Earth's temperature. Human activities that enhance the greenhouse effect are detailed below.

GREENHOUSE GASES

The greenhouse effect is caused by a variety of greenhouse gases. Greenhouse gases (GHGs) occur naturally and from human activities. GHGs produced by human activities include carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF6). Since the year 1750, it is estimated that the concentrations of carbon dioxide, methane, and nitrous oxide in the atmosphere have increased over 36 percent, 148 percent, and 18 percent, respectively, primarily due to human activity.[8] The primary GHG emissions are detailed in Appendix C (Air Quality and Climate Change Assessment, and referenced herein as the Air Quality Report).

GHGs behave differently in the atmosphere and contribute to climate change in different ways. Some gases have more potential to reflect infrared heat back towards the earth while some persist in the atmosphere longer than others. To equalize the contribution of GHGs to climate change, the Intergovernmental Panel on Climate Change (IPCC) devised a weighted metric to compare all GHGs to carbon dioxide.[9] The weighting depends on the lifetime of the gas in the atmosphere and its radiative efficiency. As an example, over a time horizon of 100-years, emissions of nitrous oxide will contribute to climate change 298 times more than the same amount of emissions of carbon dioxide while emissions of HFC-23 would contribute 14,800 times more than the same amount of carbon dioxide. These differences define a gas's global warming potential (GWP). Table 4.5-5 (Global Warming Potential of GHGs) identifies the lifetime and GWP of select GHGs. The lifetime of the GHG represents how many years the GHG will

persist in the atmosphere. The GWP of the GHG represents the GHG's relative potential to induce climate change as compared to carbon dioxide.

Table 4.5-5
Global Warming Potential (GWP) of Greenhouse Gases (GHG)

GHG	Lifetime (yrs)	GWP
Carbon Dioxide	50-200	1
Methane	12	25
Nitrous Oxide	114	298
HFC-23	270	14,800
HFC-134a	14	1,430
HFC-152a	1.4	124
PFC-14	50,000	7,390
PFC-116	10,000	12,200
Sulfur Hexafluoride	3,200	22,800
Source: IPCC 2007		

Year 2016 Existing Greenhouse Gas Emissions

The emissions inventory for existing year 2015 has been modeled utilizing the California Emissions Estimator Model (CalEEMod) based on existing land use conditions within the Planning Area and summarized in Table 4.5-6 (Planning Area Year 2015 Existing Land Use Greenhouse Gas Emissions). The Planning Area generates 22,396.45 MTCO2E annually under Existing conditions.

Table 4.5-6
Planning Area Year 2015 Existing Land Use Greenhouse Gas Emissions

Source	GHG Emissions (MT/YR)			
	CO_2	CH_4	N_2O	TOTAL*
Area Emissions	80.83	0.08	0.00	83.11
Energy Demand	3,315.40	0.14	0.04	3,329.60
Mobile Emissions	17,911.13	0.75	0.00	17,926.93
Solid Waste Disposal	244.60	14.46	0.00	548.16
Water/Wastewater Treatment/Conveyance	438.98	2.42	0.06	508.64
TOTAL	*21,990.93*	*17.85*	*0.10*	*22,396.45*

** MTCO2E/YR: metric tons of carbon dioxide equivalent per year*
Note: Slight variations may occur due to rounding

Sensitive Receptors

Some populations are more susceptible to the effects of air pollution than the population at large. These susceptible populations are defined as sensitive receptors. Sensitive receptors include children, the elderly, the sick, and the athletic. Land uses associated with sensitive receptors include residences, schools, playgrounds, childcare centers, athletic facilities, long-term health care facilities (including hospitals), rehabilitation centers, convalescent centers, and retirement homes. Pollutants of particular concern to sensitive receptors include carbon monoxide, toxic air contaminants, and odors.

According to the General Plan EIR, sensitive receptors within the City of Duarte include residences, churches, schools, playgrounds, childcare centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes.

Currently, specific sensitive receptors within the Planning Area and within one-quarter mile of the Planning Area include residential uses, places of worship, convalescent centers, retirement homes, parks, and three schools.

Sensitive receptors located in the Planning Area and within one-quarter mile of the Planning Area are listed in Table 4.5-7 (Sensitive Receptors).

Table 4.5-7
Sensitive Receptors

Receptor	Location
Within Planning Area	
First Baptist Church of Duarte	2200 East Huntington Drive, Duarte, CA 91010
Grace Fellowship Church	1551 East Huntington Drive, Duarte, CA 91010
Monrovia Convalescent Hospital	1220 Huntington Drive, Duarte, CA 91010
Duarte Public Library	1301 Buena Vista Street, Duarte, CA 91010
Andres Duarte Terrace and Andres Duarte Terrace II	1730 East Huntington Drive, Duarte, CA 91010
Royal Terrace Health Care	1340 Highland Avenue, Duarte, CA 91010
Sports Park	1401 Central Avenue, Duarte, CA 91010
Within ¼ Mile of Planning Area	
Little Scholars Montessori School	1410 Highland Avenue, Duarte, CA 91010
Duarte High School	1565 E. Central Avenue, Duarte, CA 91010
Northview Intermediate School	1401 Highland Avenue, Duarte, CA 91010
The Manor at Santa Teresita Hospital	819 Buena Vista Street, Duarte, CA 91010
Westminster Gardens	1420 Santo Domingo Avenue, Duarte, CA 91010

Regulatory Framework

U.S. Environmental Protection Agency

The U.S. Environmental Protection Agency (EPA) is responsible for the implementation of the Federal Clean Air Act, enacted in 1955. Both California and the Federal government have established health-based ambient air quality standards (AAQS) for seven air pollutants (known as *criteria pollutants*). These pollutants include ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), inhalable particulate matter with a diameter of 10 microns or less (PM_{10}), fine particulate matter with a diameter of 2.5 microns or less ($PM_{2.5}$), and lead (Pb).

Clean Air Act

The Federal Clean Air Act (CAA) defines the Environmental Protection Agency's (EPA) responsibilities for protecting and improving the United States air quality and ozone layer. Key components of the CAA include reducing ambient concentrations of air pollutants that cause health and aesthetic problems, reducing emission of toxic air pollutants, and stopping production and use of chemicals that destroy the ozone.

Federal clean air laws require areas with unhealthy levels of ozone, inhalable particulate matter, carbon monoxide, nitrogen dioxide, and sulfur dioxide to develop State Implementation Plans (SIPs), which are comprehensive documents that identify how an area will attain National Ambient Air Quality Standards (NAAQS). Deadlines for attainment were established in the 1990 amendments to the CAA based on the severity of an area's air pollution problem. Failure to meet air quality deadlines can result in sanctions against the State or in the EPA taking over enforcement of the CAA in the affected area. SIPs are a compilation of new and previously submitted plans, programs, district rules, and State and Federal regulations. The SCAQMD implements the required provisions of an applicable SIP through its Air Quality Management Plan (AQMP). Currently, SCAQMD implements the 8-hr ozone and $PM_{2.5}$ SIP in the 2007 AQMP and the PM_{10} SIP in the 2003 AQMP. The $PM_{2.5}$ SIP is currently being revised by SCAQMD in response to partial disapproval by the EPA. The 2012 lead SIP for the Los Angeles County portion of

the SCAB was adopted by the SCAQMD Board on May 4, 2012, approved by CARB on May 24, 2012, and forwarded to the EPA for approval as a revision to the California SIP.

California Air Resources Board

The California Air Resources Board (CARB) administers the air quality policy in California. California enacted more stringent standards than the CAA with California Ambient Air Quality Standards (CAAQS) in 1969. In 1988 the California Clean Air Act was approved, which required each local air district to prepare and maintain an AQMP to achieve compliance with the California Ambient Air Quality Standards.

California Clean Air Act

The California Clean Air Act (CCAA) of 1988 was enacted to develop plans and strategies for attaining CAAQS. The CARB, which is part of the California Environmental Protection Agency (Cal-EPA), develops statewide air quality regulations, including industry-specific limits on criteria, toxic, and nuisance pollutants. The State has established AAQS for the additional pollutants of visibility reducing particles, sulfates, hydrogen sulfide, and vinyl chloride. The AAQS are designed to protect the health and welfare of the populace within a reasonable margin of safety. Where the State and Federal standards differ, State AAQS are more stringent than Federal AAQS. Federal and State standards are shown in Table 4.5-8 (Ambient Air Quality Standards).

Table 4.5-8
Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[1]		National Standards[2]		
		Concentration[3]	Method[4]	Primary[3,5]	Secondary[3,6]	Method[7]
Ozone (O_3)	1 Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	-	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.07 ppm (137 µg/m^3)		0.07 ppm (137 µg/m^3)		
Respirable Particulate Matter (PM_{10}) [8]	24 Hour	50 µg/m^3	Gravimetric or Beta Attenuation	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m^3		-		
Fine Particulate Matter($PM_{2.5}$) [8]	24 Hour	-	-	35 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m^3	Gravimetric or Beta Attenuation	12 µg/m^3	15 µg/m^3	
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/ m^3)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m^3)	-	Non-Dispersive Infrared Photometry (NDIR) -
	8 Hour	9.0 ppm (10mg/m^3)		9 ppm (10 mg/m^3)	-	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/ m^3)		-	-	
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	0.03 ppm (57 µg/m^3)	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m^3)	Same as Primary Standard	Gas Phase Chemiluminescence
	1 Hour	0.18 ppm (339 µg/m^3)		100 ppb (188 µg/m^3)	-	
Sulfur Dioxide (SO_2)	1 Hour	0.25 ppm (655 µg/m^3)	Ultraviolet Fluorescence	75 ppb (196 µg/m^3)	-	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method) -
	3 Hour	-		-	0.5 ppm (1,300 µg/m^3)	
	24 Hour	0.04 ppm (105 µg/m^3)		0.14 ppm (for certain areas)[10]	-	
	Annual Arithmetic Mean	-		0.030 ppm (for certain areas)[10]	-	
Lead[11,12]	30 Day Average	1.5 µg/m^3	Atomic Absorption	-	-	High Volume Sampler and Atomic Absorption
	Calendar Quarter	-		1.5 µg/m^3 (for certain areas)[12]	Same as Primary Standard	
	Rolling 3-Month Average[10]	-		0.15 µg/m^3		
Visibility Reducing Particles[13]	8 Hour	See footnote 13	Beta Attenuation and Transmittance through Filter Tape	No Federal Standards		
Sulfates	24 Hour	25 µg/m^3	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Chloride[11]	24 Hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			

Source: ARB, October 2015

PPM, parts per million
µg/m3, micrograms per cubic meter

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), and particulate matter (PM_{10}, $PM_{2.5}$, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m^3 is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal

to or less than the standard. Contact U.S. EPA for further clarification and current national policies.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the EPA.
8. On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 µg/m^3 to 12.0 µg/m^3. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 µg/m^3, as was the annual secondary standard of 15 µg/m^3. The existing 24-hour PM_{10} standards (primary and secondary) of 150 µg/m^3 also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
9. To attain the 1-hour national standard, the 3-year average of the 98th percentile of the daily maximum 1-hour daily maximum concentrations at each site must not exceed 100ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national standards to the California standards the units can be converted from ppb to ppm. In this case, the national standards of 100ppb is identical to 0.100ppm.
10. On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.
Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
11. The ARB has identified lead and vinyl chloride as "toxic air contaminants" with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
11. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 µg/m^3 as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
12. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

Attainment Status

Air pollution levels are measured at monitoring stations located throughout the Basin. Areas that are in nonattainment with respect to criteria pollutants are required to prepare plans and implement measures that will bring the region into attainment. Table 4.5-9 (South Coast Air Basin Attainment Status) summarizes the attainment status in the non-desert portion of the Basin for the criteria pollutants. The non-desert portion of the Basin is currently in nonattainment status for ozone, inhalable and fine particulate matter, nitrogen dioxide, and lead.

Pollution problems in the Basin are caused by emissions within the Basin and the specific meteorology that promotes pollutant concentrations. Emissions sources vary widely from smaller sources such as individual residential water heaters and short-term grading activities, to extensive operational sources including long-term operation of electrical power plants and other intense industrial uses. Pollutants in the Basin are blown inland from coastal areas by sea breezes from the Pacific Ocean and are prevented from horizontally dispersing due to the surrounding mountains. This is further complicated by atmospheric temperature inversions that create inversion layers. The inversion layer in Southern California refers to the warm layer of air that lies over the cooler air from the Pacific Ocean. This is strongest in the summer and prevents ozone and other pollutants from dispersing upward. A ground-level surface inversion commonly occurs during winter nights and traps carbon monoxide emitted during the morning rush hour.

At the time of the General Plan EIR, under the CCAA, the Basin was designated as a nonattainment area for O_3, $PM_{10,}$ and $PM_{2.5}$. The Basin was designated as an attainment area for CO, NO_2, SO_2, and Pb. As of the preparation of this Supplemental EIR, these conditions remain the same.

Table 4.5-9
South Coast Air Basin Attainment Status

Pollutant	Federal	State
O_3 (1-hr)	--	Nonattainment
O_3 (8-hr)	Nonattainment	Nonattainment
PM_{10}	Attainment	Nonattainment
$PM_{2.5}$	Nonattainment	Nonattainment
CO	Attainment	Attainment
NO_2	Attainment	Attainment
SO_2	Attainment	Attainment
Pb	Nonattainment	Attainment
VRP	--	Unclassified
SO_4	--	Attainment
H_2S	--	Unclassified
Source: ARB 2014		

State Air Toxics Program

Toxic air contaminants (TACs) are regulated through California's air toxics program, mandated in Chapter 3.5 (Toxic Air Contaminants) of the Health and Safety Code (H&SC Section 39660 et. Seq.) and Part 6 (Air Toxics "Hot Spots" Information and Assessment) (H&SC Section 44300 et. Seq.). The program is administered by the CARB and is incorporated locally by the SCAQMD.

TACs refer to a diverse group of "non-criteria" air pollutants that can affect human health, but do not have established ambient air quality standards. TACs are classified as carcinogenic and noncarcinogenic, where carcinogenic TACs can cause cancer, and noncarcinogenic TACs can cause acute and chronic impacts to different target organ systems (e.g., eyes, respiratory, reproductive, developmental, nervous, and cardiovascular). Diesel Particulate Matter (DPM), which is emitted in the exhaust from diesel engines, was listed by the State as a TAC in 1998. DPM has historically been used as a surrogate measure of exposure for all diesel exhaust emissions. DPM consists of fine particles (fine particles have a diameter less than 2.5 μm), including a subgroup of ultrafine particles (ultrafine particles have a diameter less than 0.1 μm). Collectively, these particles have a large surface area which makes them an excellent medium for absorbing organics. The visible emissions in diesel exhaust include carbon particles or "soot." Diesel exhaust also contains a variety of harmful gases and cancer-causing substances. Exposure to DPM may be a health hazard, particularly to children whose lungs are still developing and the elderly who may have other serious health problems. DPM levels and resultant potential health effects may be higher in close proximity to heavily traveled roadways with substantial truck traffic or near industrial facilities.

According to the EPA and CARB, there are no reported toxic releases within the Planning Area.[10] The nearest toxic emitter to the Planning Area is Woodward HRT-Duarte located at 1700 Business Center Drive, approximately 0.13 miles south of the Planning Area. Woodward HRT-Duarte is a manufacturer of aircraft parts and auxiliary equipment.

South Coast Air Quality Management District

The SCAQMD has jurisdiction over 10,743 square miles, which includes the counties of Orange, Riverside, and San Bernardino, the non-desert portions of Los Angeles, and portions of the Salton Sea Air Basin and Mojave Desert Air Basin. The District is one of 35 air quality management districts in California that have prepared AQMPs to accomplish a five-percent annual reduction in emissions. The SCAQMD manages the Basin. Pursuant to the CCAA, SCAQMD is responsible for bringing air quality within the Basin into conformity with Federal and State air quality standards by reducing existing emission levels and ensuring that future emission levels meet applicable air quality

standards. SCAQMD works with Federal, State, and local agencies to reduce pollutant sources through the development of rules and regulations.

Air Quality Management Plan

The purpose of an AQMP is to bring an air basin into compliance with Federal and State air quality standards and is a multi-tiered document that builds on previously adopted AQMPs. The 2003 AQMP was adopted in August 2003 and demonstrated O_3 and PM_{10} for the Basin. It also provides the maintenance plans for CO and NO_2, which the Basin has been in attainment for since 1997 and 1992, respectively. The 2007 AQMP for the Basin was approved by the SCAQMD Board of Directors in June 2007. The 2007 AQMP builds on the 2003 AQMP and is designed to address the Federal 8-hour ozone and $PM_{2.5}$ air quality standards. The AQMP identifies short- and long-term control measures designed to reduce stationary, area, and mobile source emissions, organized into four primary components:

1. District Stationary and Mobile Source Control Measures
2. Air Resources Board (ARB) State Strategy
3. Supplement to ARB Control Strategy
4. SCAG Regional Transportation Strategy and Control Measures

The 2012 AQMP was adopted by the SCAQMD board on December 7, 2012. The 2012 AQMP incorporated the latest scientific and technological information and planning assumptions, including the 2012 Regional Transportation Plan/Sustainable Communities Strategy and updated emission inventory methodologies for various source categories. The 2012 AQMP includes the new and changing Federal requirements, implementation of new technology measures, and the continued development of economically sound, flexible compliance approaches. The SCAQMD is currently initiating an early development process for preparation of the 2016 AQMP.

SCAQMD Rule Book

In order to control air pollution in the Basin, SCAQMD adopts rules that establish permissible air pollutant emissions and governs a variety of businesses, processes, operations, and products to implement the AQMP and the various Federal and State air quality requirements. SCAQMD does not adopt rules for mobile sources; those are established by Arm or the United States EPA. Rules that will be applicable during construction of the proposed project include Rule 403 (Fugitive Dust) and Rule 1113 (Architectural Coatings). Rule 403 prohibits emissions of fugitive dust from any grading activity, storage pile, or other disturbed surface area if it crosses the project property line or if emissions caused by vehicle movement cause substantial impairment of visibility (defined as exceeding 20 percent opacity in the air). Rule 403 requires the implementation of Best Available Control Measures (BACM) and includes additional provisions for projects disturbing more than five acres and those disturbing more than fifty acres. Rule 1113 establishes maximum concentrations of VOCs in paints and other applications and establishes the thresholds for low-VOC coatings.

Southern California Association of Governments

The Southern California Association of Governments (SCAG) is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties and serves as a forum for regional issues relating to transportation the economy, community development and the environment.

With respect to air quality planning, the Southern California Association of Governments has prepared the Regional Comprehensive Plan and Guide for the region, which includes Growth Management and Regional Mobility chapters that form the basis for the land use and transportation control portions of the AQMP. SCAG is responsible under the Federal Clean Air Act for determining conformity of projects, plans and programs with the SCAQMD.

Executive Order S-3-05 and S-30-15

Executive Order S-3-05 was issued by California Governor Arnold Schwarzenegger and established targets for the reduction of greenhouse gas emissions at the milestone years of 2010, 2020, and 2050. Statewide GHG emissions must be reduced to 1990 levels by year 2020 and by 80 percent beyond that by year 2050. The Order requires the Secretary of the CalEPA to coordinate with other State departments to identify strategies and reduction programs to meet the identified targets. A Climate Action Team (CAT) was created and is headed by the Secretary of CalEPA who reports on the progress of the reduction strategies. The latest CAT *Biennial Report to the Governor and Legislature* was completed in April 2010.[11] CAT also works in 11 subgroups to support development and implementation of the Scoping Plan (see "California Global Warming Solutions Act" herein). S-30-15 added an intermediate greenhouse gas reduction target of 40 percent below 1990 levels by the year 2030.

California Global Warming Solutions Act

The California State Legislature adopted the California Global Warming Solutions Act in 2006 (AB 32). AB 32 establishes the caps on statewide greenhouse gas emissions proclaimed in Executive Order S-3-05 and establishes a regulatory timeline to meet the reduction targets. The timeline is as follows:

January 1, 2009	Adopt Scoping Plan
January 1, 2010	Early action measures take effect
January 1, 2011	Adopt GHG reduction measures
January 1, 2012	Reduction measures take effect
December 31, 2020	Deadline for 2020 reduction target

As part of AB 32, CARB had to determine what 1990 GHG emissions levels were and projected a business-as-usual (BAU) estimate for 2020 to determine the amount of GHG emissions that will need to be reduced. BAU is a term used to define emissions levels without considering reductions from future or existing programs or technologies. 1990 emissions are estimated at 427 million metric tons of carbon dioxide equivalent (MMTCO2E) while 2020 emissions (after accounting for the economic downturn in 2008 and implementation of Pavley 1 vehicle emissions reductions and the State Renewable Portfolio Standard identified in Air Resources Board Scoping Plan below) are estimated at 507 MMTCO2E; therefore, California GHG emissions must be reduced 80 MMTCO2E (507 – 427 = 80) by 2020, a reduction of approximately 15 percent below BAU. Emissions are required to be reduced an additional 80 percent below 1990 levels by 2050.

Air Resources Board Scoping Plan

The CARB Scoping Plan is the comprehensive plan to reach the GHG reduction targets stipulated in AB32. The key elements of the plan are to expand and strengthen energy efficiency programs, achieve a statewide renewable energy mix of 33 percent, develop a cap-and-trade program with other partners in the Western Climate Initiative (includes seven states in the United States and four territories in Canada), establish transportation-related targets, and establish fees (CARB 2008). The Scoping Plan measures are identified in Table 4.7-10 (Scoping Plan Measures). Note that the current early discrete actions are incorporated into these measures. ARB estimates that implementation of these measures will reduce GHG emissions in the state by 136 MMTCO2E by 2020; therefore, implementation of the Scoping Plan will meet the 2020 reduction target of 80 MMTCO2E, which is a reduction of 27 percent compared to the projected business as usual 507 MMTCO2E. Key recommendations of the Scoping Plan to achieve the 2020 target include:

1. Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
2. Achieving a statewide renewable energy mix of 33 percent;
3. Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system;
4. Establish targets for transportation-related greenhouse gas emissions for regions throughout California, and pursuing policies and incentives to achieve those targets;
5. Adopting and implementing measures pursuant to existing State laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard; and
6. Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the State's long term commitment to AB 32 implementation.

In a report prepared on September 23, 2010, CARB indicates that 40 percent of the reduction measures identified in the Scoping Plan have been secured (CARB 2010a). CARB held the hearing for the cap-and-trade program rulemaking on December 16, 2010. The cap-and-trade program began on January 1, 2012 after CARB completed a series of activities that dealt with the registration process, compliance cycle, and tracking system; however, covered entities will not have an emissions obligation until 2013 (CARB 2015). ARB recently conducted its first quarterly auction on November 14, 2012 with its next auction scheduled for March 2013. ARB is also currently working on the low carbon fuel standard where public hearings and workshops are currently being conducted. In August 2011, the Scoping Plan was reapproved by CARB with the program's environmental documentation.

Table 4.5-10
Scoping Plan Measures

Measure	Description
T-1	Pavely I and II – Light Duty Vehicle Greenhouse Gas Standards
T-2	Low Carbon Fuel Standard
T-3	Regional Transportation-Related Greenhouse Gas Targets
T-4	Vehicle Efficiency Measures
T-5	Ship Electrification at Ports
T-6	Good Movement Efficiency Measures
T-7	Heavy-Duty Vehicle Aerodynamic Efficiency
T-8	Medium and Heavy-Duty Vehicle Hybridization
T-9	High Speed Rail
E-1	Energy Efficiency (Electricity Demand Reduction)
E-2	Increase Combined Heat and Power Use
E-3	Renewable Portfolio Standard
E-4	Million Solar Roofs
CR-1	Energy Efficiency (Natural Gas Demand Reduction)
CR-2	Solar Water Heating
GB-1	Green Buildings
W-1	Water Use Efficiency
W-2	Water Recycling
W-3	Water System Energy Efficiency
W-4	Reuse Urban Runoff
W-5	Increase Renewable Energy Production
W-6	Public Good Charge (Water)
I-1	Energy Efficiency for Large Industrial Sources
I-2	Oil and Gas Extraction GHG Reductions
I-3	Oil and Gas Transmission Leak Reductions
I-4	Refinery Flare Recovery Process Improvements
I-5	Removal of Methane Exemption from Existing Refinery Regulations
RW-1	Landfill Methane Control
RW-2	Increase Landfill Methane Capture Efficiency
RW-3	Recycling and Zero Waste
F-1	Sustainable Forest Target
H-1	Motor Vehicle Air Conditioning
H-2	Non-Utilities and Non-Semiconductor SF_6 Limits
H-3	Semiconductor Manufacturing PFC Reductions
H-4	Consumer Products High GWP Limits
H-5	High GWP Mobile Source Reductions
H-6	High GWP Stationary Source Reductions
H-7	High GWP Mitigation Fees
A-1	Large Dairy Methane Capture

California Green Building Standards

New California Green Building Standards Code (CALGREEN) went into effect on January 1, 2011.[12] The purpose of the new addition to the California Building Code (CBC) is to improve public health, safety, and general welfare by enhancing the design and construction of buildings using concepts to reduce negative impacts or produce positive impacts on the environment. The CALGREEN regulations cover planning and design, energy efficiency, water efficiency and conservation, material conservation and resources efficiency, and environmental quality. Many of the new regulations have the effect of reducing greenhouse gas emissions from the operation of new buildings. Table 4.5-11 (CALGREEN Requirements) summarizes the previous requirements of the CBC and the new requirements of

CALGREEN that went into effect in January 2011. Minor technical revisions and additional requirements went into effect in July 2012. The Code was further updated in 2013, effective January 1, 2014 through 2016.

Table 4.5-11
CALGREEN Requirements

Item		Requirements	
		Previous	CALGREEN
4.1	Stormwater Management	Stormwater management required on projects > than one acre	All projects subject to stormwater management.
	Surface Drainage	Surface water must flow away from building	Drainage patterns must be analyzed
4.2	Energy Efficiency	California Energy Code	Minimum energy efficiency to be established by California Energy Commissions
4.3	Indoor Water Use	HCD maximum flush rates; CEC water use standards for appliances and fixtures	Indoor water use must decrease by at least 20 percent (prescriptive or performance based)
	Multiple Showerheads	Not covered	Multiple showerheads cannot exceed combined flow of the code
	Irrigation Controllers	Not covered	Irrigation controllers must be weather or soil moisture based controllers
4.4	Joint Protection	Plumbing and Mechanical Codes	All openings must be sealed with materials that rodents cannot penetrate
	Construction Waste	Local Ordinances	Establishes minimum 50 percent recycling and waste management plan
	Operation	Plumbing Code for gray water systems	Educational materials and manuals must be provided to building occupants and owners to ensure proper equipment operation
4.5	Fireplaces	Local Ordinances	Gas fireplaces must be direct-vent sealed-combustion type; Wood stoves and pellet stoves must meet USEPA Phase II emissions limits
	Mechanical Equipment	Not covered	All ventilation equipment must be sealed from contamination during construction
	VOCs	Local Ordinances	Establishes statewide limits on VOC emissions from adhesives, paints, sealants, and other coatings
	Capillary Break	No prescriptive method of compliance	Establishes minimum requirements for vapor barriers in slab on grade foundations
	Moisture Content	Current mill moisture levels for wall and floor beams is 15-20 percent	Moisture content must be verified prior to enclosure of wall or floor beams
	Whole House Fans	Not covered	Requires insulted louvers and closing mechanism when fan is off
	Bath Exhaust Fans	Not covered	Requires Energy Star compliance and humidistat control
	HVAC Design	Minimal requirements for heat loss, heat gain, and duct systems	Entire system must be designed in respects to the local climate
7	Installer Qualifications	HVAC installers need not be trained	HVAC installers must be trained or certified
	Inspectors	Training only required for structural materials	All inspectors must be trained

Source: HCD 2010

General Plan

The General Plan includes the following policies and implementation measures pertaining to air quality.

P AQ 1.1.1 Facilitate communications among residents, businesses and the Southern California Air Quality Management District (AQMD) to quickly resolve air pollution nuisance complaints. Distribute information to advise residents on how to register a complaint with the AQMD (cut smog program).

P AQ 1.1.2 Promote and support mixed-use land patterns that allow the integration of retail, office, institutional and residential uses.

P AQ 1.2.1 Establish a Mixed-Use Zoning District that offers incentives for mixed-use developments.

P AQ 1.2.2 Create opportunities to receive State transportation funds by adopting incentives (e.g. and expedited review process) for planning and implementation infill development projects that include job centers and clean transportation nodes (e.g. preparation of a "transit village" plan).

P AQ 2.1.1 Collaborate with local transit agencies to:

- Develop programs and educate employers about employee rideshare and transit.
- Establish mass transit mechanisms for the reduction of work-related and non-work related vehicle trips.
- Promote mass transit ridership through careful planning of routes, headways, origins and destination, and types of vehicles.

P AQ 2.1.2 Provide merchants with fliers/posters that publicize mass transit schedules to encourage their customers to use mass transit.

P AQ 2.1.3 Consider providing incentives such as preferential parking for alternative-fuel vehicles (e.g., compressed natural gas (CNG) or hydrogen).

IM Work with AQMD and other agencies to receive grants for alternative modes of transportation and improved traffic flow.

P AQ 2.2.1 Synchronize traffic signals throughout the City and with adjoining cities while allowing free flow of mass transit systems.

IM Continue to collaborate with adjacent cities to improve traffic flow.

P AQ 2.2.2 Monitor traffic and congestion to determine when and where the city needs new transportation facilities to achieve increased mobility and efficiency.

IM Perform traffic studies yearly and/or require traffic studies as development occurs.

P AQ 2.2.3 Consider replacing existing vehicles in the City fleet with the cleanest vehicles commercially available.

IM Prepare a vehicle replacement plan.

P AQ 2.3.1 Develop and coordinate a plan with local agencies for cost-effective use of AB 2766 (emissions reductions benefits) funds so that revenue is used for projects and programs identified in the AQMP.

IM Work with AQMD and other agencies to receive grants for alternative modes of transportation and improved traffic flow.

P AQ 2.3.2 Develop and adopt a policy to utilize federal Congestion Mitigation and Air Quality Improvement (CMAQ) funds in coordination with regional agencies in a manner consistent with projects approved in the AQMP.

IM Work with AQMD and other agencies to receive grants for alternative modes of transportation and improved traffic flow.

P AQ 2.3.3 Apply annually to the AQMD Mobile Source Reduction Committee (MSRC) for AB 2766 "Local Government Match Program" grants for projects that reduce mobile source emissions (e.g. purchases of alternative-fueled vehicles).

IM Perform traffic studies yearly and/or require traffic studies as development occurs.

P AQ 2.3.4 Seek opportunities to pool AB 2766 revenue with neighboring cities to fund programs that will reduce mobile source emissions (e.g., traffic synchronization, fueling station infrastructure, teleconferencing facilities).

IM Work with AQMD and other agencies to receive grants for alternative modes of transportation and improved traffic flow.

P AQ 3.1.1 Where fugitive dust is causing a chronic public nuisance or the air quality is in exceedance of PM 10 standards, consider adopting a dust control policy that requires preparation and approval of a dust control plan.

IM Prepare and enforce a dust reduction ordinance that addresses mobile and stationary sources.

P AQ 3.1.2 Cooperate with local, regional, state and federal jurisdictions to better control fugitive dust from stationary, mobile and area sources.

IM Prepare and enforce a dust reduction ordinance that addresses mobile and stationary sources.

P AQ 3.1.3 Ensure that vehicles do not transport aggregate or similar material upon a highway unless the material is stabilized or covered, in accordance with state law and AQMD regulations.

IM Prepare and enforce a dust reduction ordinance that addresses mobile and stationary sources.

P AQ 3.1.4 Consider rerouting the Duarte fixed route bus system to help minimize vehicle trips.

IM Review Duarte's fixed route system annually to provide service and efficiency.

P Circ 1.1.1 Development, implement, and refine local east/west traffic flow elements to allow traffic to move through and within Duarte in an expeditious manner including improving the Huntington Drive bridge over the San Gabriel River.

P Circ 1.1.2 Implement the roadway plan provided in the Circulation Element to meet the transportation needs of the citizens.

P Circ 1.1.3 Widen substandard streets and alleys to meet the city standards where feasible.

P Circ 1.1.4 Evaluate the traffic impacts of new development and require developers to employ appropriate mitigation measures to reduce traffic or improve roadway and traffic conditions.

P Circ 1.1.5 Evaluate the traffic impacts from development projects in adjacent cities and work cooperatively with those cities to develop mitigation measures that will improve traffic conditions in Duarte.

P Circ 1.1.6 Pursue and provide adequate right-of-way to accommodate future circulation system improvements.

P Circ 2.1.2 Restrict heavy duty truck traffic to arterial roadways.

P Circ 2.1.3 Continue the practice of responding to resident complaints and requests regarding residential street traffic problems.

P Circ 2.1.5 Appropriate mitigation measures should be implemented to ensure that the adverse impacts from trucks and employee traffic can be reduced.

P Circ 3.1.1 Continue to promote the development of the MTA Gold Line and a Duarte station.

P Circ 3.1.2 Coordinate Duarte Transit System with MTA, Foothill Transit and to service major destinations within Duarte including City of Hope, Duarte Gold Line Station and proposed City Center area.

P Circ 3.1.3 Promote the linking of local public transit routes with that of adjacent jurisdictions and other transit agencies.

P Circ 3.1.4 Ensure that new developments incorporate both local and regional transit measures into the project design that promote the use of alternate modes of transportation.

P Circ 3.1.5 Provide incentives for appropriate pedestrian and bicycle facilities throughout Duarte, particularly for bike lanes to the Gold Line Station.

P LU 2.1.3 Provide for the shopping and service needs of residents by conveniently clustering commercial establishments in such a way to encourage “one-stop” shopping.

P LU 2.1.7 Make every effort to ensure that industry and residences, where located in close proximity, will be compatible neighbors with non-industrial uses located nearby, and with neighboring cities as well.

P LU 3.1.2 Develop a flexible specific and strategic plan for the commercial area along the Huntington Drive and Buena Vista axis capturing traffic off the I-210 freeway.

P LU 3.1.4 Create a flexible mixed-use Transit Oriented Development Specific Plan for the current non-residential area north of the Gold Line Station.

P LU 3.1.5 If the Duarte Gold Line Station becomes a reality before 2020, consider a thorough analysis of a potential amendment to the General Plan to provide expanded Transit Oriented Development for additional area north and west and east of the Gold Line Station.

P LU 3.1.6 Promote the use of mixed land use techniques and construction methods to provide more housing and minimize housing costs without compromising basic health, safety, and aesthetic qualities.

P HOU 1.1.5 Encourage use of innovative construction techniques, design standards, and energy conservation methods in new housing development, through revised zoning and subdivision and ordinances.

Threshold of Significance

Air quality impacts resulting from the implementation of the proposed Specific Plan may be considered significant if they would result in the following:

- Conflict with or obstruct implementation of the applicable air quality plan;

- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- 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);
- Exposes sensitive receptors to substantial pollutant concentrations; and/or
- Create objectionable odors affecting a substantial number of people (refer to Section 7.0, Effects Found Not to be Significant).

Greenhouse gas impacts resulting from the implementation of the proposed Specific Plan may be considered significant if they would result in the following:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; and/or
- Conflict with an applicable plan, policy, or regulation adopted for the purposes of reducing the emissions of greenhouse gases.

The General Plan EIR determined a conclusion on the significance of greenhouse gas emissions could not be reached due to the uncertainty involved in predicting project operational impacts on greenhouse gas emissions and global climate change.

A numerical threshold for determining the significance of GHG emissions in the South Coast Air Basin (Basin) has not been established by the South Coast Air Quality Management District (SCAQMD). To determine if the proposed Specific Plan would contribute significantly to climate change impacts, a performance standard of a 15 percent reduction under *business-as-usual* (BAU) levels will be utilized, consistent with the Statewide 2020 reduction requirement pursuant to AB 32. Accordingly, GHG emissions could result in potentially significant impacts if this performance standard is not met. This report uses this 15 percent below BAU standard to analyze the project's potential GHG emissions impacts.

Environmental Impacts

Air Quality

The proposed project would not result in a cumulative increase of criteria pollutants from construction activities and would therefore not violate air quality standards. Impacts would remain less than significant.

Short-term air quality impacts would occur during grading and construction activities associated with future development facilitated by the General Plan. These temporary impacts would include the following:

- Particulate (fugitive dust) emissions from demolition, clearing, and grading activities;
- Off-site air pollutant emissions at the power plant serving the construction site, while temporary power lines are needed to operate construction equipment and provide lighting;
- Exhaust emissions and potential odors from construction equipment used on the construction site as well as the vehicles used to transport materials to and from the site;
- Exhaust emissions from the motor vehicles of the construction crew; and
- Potential release of asbestos from building demolition.

As discussed in the General Plan EIR, future development proposed would be required to implement control measures during construction activities to reduce emissions below SCAQMD significance thresholds, when possible. Future development within the City of Duarte would be subject to the rules and policies provided within the General Plan. Policies such as AQ 3.1.1 require the preparation and approval of a dust control plan prior to commencement of construction activities and would reduce impacts associated with temporary short-term construction activities. In addition, compliance with SCAQMD Rule 402 and 403 would reduce ambient entrainment of fugitive dust, and

require that air pollutant emissions not be a nuisance off-site, respectively. The General Plan EIR determined that short-term construction-related impacts would be less than significant with compliance with applicable SCAQMD rules and implementation of General Plan policies.

As a policy document, no development would be entitled or would occur directly from adoption of the proposed Specific Plan. However, development would occur within the proposed Planning Area as guided by the Specific Plan. Short-term criteria pollutant emissions would occur during site preparation, grading, building construction, paving, and painting/coating activities. Emissions would occur from use of construction equipment, worker, vendor, and hauling trips, and disturbance of on-site soils (fugitive dust). Short-term construction-related emissions would be analyzed on a project-by-project basis as future development is proposed, and, as discussed in the General Plan EIR, future development would be subject to the goals and policies and of the General Plan and applicable SCAQMD rules and standards. Therefore, short-term construction-related impacts would remain less than significant.

Future development facilitated by the proposed Specific Plan could result in an overall increase in mobile and stationary source emissions within the City which may exceed SCAQMD air quality standards. Impacts would remain significant and unavoidable.

As discussed in the General Plan EIR, projected increases in population associated with build-out of the General Plan would result in the corresponding increase in the number of automobiles and vehicular pollutants plus stationary pollutants associated with electricity and natural gas consumption. Reductions in vehicular trips and vehicle miles traveled plus energy conservation could be achieved through the application of wise, long-range planning of land uses that would provide comprehensive support for residents and workers.

Short range mobile and area air emissions generated by projects that were currently proposed within the City when the General Plan EIR was being prepared were calculated. The General Plan EIR found that short term air emissions would be within SCAQMD daily thresholds and were determined to be less than significant.

The General Plan EIR also analyzed long-range air emissions associated with potential mixed-use projects within the City that would create mobile and area source emissions. Although technological improvements to engine systems, alternative fuels, and propulsion systems, and implementation of Transportation Demand Management, would reduce mobile source emissions, emissions were still anticipated to increase due to increases in population. In addition, increased demand for electricity and natural gas would increase area source emissions in the long term.

As noted in the General Plan EIR, future site-specific development proposals would be evaluated for potential air emissions once development details become available. Nevertheless, total anticipated long range development occurring within the City of Duarte was found to generate ROG emissions beyond the SCAQMD threshold. General Plan policies and implementation measures would minimize mobile and stationary source impacts by encouraging pedestrian traffic, reducing vehicular traffic, and ensuring compatible placement of land uses. However, impacts were determined to be significant and unavoidable.

Currently proposed development within the Planning Area would result in short term emissions of criteria pollutants. A new hotel, located at 1230 Huntington Drive, is currently being proposed and would consist of an estimated 266 hotel rooms. A Starbucks location, located at 1263 Huntington Drive, is currently under construction and consists of a 1,850-square foot Starbucks location and 2,600 square feet of commercial space. Consistent with the General Plan EIR, short term emissions have been calculated and summarized in Table 4.5-12 (Short Term Air Emissions) for these two anticipated projects on Huntington Drive. Short term air emissions associated with projects that are currently proposed or currently under construction within the Planning Area would not exceed daily SCAQMD thresholds. Therefore, short term air emissions would remain less than significant. While short-term air emissions within the Planning Area would not result in increased impacts, long-range air emissions impacts would remain significant and unavoidable as analyzed in the General Plan EIR.

Table 4.5-12
Short Term Air Emissions (Short-Term Projects within Planning Area)

Emissions	Pollutant (pounds/day)					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area	10.22	0.00	0.03	0.00	0.00	0.00
Energy	0.30	2.71	2.28	0.02	0.21	0.21
Mobile	11.18	25.60	108.04	0.25	17.06	4.79
Total Short Range Emissions	*21.70*	*28.31*	*110.35*	*0.27*	*17.27*	*5.00*
SCAQMD Threshold	55	55	550	150	150	55
Is Threshold Exceeded?	No	No	No	No	No	No

Future development facilitated by the proposed Specific Plan would not result in carbon monoxide hotspots. Impacts would remain less than significant.

A carbon monoxide (CO) hotspot is an area of localized CO pollution that is caused by severe vehicle congestion on major roadways, typically near intersections. CO hotspots have the potential to violate State and Federal CO standards at intersection, even if the broader Basin is in attainment for Federal and State levels. In general, the California Department of Transportation *Project-Level Carbon Monoxide Protocol* (CO Protocol) recommend analysis of CO hotspots when a project increases the number of vehicles operating in cold start mode by more than two percent, increases traffic volumes by more than five percent, or worsens average traffic speeds. In addition, CO hotspots are typically associated with intersections with lower ratings of Level of Service (LOS), such as LOS E or F, which indicate high congestion and high amounts of idling vehicles that have the potential to generate a CO hotspot.

The General Plan EIR identified ten intersections that would operate at LOS D or worse at General Plan buildout. As a policy document, no development is authorized or would directly occur from the adoption of the General Plan. Therefore, project-specific traffic volumes were not available and a qualitative analysis of CO hotspots was provided. The 2003 AQMP provided a detailed analysis of CO concentrations by analyzing the worst-case intersections within the entire Basin. One of the most congested intersections in Los Angeles County has an average daily traffic volume of 100,000 vehicles per day. The CO levels at this intersection was determined to be well below Federal and State CO standards. Traffic volumes within Duarte would be well below 100,000 vehicles with General Plan buildout. In addition, future projects would be subject to General Plan Circulation Element goals and policies that would result in improved traffic flow, reduced vehicle miles traveled, and thus fewer emissions. The General Plan EIR determined that impacts would be less than significant.

According to the traffic study prepared for the proposed Specific Plan (Appendix D), three intersections would operate at LOS E or F during the AM Peak Hour and five intersections would operate at LOS E or F during the PM Peak Hour under Future Year 2036 with Project conditions. Traffic volumes would be well below 100,000 vehicles per day with implementation of the proposed Specific Plan. Impacts related to carbon monoxide hotspots would remain less than significant.

Buildout of the proposed Specific Plan would not conflict with or obstruct implementation of the Southern California Association of Government's Regional Comprehensive Plan Guidelines or the South Coast Air Quality Management District's Air Quality Management Plan. Impacts would remain less than significant.

A potentially significant impact would occur if the proposed project would conflict with or obstruct the implementation of the applicable air quality plan. The General Plan EIR notes that consistency with the 2003 AQMP means that a project is consistent with the goals, objectives, and assumptions in the respective plan to achieve the Federal and State air quality standards. The General Plan EIR assessed the General Plan Update's consistency with the 2003 AQMP. Two main indicators of project consistency are:

1. Whether the project would result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim reductions specified in the 2003 AQMP; and
2. Whether the project would exceed the 2003 AQMP's assumptions for 2020 or yearly increments based on the year of public buildout and phase.

The General Plan EIR determined that the General Plan Update is consistent with the Regional Comprehensive Plan and Guide and the AQMP. Both documents place heavy reliance on local implementation measures, such as land use decisions and local employment transportation programs. In addition, the City actively pursues and implements programs that reduce air pollutant emissions. Further, General Plan Open Space and Conservation Element goals and policies related to coordination with SCAQMD and SCAG, and Circulation Element goals and policies related to cooperation with County and regional agencies through participation in various transportation programs set the foundation for emission reduction. The General Plan EIR determined that the General Plan Update would not conflict with or obstruct implementation of the Regional Comprehensive Plan and Guide or the AQMP. Impacts would be less than significant.

Future development developed in accordance with the goals of the proposed Specific Plan would have the effect of contributing incrementally to the mobile, energy, and area sources that cumulatively contribute to criteria pollutant levels and associated air pollution in the Basin. The SCAQMD is responsible for preparing the various pollution Control Plans and Maintenance Plans that comprise the Air Quality Management Plan (AQMP) for the Basin. The AQMP includes strategies and control measures to reduce and/or maintain the effects that construction and operation of various uses within the Basin have on regional air quality. The effects of future development on regional air quality could result in potentially significant impacts if future projects will conflict with or obstruct the implementation of the SCAQMD 2012 AQMP. Conflicts and obstructions that hinder implementation of the AQMP can delay efforts to meet attainment deadlines for criteria pollutants and maintaining existing compliance with applicable air quality standards.

As a policy document, no development would be entitled or directly occur from adoption of the proposed Specific Plan. However, development would occur within the Planning Area as guided by the Specific Plan. As demonstrated in Section 4.1 (Land Use and Planning) of this Draft Supplemental EIR, the proposed Specific Plan would not conflict with or obstruct implementation of the Regional Comprehensive Plan and Guide or the AQMP. Further, future development would be subject to General Plan goals and policies related to cooperation with SCAQMD, SCAG, and County and regional agencies. The Specific Plan includes Implementation Actions related to mobility improvements to encourage transit use, and focuses new development in proximity to the Duarte Gold Line Station and bus routes, thereby reducing local vehicle miles traveled. The Specific Plan also encourages, and in some situations requires mixed-use development, resulting in further reductions in vehicle miles traveled. Impacts would remain less than significant.

Short-term and long range operation of development facilitated by the proposed Specific Plan would impact regional air quality levels on a cumulative basis. Impacts would remain significant and unavoidable.

As discussed in the General Plan EIR, SCAQMD recommends that a project's potential contribution to cumulative impacts should be assessed using the same significance criteria as those for project-specific impacts. As a result, individual development projects that generate construction-related or operational emissions that exceed SCAQMD-recommended daily thresholds for project-specific impacts would also cause a cumulatively considerable increase in emissions for those pollutants for which the Basin is in nonattainment. The General Plan EIR determined that long-range development emissions associated with General Plan buildout would exceed the daily thresholds. Although General Plan goals and policies would reduce the significance of these impacts, impacts would be significant and unavoidable.

As a policy document, no development would be entitled or directly occur from adoption of the proposed Specific Plan. However, development would occur within the Planning Area as guided by the Specific Plan. Future

development would be subject to environmental evaluation pursuant to CEQA upon application for entitlement permits. Project-specific daily and cumulative impacts would be analyzed on a project-by-project basis and mitigation would be implemented, if necessary. For purposes of this Supplemental EIR, Specific Plan buildout would generate construction-related and operational emissions that exceed SCAQMD-recommended daily thresholds for project-specific impacts that would cause a cumulatively considerable increase in emissions. Future development would be subject to General Plan and Specific Plan goals and policies that would reduce the significance of these impacts; however, impacts would remain significant and unavoidable.

Buildout of the proposed Specific Plan would impact regional air quality levels on a cumulative basis. Impacts would remain significant and unavoidable.

As noted in the General Plan EIR, SCAQMD neither recommends quantified analyses of cumulative construction or operational emissions, nor does it provide separate methodologies or thresholds of significance to be used to assess cumulative construction or operational impacts. Existing and General Plan buildout emissions that were calculated utilizing the URBEMIS 2002 model and provided in the General Plan EIR are summarized in Table 4.5-13 (General Plan Update Air Emissions [Citywide, 2007]). Table 4.5-13 indicates that air emissions for buildout of the General Plan Update exceed daily thresholds for ROG, NO_X, CO, and PM_{10}. As the Basin was in nonattainment for CO and ozone (both ROG and NO_X are precursors of ozone) in 2006, the General Plan Update would make a cumulative contribution to CO and ozone emissions. The General Plan EIR determined that impacts would be significant and unavoidable.

Table 4.5-13
General Plan Update Air Emissions (Citywide, 2007)

Project	Pollutant (pounds/day)				
	ROG	NO_X	CO	SO_X	PM_{10}
Area Source Emissions	729.25	167.12	275.43	1.88	0.96
Vehicle Emissions	928.00	794.75	9,217.76	14.73	2,242.34
Total Unmitigated Emissions	*1,657.25*	*961.87*	*9,493.19*	*16.62*	*2,243.36*
SCAQMD Threshold	55	55	550	150	150
Is Threshold Exceeded?	Yes	Yes	Yes	No	Yes

Source: City of Duarte. Duarte General Plan Update Environmental Impact Report. August 2007

As a policy document, no development would be entitled or directly occur from the adoption of the proposed Specific Plan. However, development would occur within the Planning Area as guided by the Specific Plan. Long-term criteria air pollutant emissions would result from the operation of potential development. Long-term emissions are categorized as area source emissions, energy demand emissions, and operational emissions. Operational emissions would result from automobile, truck, and other vehicle sources associated with daily trips to and from future development.

Pursuant to existing law, future development associated with buildout of the proposed Specific Plan would be required to prepare an air quality impact analysis for individual development projects where possible emissions could impact sensitive receptors. Such analyses would include project-specific mitigation measures, as appropriate. Therefore, future projects would be assessed on a case-by-case basis under the purview of the City.

Net emissions were calculated for buildout of the proposed Specific Plan utilizing the California Emissions Estimator Model (CalEEMod). SCAQMD daily thresholds are not intended to be used for program-level analysis and would apply to future development projects during required project-specific analyses. Net emissions are summarized in Table 4.5-14 (Proposed Specific Plan Air Emissions). Net emissions for PM_{10} and $PM_{2.5}$ would exceed SCAQMD daily thresholds. All emissions remain within total buildout emissions projected for the General Plan buildout. Therefore, implementation of the proposed Specific Plan would not result in increased impacts but would remain significant and unavoidable.

Table 4.5-14
Proposed Specific Plan Air Emissions (Planning Area, Future Build-out Conditions)

Emissions	Pollutant (pounds/day)					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area	94.37	5.66	415.94	0.92	46.69	46.68
Energy	2.30	20.63	15.56	0.13	1.59	1.59
Mobile	84.85	174.86	836.49	3.59	232.98	65.48
Total Buildout Emissions	*181.53*	*201.15*	*1,267.98*	*4.63*	*281.26*	*113.75*
Total Existing Emissions	*156.96*	*173.28*	*861.62*	*1.80*	*126.53*	*49.41*
Total Net Emissions	*24.57*	*27.87*	*406.36*	*2.83*	*154.73*	*64.34*
SCAQMD Threshold	55	55	550	150	150	55
Is Threshold Exceeded?	No	No	No	No	Yes	Yes

Greenhouse Gas Emissions

Buildout of the proposed Specific Plan would not generate direct or indirect greenhouse gas emissions that would contribute considerably to global climate change. Impacts would be less than significant with implementation of project design features and regulatory requirements.

The General Plan EIR determined a conclusion on the significance of greenhouse gas emissions could not be reached due to the uncertainty involved in predicting project operational impacts on greenhouse gas emissions and global climate change.

Development that occurs as a result of the implementation of the proposed Specific Plan would include activities that emit greenhouse gas emissions over the short and long term. While one project could not be said to cause global climate change, individual projects contribute cumulatively to greenhouse gas emissions that result in climate change. A summary of short- and long-term emissions and the analysis for each are included below.

Short-Term Emissions

Future development projects would result in short-term greenhouse gas emission from construction. Greenhouse gas emissions would be released by equipment for demolition, grading, paving, and building construction activities. GHG emissions would also result from worker and vendor trips to and from project sites and from demolition and soil hauling trips. Construction activities are short-term and cease to emit greenhouse gases upon completion, unlike operational emissions that are continuous year after year until operation of the use ceases. Because of this difference, SCAQMD recommends in its draft threshold to amortize construction emissions over a 30-year lifetime. This normalizes construction emissions so that they can be grouped with operational emissions in order to generate a precise project GHG inventory.

Typically, construction-related GHG emissions contribute unsubstantially (less than one percent) to a project's annual greenhouse gas emissions inventory, and mitigation for construction-related emissions is not effective in reducing a project's overall contribution to climate change, given how limited a portion construction emissions are of operational emissions. General Plan policies incorporate the principals of sustainability into land use planning and development processes to reduce greenhouse gas emissions consistent with State goals. As previously discussed, implementation of AB 32 and SB 375 through CARB's Scoping Plan and SCAG's RTP/SCS are designed to achieve the required reduction in greenhouse gas emissions. Analysis of the Specific Plan's consistency with and support of these plans is presented below. Short-term climate change impacts due to future construction activities would be less than significant.

Long-Term Emissions

Future development projects would result in continuous GHG emissions from mobile, area, and operational sources. Mobile sources, including vehicle trips to and from development projects, would result primarily in emissions of CO_2, with minor emissions of CH_4 and N_2O. The most significant GHG emission from natural gas usage would be methane. Electricity usage by future development and indirect usage of electricity for water and wastewater conveyance would result primarily in emissions of carbon dioxide. Disposal of solid waste would result in emissions of methane from the decomposition of waste at landfills coupled with CO_2 emissions from the handling and transport of solid waste. These sources combine to define the long-term greenhouse gas inventory for typical development projects.

Business-As-Usual Emissions

Table 4.5-15 (Specific Plan Buildout Year 2035 Business-as-Usual Greenhouse Gas Emissions) summarizes business-as-usual (BAU) greenhouse gas projections for Specific Plan buildout. Specific Plan buildout is anticipated to occur in the year 2036. Note that the CALEEMod does not calculate estimates for year 2036, therefore, year 2035 was used in the model. The emissions inventories are presented as metric tons of carbon dioxide equivalent (MTCO2E), meaning that all emissions have been weighted based on their Global Warming Potential (GWP) (a metric ton is equal to 1.102 US short tons). Mobile sources, natural gas, electricity, water demand, and solid waste generation were projected using CalEEMod default values. Buildout of the proposed Specific Plan would generate 49,999.67 MTCO2E annually under BAU conditions. BAU is defined as the emissions that would have occurred in the absence of the mandated reductions.

Table 4.5-15
Specific Plan Buildout Year 2035 Business-as-Usual Greenhouse Gas Emissions

Source	GHG Emissions (MT/YR)			
	CO_2	CH_4	N_2O	TOTAL*
Area Emissions	342.81	0.44	0.00	353.40
Energy Demand	11,722.98	0.43	0.15	11,777.83
Mobile Emissions	35,543.66	0.94	0.00	35,563.41
Solid Waste Disposal	422.77	24.99	0.00	947.46
Water/Wastewater Treatment/Conveyance	1,158.32	6.93	0.17	1,357.52
TOTAL	*49,190.54*	*33.72*	*0.33*	*49,999.67*

** MTCO2E/YR: metric tons of carbon dioxide equivalent per year*
Note: Slight variations may occur due to rounding

Greenhouse Gas Reduction Strategies

The proposed Specific Plan is designed to support the achievement of air quality goals, protect public health, and generally support AB 32 greenhouse gas reduction strategies through proposed the goals and implementation measures that will guide future development within its boundaries. Furthermore, regulatory requirements associated with the State CALGREEN requirements will further reduce greenhouse gas emissions. Greenhouse gas emissions reductions are summarized below as modeled using CalEEMod per the California Air Pollution Control Officers Association (CAPCOA) *Quantifying Greenhouse Gas Mitigation Measures* handbook. Each mitigation measure applied to CalEEMod is described below. The mitigation code included in parentheses correspond to CalEEMod mitigation measures.

- Increase Density (LUT-1) The increase in mixed-use development would result in an increase in jobs and housing within the Planning Area. Increased density reduces the distance people travel and provides greater options for their mode of travel. As discussed in Section 4.2 (Population and Housing) of this Supplemental EIR, the proposed Specific Plan will generate approximately 577 additional jobs and 1,036 residential units. With an increase of 577 jobs and 1,036 residential units in the 54.96-acre Planning Area,

build-out of the Specific Plan would increase overall employment density by 10.50 jobs per acre and housing density by 18.85 units per acre.

- Increase Diversity (LUT-3) The proposed Specific Plan supports higher-density, mixed-use development in an area currently characterized by single- or two-story separated land uses. Having different types of land uses near one another can decrease vehicle miles traveled (VMT) since trips between land use types are shorter and may be accommodated by non-auto modes of transport.[13] The increase in diversity is supported by the proposed Specific Plan, which includes a mix of uses including restaurants, retail, residential, civic, office, and hotel uses.

- Increase Transit Accessibility (LUT-5) The proposed Specific Plan and associated increase in population and employment densities would result in an increase in the number of people with access to transit facilities. The use of transit reduces vehicle miles traveled (VMT). Foothill Transit operates Routes 187, 272, and 494 on Huntington Drive. The City of Duarte operates a free, fixed-route bus system throughout the City. The new Metrolink Gold line light rail station located approximately 0.25 miles south of the Planning Area opened in March 2016.

- Improve Pedestrian Network (SDT-1) The proposed Specific Plan supports pedestrian mobility both within the Planning Area and as it connects to the surrounding area. Providing pedestrian accessibility within the Planning Area supports walking instead of driving and thereby reduces VMT.[14] The Specific Plan supports mixed-use developments and public open spaces that would provide places to sit, gather, enhance pedestrian circulation, and host community events. In addition, pedestrians would be able to move efficiently through accessible and walkable pedestrian passageways located mid-block to provide convenient access.

- Energy Efficiency (BE-1) New California buildings must be designed to meet the building energy efficiency standards of Title 24, also known as the California Building Standards Code. CalEEMod defaults assume compliance with 2008 California Building Energy Efficiency Standards. Emissions associated with compliance with 2008 energy efficiency standards are accounted for under BAU conditions above. According to the Impact Analysis on California's 2013 *Building Energy Efficiency Standards* report prepared by the California Energy Commission, compliance with 2013 standards reduces electricity use by 23.3 percent compared to 2008 standards.[15] The model was adjusted to account for a 23.3 percent exceedance of 2008 Title 24 efficiency standards.

- Install Low-Flow Water Fixtures (WUW-1) The proposed Specific Plan supports the use of green construction methods and technologies in future development. This is consistent with the recent California Building Code (CBC) CALGREEN sustainability requirements that went into effect in January 2011. Based on the requirements of CBC, all future development is assumed to include low-flow bathroom faucets, kitchen faucets, toilets, and showers. Use of low-flow fixtures directly reduces water demand and indirectly reduces the energy required to transport water to the Planning Area.

- Institute Recycling Services (SW-1) Pursuant to the State *Integrated Waste Management Act* (AB 939) and the mandatory commercial recycling (California Code of Regulations Title 14, Division 7, Chapter 9.1) requirement of AB 32 (effective May 2012), future projects are required to recycle a minimum of 50 percent of their solid waste. Reduction factors associated with the recycling of 50 percent of solid waste have been applied to CalEEMod. Recycling helps reduce GHG emissions by reducing solid waste transportation demand and decomposition of solid waste in landfills.

Greenhouse Gas Inventory

Table 4.5-16 (Greenhouse Gas Emissions Reduced Inventory) summarizes the greenhouse gas inventory with CAPCOA strategies, and with regulatory requirements incorporated. CAPCOA strategies and regulatory

requirements would reduce greenhouse gas emissions by 16,187.19 MTCO2E per year from BAU Conditions, a 32.37 percent reduction. The proposed Specific Plan would meet the minimum threshold of a 15 percent reduction performance standard from BAU conditions and would therefore result in less than significant impacts.

Table 4.5-16
Greenhouse Gas Emissions Reduced Inventory

Source	GHG Emissions (MT/YR)			
	CO_2	CH_4	N_2O	TOTAL*
Area Emissions	342.81	0.44	0.00	353.40
Energy Demand	10,775.73	0.40	0.13	10,825.87
Mobile Emissions	21,000.39	0.57	0.00	21,012.46
Solid Waste Disposal	211.39	12.49	0.00	473.73
Water/Wastewater Treatment/Conveyance	987.49	5.55	0.14	1,147.00
TOTAL	*33,317.80*	*19.45*	*0.28*	*33,812.48*

** MTCO2E/YR: metric tons of carbon dioxide equivalent per year*
Note: Slight variations may occur due to rounding

The proposed project is consistent with the State Scoping Plan in support of the California Global Warming Solutions Act. Impacts would be less than significant.

The General Plan EIR determined that the General Plan was in conformance with measures and strategies recommend by the CARB and the CAT to help reduce global climate impacts. However, the General Plan EIR noted that a conclusion on the significance of greenhouse gas emissions could not be reached due to the uncertainty involved in predicting project operational impacts on greenhouse gas emissions and global climate change.

CARB's Scoping Plan identifies strategies to reduce California's greenhouse gas emissions in support of AB 32. Many of the strategies identified in the Scoping Plan are not applicable at the project level, such as long-term technological improvements to reduce emissions from vehicles. Some measures are applicable and supported by the proposed Specific Plan, such as energy efficiency. Finally, while some measures are not directly applicable, the proposed Specific Plan would not conflict with their implementation. Reduction measures are grouped into 18 action categories, as follows:

1. California Cap-and-Trade Program Linked to Western Climate Initiative Partner Jurisdictions. Implement a broad-based California cap-and-trade program to provide a firm limit on emissions. Link the California cap–and-trade program with other Western Climate Initiative Partner programs to create a regional market system to achieve greater environmental and economic benefits for California.[16] Ensure California's program meets all applicable AB 32 requirements for market-based mechanisms. These programs include capping emissions from electricity generation, industrial facilities, and broad scoped fuels. While the proposed Specific Plan does not plan for these facilities, if one were to be developed within the Planning Area, it would be subject to these State requirements, and the proposed Specific Plan would not interfere with their implementation.

2. California Light-Duty Vehicle Greenhouse Gas Standards. Implement adopted Pavley standards and planned second phase of the program. Align zero-emission vehicle, alternative and renewable fuel, and vehicle technology programs with long-term climate change goals. This is not applicable as this is a statewide measure establishing vehicle emissions standards.

3. Energy Efficiency. Maximize energy efficiency building and appliance standards, and pursue additional efficiency efforts including new technologies, and new policy and implementation mechanisms. Pursue comparable investment in energy efficiency from all retail providers of electricity in California (including both investor-owned and publicly owned utilities). The Specific Plan promotes energy efficient building design, as

well as implementation of existing building codes regulating energy, water, and waste efficiency, consistent with current CALGREEN requirements, and would thus be consistent and not interfere with this program.

4. Renewables Portfolio Standards. Achieve 33 percent renewable energy mix statewide by 2020. This establishes the minimum statewide renewable energy mix and is not applicable at a City level or below for implementation. The proposed Specific Plan would not interfere with the implementation of this program.

5. Low Carbon Fuel Standard. Develop and adopt the Low Carbon Fuel Standard. This is not applicable to a City as this establishes reduced carbon intensity of transportation fuels.

6. Regional Transportation-Related Greenhouse Gas Targets. Develop regional greenhouse gas emissions reduction targets for passenger vehicles. As explained previously, the proposed Specific Plan would not conflict with, and would not obstruct implementation of, the Regional Plan and Guide and the AQMP. The proposed Specific Plan includes policies to reduce vehicle miles traveled by encouraging mixed-use, infill, an improved jobs-housing balance, and alternative modes of transportation.

7. Vehicle Efficiency Measures. Implement light-duty vehicle efficiency measures. This is not applicable to a City as this identifies measures such as minimum tire-fuel efficiency, lower friction oil, and reduction in air conditioning use.

8. Goods Movement. Implement adopted regulations for the use of shore power for ships at berth. Improve efficiency in goods movement activities. Identified measures to improve goods movement efficiencies such as advanced combustion strategies, friction reduction, waste heat recovery, and electrification of accessories. The proposed Specific Plan does not plan for facilities such as distribution warehouses that are associated with goods movement. The proposed Specific Plan would not interfere with the eventual implementation of these measures.

9. Million Solar Roofs Program. Install 3,000 megawatts of solar-electric capacity under California's existing solar programs. Sets goals for use of solar systems throughout the State. The proposed Specific Plan would not interfere with, but instead would directly support installation of, alternative energy sources through its policies and programs.

10. Medium- and Heavy-Duty Vehicles. Adopt medium- (MD) and heavy-duty (HD) vehicle efficiencies. Aerodynamic efficiency measures for HD trucks pulling trailers 53-feet or longer that include improvements in trailer aerodynamics and use of rolling resistance tires were adopted in 2008 and went into effect in 2010.[17] Future, yet to be determined improvements, include hybridization of MD and HD trucks. The proposed Specific Plan would not result in development of industrial uses that utilize truck fleets. The proposed Specific Plan would not interfere with implementation of this program.

11. Industrial Emissions. Require assessment of large industrial sources to determine whether individual sources within a facility can cost-effectively reduce greenhouse gas emissions and provide other pollution reduction co-benefits. Reduce greenhouse gas emissions from fugitive emissions from oil and gas extraction and gas transmission. Adopt and implement regulations to control fugitive methane emissions and reduce flaring at refineries. These measures are applicable to large industrial facilities (>500,000 MTCO2E/YR) and other intensive uses such as refineries. While the proposed Specific Plan does not plan for these facilities, if one were to be developed within the Planning Area, it would be subject to these State requirements, and the proposed Specific Plan would not interfere with their implementation.

12. High Speed Rail. Support implementation of a high speed rail system. This is not applicable as no high-speed rail facilities are planned within the Planning Area.

13. Green Building Strategy. Expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings. The proposed Specific Plan promotes energy efficient building design as well as implementation of existing building and other codes regulating energy, water, and waste efficiency consistent with current CALGREEN requirements and would thus be consistent and not interfere with this program.

14. High Global Warming Potential Gases. Adopt measures to reduce high warming global potential gases. The proposed Specific Plan would not directly result in generation of high global warming potential gases, and would not interfere with implementation of any future changes in air conditioning, fire protection suppressant, and other emission requirements.

15. Recycling and Waste. Reduce methane emissions at landfills. Increase waste diversion, composting and other beneficial uses of organic materials, and mandate commercial recycling to move toward zero-waste. The proposed Specific Plan is consistent since implementing development would be required to recycle a minimum of 50 percent from construction activities per State requirements.

16. Sustainable Forests. Preserve forest sequestration and encourage the use of forest biomass for sustainable energy generation. The 2020 target for carbon sequestration is 5 million MTCO2E/YR. This is not applicable, as the Planning Area does not contain any areas defined as forest.

17. Water. Continue efficiency programs and use cleaner energy sources to move and treat water. The proposed Specific Plan is consistent since implementing development would include use of low-flow fixtures and water efficient landscaping per State requirements.

18. Agriculture. In the near-term, encourage investment in manure digesters and at the five-year Scoping Plan update determine if the program should be made mandatory by 2020. The proposed Specific Plan does not contain any agricultural land use designations, and any policies related to agriculture land uses would not be applicable.

As summarized above, the proposed Specific Plan would not conflict with the provisions of the Scoping Plan. The proposed Specific Plan supports four of the action categories through energy efficiency, green building, recycling/waste, and water conservation through General Plan goals and policies. Impacts would less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significant with Mitigation Incorporated

Impacts related to short-term construction emissions, carbon monoxide hotspots, and consistency with regional plans would remain less than significant. Impacts related to greenhouse gas emissions would be less than significant. Impacts related to mobile and stationary source emissions and cumulative air quality impacts would remain significant and unavoidable with implementation of General Plan goals and implementation measures.

Significant Unavoidable Impacts

The following air quality impacts would remain significant and unavoidable following implementation of the proposed Specific Plan:

- Mobile and Stationary Source Emissions (Reactive Organic Gasses);
- Short-Term Cumulative Impacts; and

- Cumulative Impacts

All other impacts are would be less than significant prior to or after implementation of General Plan policies and implementation measures.

---

1 South Coast Air Quality Management District. CEQA Air Quality Handbook. 1993
2 United States Environmental Protection Agency. Sulfur Dioxide. http://www.epa.gov/airquality/sulfurdioxide/ [August 2014]
3 Western Regional Climate Center. Period of Record Monthly Climate Summary: Azusa City PK FC 143, California (040410). http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca0410 [January 22, 2016]
4 U.S. Geological Survey. Azusa Quadrangle. California-Los Angeles Co. 7.5-Minute Series. 1995
5 South Coast Air Quality Management District. Historical Data by Year. 2012
6 South Coast Air Quality Management District. Historical Data by Year. 2013
7 South Coast Air Quality Management District. Historical Data by Year. 2014
8 United States Environmental Protection Agency. Greenhouse Gas Emissions. www.epa.gov/climatechange/emissions/index.html [September 28, 2010]
9 Intergovernmental Panel on Climate Change. Changes in Atmospheric Constituents and in Radiative Forcing (Working Group I). Forth Assessment Report. 2007
10 Environmental Protection Agency. Enviromapper. http://www.epa.gov/emefdata/em4ef.home [January 22, 2016]
11 California Climate Action Team. Biennial Report. April 2010
12 California Building Standards Commission. California Code of Regulations Title 24. California Green Building Standards Code. 2010
13 California Air Pollution Control Officers Association. Quantifying Greenhouse Gas Mitigation Measures. August 2010
14 Ibid
15 California Energy Commission. Impact Analysis California's 2013 Building Energy Efficiency Standards. July 2013
16 California Air Resources Board. California GHG Emissions – Forecast (2002-2020). October 2010
17 California Air Resources Board. Scoping Plan Measures Implementation Timeline. October 2010

This Page Intentionally Left Blank

This section describes the existing and future noise environment within the City of Duarte and evaluates whether the proposed Specific Plan would cause a substantial change in noise impacts as evaluated under the certified General Plan EIR.

The Initial Study prepared for the proposed Town Center Specific Plan determined that the City is not within the noise contours of any public airport or private airstrip. The proposed Specific Plan would not expose people residing or working within two miles of a public airport or in the vicinity of a private airstrip to excessive noise levels. Therefore, these impact have not been analyzed in this Supplemental EIR.

Defining Noise

"Sound" is a vibratory disturbance created by a moving or vibrating source and is capable of being detected. "Noise" is defined as sound that is loud, unpleasant, unexpected, or undesired and may therefore by classified as a more specific group of sounds. The effects of noise on people can include general annoyance, interference with speech communication, sleep disturbance and, in the extreme, hearing impairment.

The Production of Sound

Sound has three properties: amplitude and amplitude variation of the acoustical wave (loudness), frequency (pitch), and duration of the noise. Despite the ability to measure sound, human perceptibility is subjective, and the physical response to sound complicates the analysis of its impact on people. People judge the relative magnitude of sound sensation in subjective terms such as "noisiness" or "loudness."

Measuring Sound

Loudness (sound pressure level) is described in logarithmic units of ratios of sound pressures to a reference pressure, squared. These units are called bels. To provide a finer description of sound, a bel is subdivided into 10 decibels, abbreviated dB. Since decibels are logarithmic units, sound pressure levels cannot be added or subtracted by ordinary arithmetic means. For example, if one automobile produces a sound pressure level of 70 dB when it passes an observer, two cars passing simultaneously will not produce 140 dB. In fact, they would combine to produce 73 dB. This same principle can be applied to other traffic quantities as well. In other words, doubling the traffic volume on a street or the speed of the traffic will increase the traffic noise level by three dB. Conversely, halving the traffic volume or speed will reduce the traffic noise level by three dB. A three dB change in sound is the beginning at which humans generally notice a *barely perceptible* change in sound and a five dB change is generally *readily perceptible.*[1] In addition to sound pressure levels, the frequency or pitch of a sound also has a substantial effect on how humans will respond.

The A-weighted sound pressure level (dB[A]) is the sound pressure level, in decibels, as measured on a sound level meter using the A-weighted filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound, placing greater emphasis on those frequencies within the sensitivity range of the human ear. Table 4.6-1 (Sound Levels and Human Response) was prepared by the previously certified General Plan EIR and provides examples of various sound levels in different environments.

Table 4.6-1
Sound Levels and Human Response

Noise Source	dB(A) Noise level	Response
	150	
Carrier Jet Operation	140	Harmfully loud
	130	Pain threshold
Jet takeoff (200 feet; thence) Discotheque	120	
Unmuffled motorcycle, auto horn (3 feet; thence) rock'N roll band riveting machine	110	Maximum vocal effort Physical discomfort
Loud power mower, jet takeoff (2000 feet; thence) garbage truck	100	Very annoying hearing damage (steady 8-hour exposure)
Heavy truck (50 feet; thence) pneumatic drill (50 feet; thence)	90	
Alarm clock, freight train (50 feet; thence) vacuum cleaner (10 feet; thence)	80	Annoying
Freeway traffic (50 feet; thence)	70	Telephone use difficult
Dishwashers air conditioning unit (20 feet; thence)	60	Intrusive
Light auto traffic (100 feet; thence)	50	Quiet
Living room bedroom	40	
Library soft whisper (15 feet; thence)	30	Very quiet
Broadcasting studio	20	
	10	Just audible
	0	Threshold of hearing

Source: Duarte General Plan Update EIR, 2007.

Standards for Noise Equivalent

Noise consists of pitch, loudness, and duration; therefore, a variety of methods for measuring noise have been developed. According to the California General Plan Guidelines for Noise Elements, the following are common metrics for measuring noise:[2]

L_{eq} (Equivalent Energy Noise Level): The sound level corresponding to a steady-state sound level containing the same total energy as a time-varying signal over given sample periods. L_{eq} is typically computed over 1-, 8-, and 24-hour sample periods.

CNEL (Community Noise Equivalent Level): The average equivalent A-weighted sound level during a 24-hour day, obtained after addition of five decibels to sound levels in the evening from 7:00 PM to 10:00 PM and after addition of ten decibels to sound levels in the night from 10:00 PM to 7:00 AM.

L_{dn} (Day-Night Average Level): The average equivalent A-weighted sound level during a 24-hour day, obtained after the addition of ten decibels to sound levels in the night after 10:00 PM and before 7:00 AM.

CNEL and L_{dn} are utilized for describing ambient noise levels because they account for all noise sources over an extended period of time and account for the heightened sensitivity of people to noise during the night. L_{eq} is better utilized for describing specific and consistent sources because of the shorter reference period.

Federal and State agencies have established noise and land use compatibility guidelines that use averaging approaches to noise measurement. The State Department of Aeronautics and the California Commission on Housing and Community Development have adopted the community noise equivalent level (CNEL).

Distance from a Noise Source

For each doubling of distance from a point noise source, the sound level will decrease by 6 dBA. In other words, if a person is 100 feet from a machine, and moves to 200 feet from that source, sound levels will drop approximately 6 dBA. For each doubling of distance from a line source, like a roadway, noise levels are reduced by 3 to 5 decibels, depending on the ground cover between the source and the receiver.

Noise barriers can provide approximately a 5 dBA CNEL noise reduction (additional reduction may be provided with a barrier of appropriate height, material, location, and length). A row of buildings provides up to 5 dBA CNEL noise reduction with a 1.5 dBA CNEL reduction for each additional row up to a maximum reduction of approximately 10 dBA. The exact degree of noise attenuation depends on the nature and orientation of the structure and intervening barriers.

Vibration and Groundborne Noise

Vibration is the movement of mass over time. It is described in terms of frequency and amplitude and unlike sound; there is no standard way of measuring and reporting amplitude. Vibration can be described in units of velocity (inches per second) or discussed in decibel (dB) units in order to compress the range of numbers required to describe vibration. Vibration impacts to buildings are generally discussed in terms of peak particle velocity (PPV) that describes particle movement over time (in terms of physical displacement of mass). For purposes of this analysis, PPV will be used to describe all vibration for ease of reading and comparison. Vibration can impact people, structures, and sensitive equipment.[3] The primary concern related to vibration and people is the potential to annoy those working and residing in the area. Vibration with high enough amplitudes can damage structures (such as crack plaster or destroy windows). Groundborne vibration can also disrupt the use of sensitive medical and scientific instruments such as electron microscopes. Common sources of vibration within communities include construction activities and railroads.

Groundborne vibration generated by construction projects is usually highest during pile driving, rock blasting, soil compacting, jack hammering, and demolition-related activities. Next to pile driving, grading activity has the greatest potential for vibration impacts if large bulldozers, large trucks, or other heavy equipment are used.

Environmental Setting

Duarte's noise environment is dominated by vehicular traffic, including vehicular-generated noise along Interstate 210 (I-210), as well as primary and major arterials. Major roadways that serve the City and the Planning Area in particular include Huntington Drive, Buena Vista Street, Highland Avenue, and Duarte Road.

In addition, a number of other sources contribute to the total noise environment. These noise sources include construction activities, power tools and gardening equipment, loudspeakers, auto repair, radios, children playing, and dogs barking.

The previously certified General Plan EIR analyzed the existing noise environment by taking measurements at various locations in the City to reflect ambient noise levels, primarily in the vicinity of sensitive uses (e.g., schools, parks, residences, churches, and hospitals). Existing traffic volumes were also modeled throughout the City to provide projected vehicular-generated noise levels.

Noise Sensitive Receptors

Human response to noise varies widely depending on the type of noise, time of day, and sensitivity of the receptor. The effects of noise on humans can range from temporary or permanent hearing loss to mild stress and annoyance due to such things as speech interference and sleep deprivation. Prolonged stress, regardless of the cause, is known to contribute to a variety of health disorders.

The General Plan EIR took inventory of some noise sensitive receptors in the City that can be affected by excess noise levels. Noise sensitive land uses in Duarte include institutional uses such as places of worship, hospitals, schools, and libraries, parks, and residential uses.

Currently, specific sensitive receptors within the Planning Area and within one-quarter mile of the Planning Area include residential uses, places of worship, convalescent centers, retirement homes, parks, and three schools. Sensitive receptors located in the Planning Area and within one-quarter mile of the Planning Area are listed in Table 4.6-2 (Sensitive Receptors).

Table 4.6-2
Sensitive Receptors

Receptor	Location
Within Planning Area	
First Baptist Church of Duarte	2200 East Huntington Drive, Duarte, CA 91010
Grace Fellowship Church	1551 East Huntington Drive, Duarte, CA 91010
Monrovia Convalescent Hospital	1220 Huntington Drive, Duarte, CA 91010
Duarte Public Library	1301 Buena Vista Street, Duarte, CA 91010
Andres Duarte Terrace and Andres Duarte Terrace II	1730 East Huntington Drive, Duarte, CA 91010
Royal Terrace Health Care	1340 Highland Avenue, Duarte, CA 91010
Sports Park	1401 Central Avenue, Duarte, CA 91010
Within ¼ Mile of Planning Area	
Little Scholars Montessori School	1410 Highland Avenue, Duarte, CA 91010
Duarte High School	1565 E. Central Avenue, Duarte, CA 91010
Northview Intermediate School	1401 Highland Avenue, Duarte, CA 91010
The Manor at Santa Teresita Hospital	819 Buena Vista Street, Duarte, CA 91010
Westminster Gardens	1420 Santo Domingo Avenue, Duarte, CA 91010

Ambient Noise

Ambient noise was quantified and measured for the General Plan EIR in March 2006. The noise measurement sites were representative of typical existing noise exposure within and immediately adjacent to sensitive uses within the City. Based on the General Plan EIR's findings, the City of Duarte experiences occasional high levels of noise that exceed the established criteria in the Municipal Code. Primary sources of noise are traffic generated along Huntington Drive and the I-210. During the 2006 measurements, noise levels were exceeded where there were higher densities of people and activity, such as Duarte High School and the City of Hope National Medical Center. The majority of measurements in residential neighborhoods did not exceed the established criteria. Noise levels from the 2006 study are listed in Table 4.6-3 (Ambient Noise Levels, 2006).

Table 4.6-3
Ambient Noise Levels (2006)

Site	Location	Leq (dBA)	Time
March 22, 2006			
1	Duarte High School	63.9	10:40 AM
2	Huntington Drive	68.7	11:17 AM
3	Duarte Road	65.6	1:45 PM
4	City of Hope Hospital – National Medical Center	59.6	3:00 PM
March 23, 2006			
5	Huntington Drive	70.6	12:10 PM
6	Huntington Drive	71.1	12:43 PM
7	Westminster Gardens - A Retirement Community	58.2	2:00 PM

Source: Duarte General Plan Update EIR, 2007. Select noise measurement locations listed that are located in proximity to the Planning Area.

New short-term (15-minute) noise measurements at five locations within the Specific Plan Planning Area were conducted on June 3, 2016. An American National Standards Institute (ANSI Section SI4 1979, Type 1) Larson Davis model LxT sound level meter was used. The noise meter was programmed in "slow" mode to record noise levels in A-weighted form.

Ambient noise levels at the study locations ranged from 62.7 to 77.1 dBA CNEL. Ambient noise levels are a composite of noise from all sources, near and far. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location. Ambient noise levels are presented in Table 4.6-4 (Ambient Noise Levels, 2016).

Vehicular traffic along Buena Vista Street, Huntington Drive, Highland Avenue, and I-210 was the dominant noise source. Other noise sources included human activity and operation of construction equipment at the property located at the northwestern corner of Buena Vista Street and Huntington Drive.

Table 4.6-4
Ambient Noise Levels (2016)

Site	Location	Leq (dBA)	Time
1	Buena Vista north of the intersection of Buena Vista & Huntington	62.7	11:03 AM – 11:18 AM
2	Southeast corner of Huntington and Brycedale	65.9	11:23 AM – 11:38 AM
3	Northeast corner of Huntington & Highland	77.1	11:41 AM – 11:56 AM
4	Central east of the intersection of Highland & Central	65.6	12:02 PM – 12:17 PM
5	Northeast corner of Buena Vista & Central	70.4	12:20 PM – 12:35 PM

Computer Modeling

In order to project roadway noise levels throughout the City, the analysis included in the General Plan EIR utilized the Federal Highway Administration's Highway Noise Prediction Model (FHWA RD-77-108) together with several roadway and site parameters.

Traffic noise levels projected in this Supplemental EIR were computed using Version 2.5 of the Traffic Noise Model (TNM) published by the Federal Highway Administration (FHWA). The model uses traffic volume, vehicle mix, vehicle speed, and roadway geometry to compute noise levels for each of the time periods studied, resulting in a series of "noise contours." Noise contours are a series of lines that illustrate how noise levels decrease as the distances from a primary noise source increase. For Duarte, the contours are developed by calculating distances to the 60, 65, and

70 CNEL noise levels, assuming a reduction of 6 dB with every doubling of distance. For the roadway analysis, worst-case assumptions about future motor vehicle traffic and noise levels have been made and were incorporated in the noise model. Specifically, calculations do not assume natural or artificial shielding, nor do they assume noise deflection from existing or proposed structures or topography.

Existing Traffic Noise

Traffic noise levels can be reliably predicted using formulas that take into account vehicular traffic volume, and speed, while accounting for the proportion of trucks The General Plan EIR developed noise contours for all the primary and major arterials in Duarte, as well as the I-210. Generally, noise levels were greatest adjacent to the I-210. The closer to the I-210 or major arterials, the greater the noise levels were. The further away from the I-210 or major arterials, the lower the noise levels were.

In an effort to reduce the effects of roadway noise on the local population, soundwalls have been constructed adjacent to the I-210. Phase One of the 210 Freeway Soundwall Project was completed in December 2002 by Caltrans.

The discussion below explains how noise contours are used to define noise impacts from traffic.

60 CNEL

The 60 CNEL contour defines the "noise study zone." The noise environment for any proposed noise-sensitive land use (for example, single- or multi-family residences, hospitals, schools, or churches) within this zone should be evaluated on a project-specific basis. As a result, projects may require particular construction materials or techniques (e.g., noise-insulating windows or indoor air circulation systems) to meet City or State (Title 24) standards (whichever is most stringent).

65 CNEL

The 65 CNEL contour defines the "noise mitigation zone." Within this contour, new or expanded noise-sensitive developments should be permitted only if appropriate mitigation measures, such as barriers or additional sound insulation, are included to achieve City or State noise standards (whichever is most stringent).

Existing Noise Contours

The noise exposure study conducted as part of the General Plan EIR is summarized in Table 4.6-5 (Noise Exposure Adjacent to Nearby Roadways [2006]).

Table 4.6-5
Noise Exposure Adjacent to Nearby Roadways (2006)

Roadway Segment	ADT[1]	dBA @ 100 Feet from Roadway Centerline	Noise Contour (distance from centerline)		
			60 CNEL	65 CNEL	70 CNEL
Arterial Roads					
Huntington Drive					
Between Mountain Avenue and Buena Vista Street	26,530	67.1	621	196	62
Between Buena Vista Street and Highland Avenue	23,810	66.6	557	176	56
Between Highland Avenue and Bradbourne Avenue	26,460	67.1	620	196	62
Between Bradbourne Avenue and Mount Olive Drive	28,640	67.4	672	212	67
Between Mount Olive Drive and Las Lomas Road	26,750	67.1	627	198	63
Huntington Drive East of Las Lomas Road	26,170	64.0	221	103	48
Duarte Road					
Between Mountain Avenue and Buena Vista Street	11,950	63.8	280	89	28
Buena Vista Street to Highland Avenue	12,740	64.0	299	94	30
Mountain Avenue					
Between Huntington Drive and I-210 Freeway	24,500	65.6	423	134	42
Between I-210 Freeway and Duarte Road	31,040	66.7	535	169	54
Mountain Avenue South of Duarte Road	3,550	54.6	48	22	10
Buena Vista Street					
Between Royal Oaks Road and Huntington Drive	11,310	63.5	265	84	26
Between Huntington Drive and I-210 Freeway	18,860	65.7	442	140	44
Between I-210 Freeway and Duarte Road	15,170	61.8	154	71	33
Buena Vista Street South of Duarte Road	7,860	58.0	81	38	17
Highland Avenue					
Between Royal Oaks Road and Huntington Drive	3,750	57.7	65	20	6
Between Huntington Drive and I-210 Freeway	11,480	63.8	269	85	27
Between I-210 Freeway and Duarte Road	9,650	60.1	114	53	25
Collector Streets					
Royal Oaks Road					
Royal Oaks Road West of Buena Vista Street	10,650	62.2	184	58	18
Between Buena Vista Street to Highland Avenue	8,550	58.3	86	40	18
Between Highland Avenue and Bradbourne Avenue	7,610	57.9	79	37	17
Between Bradbourne Avenue and Mount Olive Drive	7,870	58.0	81	38	17
Between Mount Olive Drive and Las Lomas Road	10,380	59.2	97	45	21
Royal Oaks Road East of Las Lomas Road	8,000	58.1	82	38	18
Royal Oaks Road West of Encanto Parkway	1,400	50.5	26	12	6
Central Avenue					
Central Avenue West of Buena Vista Street	3,880	56.5	48	15	5
Central Avenue East of Buena Vista Street	12,200	61.5	150	48	15
Central Avenue West of Highland Avenue	3,550	56.2	44	14	4
Between Highland Avenue and Bradbourne Avenue	7,100	59.2	88	28	9
Bradbourne Avenue					
Between Royal Oaks Drive and Huntington Drive	1,260	51.0	118	55	25
Mount Olive Drive					
Between Royal Oaks Road to Huntington Drive	10,230	60.4	118	55	25
Mount Olive Drive South of Huntington Drive	23,870	63.6	208	97	45

Las Lomas Road					
Las Lomas Road North of Royal Oaks Drive	3,200	52.6	36	17	8
Between Royal Oaks Drive and Huntington Drive	9,440	58.4	91	42	20
Las Lomas Road South of Huntington Drive	4,080	55.1	52	24	11
Source: Duarte General Plan Update EIR, 2007					

Based on (1) on average daily traffic (ADT) volumes and (2) 2015 traffic volumes provided by the Specific Plan traffic study, existing noise exposure is summarized in Table 4.6-6 (Existing Noise Exposure Adjacent to Nearby Roadways [2015]). The traffic study calculated traffic volumes during the AM and PM peak hours. The PM peak hour is typically estimated to make up approximately eight percent of ADT.[4] PM peak hour volumes included in the traffic study (Appendix D) were scaled up to estimate ADT.

Table 4.6-6
Existing Noise Exposure Adjacent to Nearby Roadways (2015)

Roadway Segment	ADT[1]	dBA @ 100 Feet from Roadway Centerline	Noise Contour (distance from centerline - feet)		
			60 CNEL	65 CNEL	70 CNEL
Huntington Drive					
West of Mountain Way	8,400	69.3	292	164	108
Between Mountain way & Buena Vista Street	28,663	74.9	556	313	176
Between Buena Vista Street & Cotter Avenue	27,550	74.6	537	302	170
Between Cotter Avenue & Highland Avenue	25,413	74.4	525	295	166
Between Highland Avenue & I-605	28,525	74.9	556	313	176
East of I-605	21,825	73.5	473	266	150
Central Avenue					
West of Buena Vista Street	2,013	63.1	143	124	221
Between Buena Vista Street & I-210 WB Off Ramp	11,163	69.6	302	170	105
Between I-210 WB Off Ramp & Highland Avenue	7,050	68.8	275	155	115
East of Highland Avenue	7,813	69.0	282	158	112
Mountain Avenue					
North of Huntington Drive	6,938	68.5	266	150	119
South of Huntington Drive	10,763	70.4	331	186	105
Buena Vista Street					
North of Huntington Drive	5,175	66.3	207	116	153
Between Huntington Drive & Central Avenue	15,363	71.0	355	200	112
Between Central Avenue & I-210	22,675	71.8	389	219	123
South of I-210	6,350	67.1	226	127	140
Cotter Avenue					
North of Huntington Drive	1,075	58.1	124	221	394
Highland Avenue					
North of Huntington Drive	2,225	62.6	135	132	234
Between Huntington Drive & Central Avenue	8,888	68.6	269	151	117
South of Central Avenue	2,538	63.2	145	123	219
Mt. Olive Drive					
North of Huntington Drive	3,738	63.6	151	117	209

Source: MIG, 2016
1 The PM peak hour provided in traffic study is estimated to make up approximately eight percent of ADT.

Stationary Noise Sources

Commercial and industrial land uses located near residential areas in Duarte generate occasional noise impacts. According to the General Plan EIR, the primary noise sources associated with these facilities are caused by delivery trucks, air compressors, generators, outdoor loudspeakers, and gas venting. Other significant stationary noise sources in the City include noise from construction activity, street sweepers, and gas-powered leaf blowers.

Irwindale Rock Quarries

Irwindale is located approximately seven miles southwest of Duarte and is home to 17 rock quarries; however, eight of the quarries are dormant. According to the General Plan EIR, using 2006 police records, no noise complaints had been made regarding any of the quarries.

No rock quarry is located in the Planning Area.

Azusa Rock Company

The Azusa Rock Company, which is now a part of Vulcan Materials Company, is a 350-acre rock pit on the border of Duarte and its easterly neighbor, Azusa. Despite the company's extensive mining activities, truck traffic typically is not a major noise source, since the material removed from the rock pit is placed on a conveyor belt, transported to the reliance plant, then crushed into sand and gravel.

The Azusa Rock Company is not located within the Planning Area.

San Gabriel Valley Gun Club

The San Gabriel Valley Gun Club is located in the northeast corner of the City of Duarte. The outdoor rifle and pistol ranges are open from 8:00 AM to 4:00 PM Tuesday through Friday, and 8:00 AM to 4:45 PM on Saturday and Sunday, with 86 covered shooting positions. The air rifle and air pistol range has the same hours of operation as the rifle and pistol range, and has 20 positions available. In addition to the rifle and pistol ranges, the club also offers four shotgun fields that operate from 10:00 AM to 3:30 PM Tuesday, Wednesday and Friday, and from 8:30 AM to 4:15 PM on Saturday and Sunday. The San Gabriel Valley Gun Club is nestled within the bottom of the San Gabriel Mountains and is approximately two miles from any residential areas in Duarte.

The San Gabriel Valley Gun Club is not located within the Planning Area.

Duarte Gold Line Metro Station

The Duarte Gold Line Metro Station opened on March 5, 2016. The station is approximately 500 feet west of Highland Avenue, south of the Planning Area. The surrounding uses include commercial and industrial buildings to the north and the San Gabriel Flood Control area to the south. In the General Plan EIR noise study (2006), an overnight noise measurement of 67 Leq was recorded.

According to the Duarte Station Specific Plan, three industrial buildings that occupy 19 acres directly adjacent to the Duarte Metro Gold Line Station have been approved to become a transit-oriented development of mixed-use, open space, and high density residential development.

The Duarte Gold Line Metro Station is not located within the Planning Area.

Irwindale Speedway

As of 2016, the Irwindale Speedway is scheduled to be demolished and replaced with an outlet mall. The speedway is not located within the Planning Area.

Regulatory Setting

Federal Regulations

Federal Noise Control Act of 1972

The U.S. Environmental Protection Agency (EPA) Office of Noise Abatement and Control was originally established to coordinate federal noise control activities. After its inception, EPA's Office of Noise Abatement and Control issued the Federal Noise Control Act of 1972, establishing programs and guidelines to identify and address the effects of noise on public health, welfare, and the environment. In response, the EPA published information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety (Levels of Environmental Noise). The Levels of Environmental Noise recommended that the L_{dn} should not exceed 55 dBA outdoors or 45 dBA indoors to prevent significant activity interference and annoyance in noise-sensitive areas.

In addition, the Levels of Environmental Noise identified five dBA as an "adequate margin of safety" for a noise level increase relative to a baseline noise exposure level of 55 dBA L_{dn} (i.e., there will not be a noticeable increase in adverse community reaction with an increase of five dBA or less from this baseline level). The EPA did not promote these findings as universal standards or regulatory goals with mandatory applicability to all communities, but rather as advisory exposure levels below which there would be no risk to a community from any health or welfare effect of noise.

In 1981, EPA administrators determined that subjective issues such as noise will be better addressed at more localized levels of government. Consequently, in 1982 responsibilities for regulating noise control policies were transferred to State and local governments. However, noise control guidelines and regulations contained in EPA rulings in prior years remain in place by designated Federal agencies, allowing more individualized control for specific issues by designated Federal, State, and local government agencies.

Federal Transit Administration

The Federal Transit Administration (FTA) has developed methodology and significance criteria to evaluate incremental noise impacts from surface transportation modes (i.e., on road motor vehicles and trains) as presented in Transit Noise Impact and Vibration Assessment (FTA Guidelines). These incremental noise impact criteria are based on EPA findings and subsequent studies of annoyance in communities affected by transportation noise. The FTA extended the EPA's five dBA incremental impact criterion to higher ambient levels. As baseline ambient levels increase, smaller and smaller increments are allowed to limit expected increases in community annoyance. For example, in residential areas with a baseline ambient noise level of 50 dBA CNEL, a less-than-five dBA increase in noise levels will produce a minimal increase in community annoyance levels, while at 70 dBA CNEL, only one dBA increase could be accommodated before a significant annoyance increase will occur.

Vibration Standards

The FTA provides guidelines for maximum-acceptable vibration criteria for different types of land uses. Groundborne vibration and noise levels associated with various types of construction equipment and activities are summarized in Table 4.6-7 (Reference Vibration Source Amplitudes for Construction Equipment). Table 4.6-8 (Groundborne Vibration and Noise Impact Criteria) shows the Federal Transit Administration's maximum acceptable vibration standard for human annoyance in residences where people normally sleep is 80 VdB (less than 70 vibration events per day).

Table 4.6-7
Reference Vibration Source Amplitudes for Construction Equipment

Equipment	Reference PPV at 25 ft (in/sec) at 25 Feet	Approximate Vibration Level (VL) at 25 Feet
Pile driver (impact)	1.518 (upper range)	112
	0.644 (typical)	104
Pile driver (sonic)	0.734 (upper range)	105
	0.170 (typical)	93
Clam shovel drop (slurry wall)	0.202	94
Hydromill	0.008 in soil	66
Slurry wall	0.017 in rock	75
Vibratory roller	0.210	94
Hoe Ram	0.089	87
Large bulldozer	0.089	87
Caisson drill	0.089	87
Loaded trucks	0.076	86
Jackhammer	0.035	79
Small bulldozer	0.003	58

Notes: PPV is the peak particle velocity. Pile driver amplitude varies greatly based on equipment type and size.
Source: Federal Transit Administration. Transit Noise and Vibration Impact Assessment. 2006.

Table 4.6-8
Groundborne Vibration and Noise Impact Criteria

Land Use Category	Groundborne Vibration Impact Levels (VdB)		Groundborne Noise Impact Levels (dBA)	
	Frequent Events[1]	Infrequent Events[2]	Frequent Events[1]	Infrequent Events[2]
Category 1: Buildings where low ambient vibration is essential for interior vibrations	65 VdB[3]	65 VdB[3]	N/A	N/A
Category 2: Residences and buildings where people normally sleep	72 VdB	80 VdB	35 dBA	43 dBA
Category 3: Institutional land uses with primarily daytime use	75 VdB	83 VdB	40 dBA	48 dBA

[1] *Frequent Events – more than 70 vibration events per day*
[2] *Infrequent Events – fewer than 70 vibration events per day*
[3] *This criterion limit is based on levels that are acceptable for more moderately sensitive equipment such as optical microscopes.*
Source: United States Department of Transportation, Federal Transit Administration, Transit Noise and Vibration Assessment, 1995

The FTA and Caltrans have compiled the data from numerous studies related to vibration and have developed standards for human perception and building damage. The FTA's maximum acceptable vibration standard for human annoyance is 78 VdB at nearby vibration-sensitive land uses.[5] The Caltrans maximum vibration level standard is 0.2 in/sec PPV for the prevention of structural damage to typical residential buildings.[6]

State Regulations

California Environmental Quality Act (CEQA)

CEQA requires lead agencies to consider noise impacts. Under CEQA, lead agencies are directed to assess conformance to locally established noise standards or other agencies' noise standards; measure and identify the potentially significant exposure of people to or generation of excessive noise levels; measure and identify potentially

significant permanent or temporary increase in ambient noise levels; and measure and identify potentially significant impacts associated with air traffic.

California Noise Control Act of 1973

Sections 46000-46080 of the California Health and Safety Code, known as the California Noise Control Act of 1973, find that excessive noise is a serious hazard to public health and welfare and that exposure to certain levels of noise can result in physiological, psychological, and economic damage. It also finds that there is a continuous and increasing bombardment of noise in the urban, suburban, and rural areas. The California Noise Control Act declares that the State of California has a responsibility to protect the health and welfare of its citizens by the control, prevention, and abatement of noise. It is the policy of the State to provide an environment for all Californians free from noise that jeopardizes their health or welfare.

California Noise Insulation Standards (CCR Title 24)

In 1974, the California Commission on Housing and Community Development adopted noise insulation standards for multi-family residential buildings (Title 24, Part 2, California Code of Regulations). Title 24 establishes standards for interior room noise (attributable to outside noise sources). The regulations also specify that acoustical studies must be prepared whenever a residential building or structure is proposed to be located near an existing or adopted freeway route, expressway, parkway, major street, thoroughfare, rail line, rapid transit line, or industrial noise source, and where such noise source or sources create an exterior CNEL (or L_{dn}) of 60 dBA or greater. Such acoustical analysis must demonstrate that the residence has been designed to limit intruding noise to an interior CNEL (or L_{dn}) of 45 dBA or below [California's Title 24 Noise Standards, Chap. 2-35].

State of California General Plan Guidelines 2003

Though not adopted by law, the State of California General Plan Guidelines 2003, published by the California Governor's Office of Planning and Research (OPR) (OPR Guidelines), provides guidance for the compatibility of projects within areas of specific noise exposure. The OPR Guidelines identify the suitability of various types of development relative to a range of outdoor noise levels and provide each local community some flexibility in setting local noise standards that allow for the variability in community preferences. Findings presented in the Levels of Environmental Noise Document (EPA 1974) influenced the recommendations of the OPR Guidelines, most importantly in the choice of noise exposure metrics (i.e., L_{dn} or CNEL) and in the upper limits for the normally acceptable outdoor exposure of noise-sensitive uses.

The OPR Guidelines include a Noise and Land Use Compatibility Matrix which identifies acceptable and unacceptable community noise exposure limits for various land use categories. Where the "normally acceptable" range is used, it is defined as the highest noise level that should be considered for the construction of the buildings which do not incorporate any special acoustical treatment or noise mitigation. The "conditionally acceptable" or "normally acceptable" ranges include conditions calling for detailed acoustical study or construction mitigation to reduce interior exposure levels prior to the construction or operation of the building under the listed exposure levels.

California Department of Transportation

According to the Caltrans vibration manual, large bulldozers, vibratory rollers (used to compact earth), and loaded trucks utilized during grading activities can produce vibration, and depending on the level of vibration, could cause annoyance at uses within the project vicinity or damage structures. Caltrans has developed a screening tool to determine if vibration from construction equipment is substantial enough to impact surrounding uses.

The Caltrans vibration manual establishes thresholds for vibration impacts on buildings and humans. These thresholds are summarized in Tables 4.6-9 (Vibration Damage Potential Threshold Criteria) and 4.6-10 (Vibration Annoyance Potential Threshold Criteria).

Table 4.6-9
Vibration Damage Potential Threshold Criteria

Structural Integrity	Maximum PPV (in/sec)	
	Transient	Continuous
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.20	0.10
Historic and some older buildings	0.50	0.25
Older residential structures	0.50	0.30
New residential structures	1.00	0.50
Modern industrial and commercial structures	2.00	0.50
Source: Caltrans 2004		

Table 4.6-10
Vibration Annoyance Potential Threshold Criteria

Human Response	PPV Threshold (in/sec)	
	Transient	Continuous
Barely perceptible	0.04	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.90	0.10
Severely perceptible	2.00	0.40
Source: Caltrans 2004		

Local Standards

City of Duarte General Plan

The General Plan Noise Element includes the following land use compatibility noise guidelines, which are recommended by the State Office of Planning and Research.

Table 4.6-11
Land Use Compatibility Noise Guidelines - California

Land Use Category	Community Noise Exposure (L_{dn} or CNEL, dBA)			
	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Residential - Low Density, Single-Family, Duplex, Mobile Homes	50 - 60	55 - 70	70-75	75-85
Residential - Multiple Family	50 - 65	60 - 70	70 - 75	70 - 85
Transient Lodging - Motels, and Hotels	50 - 65	60 - 70	70 - 80	80 - 85
Schools, Libraries, Churches, Hospitals, Nursing Homes	50 - 70	60 - 70	70 - 80	80 - 85
Auditoriums, Concert Halls, Amphitheaters	NA	50 - 70	NA	65 - 85
Sports Arenas, Outdoor Spectator Sports	NA	50 - 75	NA	70 - 85
Playgrounds, Neighborhood Parks	50 - 70	NA	67.5 - 75	72.5 - 85
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50 - 70	NA	70 - 80	80 - 85
Office Buildings, Business Commercial and Professional	50 - 70	67.5 - 77.5	75 - 85	NA
Industrial, Manufacturing, Utilities, Agriculture	50 - 75	70 - 80	75 - 85	NA

NA: Not Applicable

Source: General Plan Guidelines, Office of Planning and Research, California, October 2003.

Normally Acceptable – Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

Conditionally Acceptable – New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning, will normally suffice.

Normally Unacceptable – New construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

Clearly Unacceptable – New construction or development should generally not be undertaken.

Source: City of Duarte General Plan Noise Element Table N-1. August 2007

City of Duarte Municipal Code

Operational Noise Standards

Chapter 9.68 (Noise Regulations) of the City of Duarte Municipal Code is intended to control unnecessary, excessive, and annoying noise. The City's noise regulations state, "It is unlawful for any person within the City of Duarte to make, cause, or allow to be produced, noise which is received on property occupied by another person with the designated zone, in excess of the following levels, except as expressly provided otherwise." The City's noise standards are summarized in Table 4.6-12 (City of Duarte Noise Ordinance Standards).

Table 4.6-12
City of Duarte Noise Ordinance Standards

Zone	Noise Level (dBA)	
	7:00 AM – 9:00 PM	9:00 PM – 7:00 AM
R-1 and R-2	55	45
R-3 and R-4	55	50
Commercial	60	55
Industrial and Light Manufacturing	70	70

Source: City of Duarte Municipal Code Section 9.68.050 (Ambient Base Noise Levels)

Construction Noise Standards

Pursuant to Section 9.68.120 (Construction of Buildings and Projects) of the Duarte Municipal Code, noise sources created by construction are prohibited except between the hours of 7:00 AM and 10:00 PM.

General Plan

The General Plan includes the following policies and implementation measures pertaining to noise.

P N 1.1.1 Ensure noise mitigation measures are included in the design of new developments.

IM Require new developments to pay their fair share of mitigating measures.

P N 1.1.2 Encourage the State Department of Transportation (Caltrans) to continue programs that lead to the reduction of the noise levels on I-210 and I-605.

IM In coordination with Caltrans, the City will continue to participate in the phased program for the construction of sound walls along I-210 and I-605.

P N 1.1.3 Continue the City's beautification program along arterials to help reduce noise levels.

IM Require earthen berms, setbacks and other noise reduction techniques as conditions of development where applicable.

P N 1.1.4 Encourage acoustical materials in all new residential and commercial developments where noise levels exceed the compatibility standards outlined in the Noise Element.

IM Require noise mitigation methods as a condition of approval during the development review process. Encourage the use of Sound Transmission Class (STC) or Outdoor Indoor Transmission Class (OITC) rated windows for residential uses adjacent to the freeways and along major arterials.

P N 1.1.5 Limit construction, delivery, and through truck traffic to designated routes.

IM Limit construction, delivery, and through truck traffic to designated routes.

P N 1.1.6 Ensure Community Noise Equivalent Levels (CNEL) levels for noise sensitive land uses meet or exceed normally acceptable levels, as defined by State of California standards.

IM Incorporate noise reduction measures into all development proposals, as necessary. Monitor existing noise levels along major arterials and enforce the City's noise ordinance where necessary.

P N 1.1.7 The City should encourage, support, and enforce all State and Federal legislation designed to abate and control noise pollution.

P N 1.1.8 The City should encourage, support, and enforce all State and Federal legislation designed to abate and control noise pollution.

IM Support the use of rubberized asphalt on city streets for projects that require substantial paving activity, or roadways with high levels of traffic.

P N 2.1.2 Strive to resolve existing and potential conflicts between noise generating uses and human activities.

IM Require noise studies to be prepared in accordance with the City's environmental review procedure for all projects that are not "clearly compatible" with the future noise levels at the site. Consider

developing maximum noise standards for ventilation systems (i.e., air conditioning units) in residential areas. Consider developing regulations to prohibit the use of public address systems and encourage the use of alternative (noise sensitive) communication devices (i.e., walkie-talkies, hand-held phones, or other similar methods).

P N 2.1.3 Reduce noise from rock quarrying operations.

P N 2.1.4 Prohibit significant noise generating activities from locating adjacent to residential neighborhoods and near schools.

IM Require noise studies during the development review process if a project has the potential to generate significant noise.

P N 2.1.5 Evaluate the noise impacts from projects and existing uses in adjacent cities and work cooperatively with these cities to develop mitigation measures that will improve ambient noise conditions in Duarte.

IM Evaluate the noise impacts from proposed development projects and existing uses (i.e., Irwindale Raceway and San Gabriel Valley Gun Club) in adjacent cities as part of the environmental (CEQA) and project review process and implement measures to mitigate any significant impacts.

P N 2.2.1 Continuously review the Noise Ordinance to ensure noise-generating uses are adequately addressed.

IM Strictly enforce the Noise Ordinance to ensure that noise generating uses are promptly abated.

P N 3.1.1 Establish a system of locating land uses according to the maximum noise levels they generate.

P N 3.1.2 Enforce limits set by the State to control noise levels, particularly those governing motor vehicles.

IM Review the City's noise reduction ordinance to ensure compliance with State requirements.

P N 3.1.3 Ensure that construction noise does not cause an adverse impact to the residents of the City.

IM Condition projects adjacent to developed/occupied uses to require the developer to submit a construction related noise mitigation plan to the Director of Community Development for review and approval prior to issuance of grading permits.

Thresholds of Significance

Noise impacts resulting from the implementation of the proposed Specific Plan may be considered significant if they would result in the following:

- Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels;
- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;
- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;

- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of public airport or public use airport, would the project expose people presiding or working in the project area to excessive noise levels (refer to Section 7.0, Effects Found Not to be Significant); or
- For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels (refer to Section 7.0, Effects Found Not to be Significant).

Significance of Changes in Ambient Noise Levels

A project is considered to have a significance noise impact when it causes an adopted noise standard to be exceeded for the project site or for adjacent sensitive receptors. Even if a noise standard is not exceeded, an increase in noise in a quiet environment might create an impact. In these situations, a generally accepted professional standard is that a change of over 5 dBA is readily noticeable; however, Table 4.6-13 (Significance of Changes in Cumulative Noise Exposure) was included in the certified General Plan EIR as a guideline for determining the significance of noise increases. Adverse impacts would result if increases in noise levels exceed levels specified in Table 4.6-13, although the noise level may not exceed the significant impact criteria specified above.

Table 4.6-13
Significance of Changes in Cumulative Noise Exposure

Ambient Noise Level Without Project (Ldn or CNEL)	Significant Impact Assessment to Occur if the Project Increases Ambient Noise Levels by:
< 60 dBA	+ 5.0 dBA or more
60 – 65 dBA	+ 3.0 dBA or more
> 65 dBA	+1.0 dBA or more

Source: City of Duarte. Duarte General Plan Update Environmental Impact Report. August 2007

Environmental Impacts

Construction-related noise impacts related to future development in the Planning Area would remain less than significant with mitigation incorporated.

Over the long term, the General Plan and proposed Specific Plan would facilitate the completion of various construction projects throughout the Planning Area. These projects could occur in any zoned area, including residential, mixed-use, and public facilities areas.

Construction activities would generate a variety of noise levels associated with different kinds of construction equipment and the location of staging, construction, storage, and access routes. Demolition, grading, paving, landscaping and building construction processes involve equipment and vehicles near the active construction sites, which could adversely affect neighboring land uses, particularly those where sensitive receptors are located. Construction activity generates short-term noise that can increase ambient noise levels and affect nearby sensitive land uses.

The General Plan EIR notes that noise from construction activities is generated by two primary sources: (1) the transport of workers and equipment to construction sites and (2) the noise related to the construction itself. Construction noise impacts are short-term and cease upon completion of each project. The General Plan includes policies and implementation measures that would minimize construction noise impacts, such as limiting construction traffic to designated routes, incorporation of noise reduction measures, and requiring new projects to prepare and submit construction-related noise mitigation plans. In addition, the General Plan EIR includes Mitigation Measures N-1 through N-4 requiring mitigation of construction equipment noise, sound attenuation, and noise-reduction techniques in site planning. The General Plan EIR determined that with compliance with General Plan policies and

implementation measures, the City's Noise Ordinance, and EIR Mitigation Measures N-1 through N-4, construction-related noise impacts would be less than significant.

Future construction projects within the Planning Area would be subject to rules of the Noise Ordinance. The construction noise impacts on a particular neighborhood would depend on project-specific factors, including proximity to sensitive land uses, time of day, intervening barriers, level of construction (e.g., number and type of construction equipment that is operating simultaneously), and the duration of the project's construction phase.

According to Section 9.68.120 (Construction of Buildings and Projects) of the Duarte Municipal Code, operation of construction equipment is prohibited between the hours of 10:00 PM and 7:00 AM. Compliance with Chapter 9.68 of the Duarte Municipal Code, noise levels at sensitive receptors should be analyzed on a case-by-case basis and appropriate mitigation should be applied to bring noise levels down to acceptable levels. General Plan Noise Policy 3.1.3 requires that construction noise does not cause an adverse impact to the residents of the City. Mitigation shall be applied on a case-by-case basis to ensure that construction noise does not exceed normally acceptable or allowable levels as outlined in Table 4.6-11 and Table 4.6-12, respectively. Further, future development within the Planning Area would be subject to General Plan EIR Mitigation Measures N-1 through N-4. With compliance with Duarte Municipal Code Section 9.68, General Plan policies and implementation measures, and General Plan EIR mitigation, impacts would remain less than significant.

Traffic noise impacts associated with the Specific Plan would remain less than significant.

The General Plan EIR analyzed impacts related to the increase in motor vehicles along 35 roadway segments in Duarte. Based on results of the model, build-out of the General Plan would result in potentially significant increases in motor vehicle noise along two roadway segments: (1) Mountain Avenue south of Duarte Road and (2) Buena Vista Avenue between Huntington Drive and I-210 Freeway, based on the cumulative noise exposure thresholds summarized in Table 4.6-13. Table 4.6-14 (Potentially Affected Roadways Under General Plan Build-Out) summarizes the Existing (2006) and Projected (2020) noise levels and difference in noise levels experienced along the two roadway segments that are potentially affected.

Table 4.6-14
Potentially Affected Roadways Under General Plan Build-Out

Roadway Segment	2006 CNEL @ 100 Ft	2020 CNEL @ 100 Ft	Difference	Potentially Significant?
Mountain Avenue south of Duarte Road	54.6	59.8	5.2	Yes
Buena Vista Avenue between Huntington Drive and I-210	65.7	66.7	1.0	Yes
Source: City of Duarte. Duarte General Plan Update Environmental Impact Report. August 2007				

Based on the cumulative thresholds identified in Table 4.6-13, noise level increases are potentially significant when noise levels of less than 60 dBA increase by 5 dBA or more, and when noise levels of greater than 65 dBA increase by 1 dBA or more.

Noise attenuation is achieved when the direct noise path is interrupted. For instance, the soundwalls adjacent to I-210 serve as noise barriers and reduce noise exposure at nearby land uses. The General Plan includes policies and implementation measures intended to minimize noise exposure at new and existing developments. General Plan Noise Policy 1.1.1 requires that noise mitigation measures are included in the design of new developments, Noise Policy 1.1.6 requires that noise levels for noise-sensitive receptors meet acceptable levels, and Policy 2.1.2 requires that noise studies be prepared during the City's environmental review procedure for all projects that are not clearly compatible with future noise levels at the site. General Plan policies also require enforcement of applicable State guidelines related to building materials and noise control. The General Plan EIR determined that compliance with General Plan policies and implementation measures, and local and State guidelines, related to noise control, would result in less than significant traffic noise impacts.

Future population and employment growth within the Planning Area would result in increased traffic and the need for roadway and intersection improvements necessary to maintain desired levels of service. Increases in traffic could result in permanent increases in ambient noise levels (e.g., where a roadway segment is proposed to be expanded with additional travel lanes over the long-term to achieve level of service standards). Roadway noise could also increase on an existing roadway that would carry increased traffic volumes. In either case, roadway noise could exceed acceptable, City-defined levels at adjacent land uses.

Future Year 2036 traffic noise levels at 100 feet from roadway segment centerlines were modeled under Without Project and With Project conditions (see Appendix F). Distances to the 60, 65, and 70 BA CNEL noise contours under 2036 Without project and 2036 With proposed Specific Plan build-out conditions were calculated and shown in Table 4.6-15 (2036 CNEL Without Project) and Table 4.6-16 (2036 CNEL Proposed Specific Plan Build-Out), respectively. The traffic noise levels represent a conservative analysis of potential noise exposure. In reality, noise levels may be lower because the calculations do not assume natural or artificial shielding, nor do they assume deflection from existing or proposed structures or topography. Intervening structures or other noise-attenuating obstacles between a roadway and a receptor may reduce roadway noise levels at the receptor.

Table 4.6-17 (Projected Increase in Motor Vehicle Noise) provides a comparison of motor vehicle noise levels during future year 2036 under without project and Specific Plan build-out conditions. None of the roadway segments would experience noticeable increases in noise resulting from the proposed Specific Plan. In addition, based on cumulative noise exposure thresholds summarized in Table 4.6-13, build-out of the proposed Specific Plan would not result in significant changes in cumulative noise along any roadway segment. Development of future uses within the Planning Area would be subject to General Plan policies and implementation measures that would minimize noise exposure. Future development would be required to evaluate noise impacts and incorporate mitigation as needed to meet State and local noise control requirements. Therefore, impacts would remain less than significant.

Table 4.6-15
2036 CNEL Without Project

Roadway Segment	ADT[1]	dBA @ 100 Feet from Roadway Centerline	Noise Contour (distance from centerline - feet)		
			60 CNEL	65 CNEL	70 CNEL
Huntington Drive					
West of Mountain Way	9,913	70.1	320	180	101
Between Mountain way & Buena Vista Street	33,825	75.7	610	343	193
Between Buena Vista Street & Cotter Avenue	32,500	75.3	582	327	184
Between Cotter Avenue & Highland Avenue	29,975	75.1	569	320	180
Between Highland Avenue & I-605	33,675	75.7	610	343	193
East of I-605	25,750	74.2	513	288	162
Central Avenue					
West of Buena Vista Street	2,375	63.8	155	115	204
Between Buena Vista Street & I-210 WB Off Ramp	13,150	70.4	331	186	105
Between I-210 WB Off Ramp & Highland Avenue	8,313	69.6	302	170	105
East of Highland Avenue	9,225	69.7	305	172	104
Mountain Avenue					
North of Huntington Drive	8,188	69.2	288	162	110
South of Huntington Drive	12,700	71.1	359	202	114
Buena Vista Street					
North of Huntington Drive	6,113	67.0	224	126	141
Between Huntington Drive & Central Avenue	18,138	71.7	385	216	122
Between Central Avenue & I-210	26,775	72.5	422	237	133
South of I-210	7,500	67.9	248	140	127
Cotter Avenue					
North of Huntington Drive	1,263	58.8	115	204	363
Highland Avenue					
North of Huntington Drive	2,625	63.3	146	122	216
Between Huntington Drive & Central Avenue	10,488	69.3	292	164	108
South of Central Avenue	2,988	63.9	157	114	202
Mt. Olive Drive					
North of Huntington Drive	4,413	64.3	164	108	193

Source: MIG, 2016
1 The PM peak hour provided in traffic study is estimated to make up approximately eight percent of ADT.

Table 4.6-16
2036 CNEL Proposed Specific Plan Build-Out

Roadway Segment	ADT[1]	dBA @ 100 Feet from Roadway Centerline	Noise Contour (distance from centerline - feet)		
			60 CNEL	65 CNEL	70 CNEL
Huntington Drive					
West of Mountain Way	10,588	70.3	327	184	104
Between Mountain way & Buena Vista Street	36,550	76.0	631	355	200
Between Buena Vista Street & Cotter Avenue	39,363	76.2	646	363	204
Between Cotter Avenue & Highland Avenue	35,200	75.8	617	347	195
Between Highland Avenue & I-605	38,413	76.2	646	363	204
East of I-605	26,575	74.3	519	292	164
Central Avenue					
West of Buena Vista Street	2,375	63.8	155	115	204
Between Buena Vista Street & I-210 WB Off Ramp	13,825	70.6	339	191	107
Between I-210 WB Off Ramp & Highland Avenue	8,713	69.8	309	174	102
East of Highland Avenue	9,263	69.7	305	172	104
Mountain Avenue					
North of Huntington Drive	8,300	69.3	292	164	108
South of Huntington Drive	12,813	71.2	363	204	115
Buena Vista Street					
North of Huntington Drive	6,225	67.1	226	127	140
Between Huntington Drive & Central Avenue	21,350	72.4	417	234	132
Between Central Avenue & I-210	29,763	72.9	442	248	140
South of I-210	7,938	68.1	254	143	124
Cotter Avenue					
North of Huntington Drive	1,263	58.8	115	204	363
Highland Avenue					
North of Huntington Drive	2,625	63.3	146	122	216
Between Huntington Drive & Central Avenue	11,125	69.6	302	170	105
South of Central Avenue	3,025	63.9	157	114	202
Mt. Olive Drive					
North of Huntington Drive	4,450	64.3	164	108	193

Source: MIG, 2016
1 The PM peak hour provided in traffic study is estimated to make up approximately eight percent of ADT.

Table 4.6-17
Projected Increase in Motor Vehicle Noise

Roadway Segment	CNEL at 100 Feet from Centerline		Difference	Potentially Significant?[1]
	2036 Without Project	2036 With Project		
Huntington Drive				
West of Mountain Way	70.1	70.3	0.2	No
Between Mountain way & Buena Vista Street	75.7	76.0	0.3	No
Between Buena Vista Street & Cotter Avenue	75.3	76.2	0.9	No
Between Cotter Avenue & Highland Avenue	75.1	75.8	0.7	No
Between Highland Avenue & I-605	75.7	76.2	0.5	No
East of I-605	74.2	74.3	0.1	No
Central Avenue				
West of Buena Vista Street	63.8	63.8	0.0	No
Between Buena Vista Street & I-210 WB Off Ramp	70.4	70.6	0.2	No
Between I-210 WB Off Ramp & Highland Avenue	69.6	69.8	0.2	No
East of Highland Avenue	69.7	69.7	0.0	No
Mountain Avenue				
North of Huntington Drive	69.2	69.3	0.1	No
South of Huntington Drive	71.1	71.2	0.1	No
Buena Vista Street				
North of Huntington Drive	67.0	67.1	0.1	No
Between Huntington Drive & Central Avenue	71.7	72.4	0.7	No
Between Central Avenue & I-210	72.5	72.9	0.4	No
South of I-210	67.9	68.1	0.2	No
Cotter Avenue				
North of Huntington Drive	58.8	58.8	0.0	No
Highland Avenue				
North of Huntington Drive	63.3	63.3	0.0	No
Between Huntington Drive & Central Avenue	69.3	69.6	0.3	No
South of Central Avenue	63.9	63.9	0.0	No
Mt. Olive Drive				
North of Huntington Drive	64.3	64.3	0.0	No

Source: MIG, 2016
1 Significant determination based on cumulative noise exposure thresholds summarized in table 4.6-10.

Impact related to stationary noise sources within the City of Duarte would remain less than significant with mitigation incorporated.

As discussed in the General Plan EIR, delivery trucks, air compressors, generators, outdoor loudspeakers, and gas vents operated at commercial and industrial uses are sources of stationary noise. In addition, construction activity, street sweepers, and gas-powered leaf blowers constitute sources of stationary noise. The Metro Gold Line Station, which was proposed and not operational at the time of preparation of the General Plan EIR, was anticipated to increase noise within the station vicinity. However, because noise level increases were anticipated to result from passenger conversation and the location of the station within an industrial area, noise level increases were determined to not create a substantial disturbance or become a nuisance to surrounding uses. General Plan policies and implementation measures would ensure that noise impacts at surrounding uses are minimized. In addition, General Plan EIR Mitigation Measure N-5 requires that mixed-use structures be designed to prevent transfer of noise

and vibration from commercial to residential uses. The General Plan EIR determined that impacts related to stationary noise within the City would be less than significant.

The Specific Plan proposes a mix of uses, including residential, retail, restaurant, office, and hotel uses; the Specific Plan would not allow industrial uses within the Planning Area. Therefore, stationary noise sources within the Planning Area would be associated with commercial uses. As discussed in the General Plan EIR, stationary noise sources due to operation of commercial uses would include delivery trucks, air compressors, generators, outdoor loudspeakers, and gas vents. Pursuant to General Plan EIR Mitigation Measure N-5, design of mixed-use structures would be required to prevent noise transfer from commercial uses to residential uses. In addition, General Plan policies require project-specific noise analyses under certain circumstances, to ensure that noise levels are within normally acceptable levels as defined by City and State noise control guidelines. Impacts would remain less than significant with implementation of General Plan policies and implementation measures and General Plan EIR Mitigation Measure N-5.

Impact related to stationary noise sources outside of the City of Duarte would remain less than significant.

Rock quarries, gun clubs, and the Irwindale Speedway are located outside of Duarte's boundaries but have the potential to generate noise within the City. Implementation of General Plan policies and implementation measures would minimize the impact these stationary noise sources would create within the City. For example, General Plan Noise Policy 2.1.5 requires evaluation of noise impacts from projects and existing uses in adjacent cities as part of the environmental review process. The certified General Plan EIR determined that impacts would be less than significant.

Implementation of the proposed Specific Plan would not create sources of substantial stationary noise within or outside the Planning Area. Pursuant to General Plan Noise Policy 2.1.5, noise levels from rock quarries, gun clubs, and the Irwindale Speedway would be evaluated, as necessary, as development occurs within the Planning Area. With implementation of General Plan policies and implementation measures, impacts would remain less than significant.

Impact related to groundborne vibration would remain less than significant with mitigation incorporated.

Pile drivers and rock blasting are generally the primary cause of construction-related vibration impacts. Such construction methods are employed on a limited basis, on sites where there are extensive layers of very hard materials that must be loosened and/or penetrated to achieve the grading plan and place foundation supports. Additional noise impacts could occur where heavy machinery is required to break up large, hard rocks into smaller fragments. The need for such methods is determined through site-specific geotechnical investigations that identify the subsurface materials within the grading envelope, along with the construction methods recommended to handle the types of materials that are found.

Occasionally, large bulldozers and loaded trucks can create perceptible vibration at close proximity; however, they generally do not cause vibration that could cause structural or cosmetic damage. Construction equipment and activities are categorized by the nature of the vibration they produce. Equipment or activities typical of continuous vibration include excavation equipment, compaction equipment, vibratory pile drivers, and pile-extraction equipment. Equipment or activities typical of single-impact or low-rate repeated impact vibration include impact pile drivers, and blasting. High-rate repeated impact vibrations are common of jackhammers and pavement breakers. Table 4.6-18 (Common Construction Vibration) summarizes the peak particle velocity (PPV), vibration level, at 25 feet for common construction equipment.

Table 4.6-18
Common Construction Vibration

Equipment	PPV (in/sec at 25ft)
Crack-and-Seat Operators	2.400
Vibratory Roller	0.210
Large Bulldozer	0.089
Caisson Drilling	0.089
Loaded Trucks	0.076
Jackhammer	0.035
Small Bulldozer	0.003
Source: California Department of Transportation. Transportation- and Construction-Induced Vibration Guidance Manual, June 2004	

Vibration varies widely with distance and intensity. Vibration from earthmovers and haulers has no potential to damage buildings after ten feet, while vibration from blasting activities can damage structures up to 115 feet away. Common mitigation for impact pile drivers include jetting, pre-drilling, use of cast-in-place or auger cast piles, use of non-displacement piles, and use of pile cushioning. Vibration can be reduced from breaking of concrete and other materials through use of hydraulic crushers, saws or rotary rock-cutting heads, hydraulic splitters, and chemicals instead of using hydraulic breakers.

Building and roadway construction has the potential to generate perceptible vibration levels to sensitive receptors within 20 feet from the operation of heavy equipment. The proposed Specific Plan would allow mixed-use developments with residential above commercial up to the property line with no setback. Therefore, residential land uses adjoining roadway and intersection improvement projects would likely be subject to distinctly perceptible vibration levels over extended periods of time.

Potential vibration due to future construction activities under the Specific Plan would be assessed in conjunction with the City's standard review of mandatory, site-specific geotechnical studies and their recommended grading and foundation design recommendations. In addition, General Plan EIR Mitigation Measure N-5 requires that mixed-use development be designed to prevent transfer of noise and vibration from the commercial to residential uses. Impacts resulting from construction–generated groundborne vibration would be less than significant.

Mitigation Measures

Related to construction noise, the General Plan EIR required the following mitigation that remains applicable to the proposed Specific Plan.

N-1 Mitigate transportation equipment impacts at construction sites, such as temporary noise buffers/barriers.

N-2 Ensure noise mitigation techniques are incorporated into all construction-related activities.

N-3 Reduce noise generated by construction activities by requiring sound attenuation devices on construction equipment.

N-4 Require noise-reduction techniques in site planning, architectural design, and construction where noise reduction is necessary.

Related to stationary noise, the following mitigation was required by the certified General Plan EIR and remains applicable to the proposed Specific Plan.

N-5 Require that mix-use structures be designed to prevent transfer of noise and vibration from the commercial to residential uses.

Level of Significance with Mitigation Incorporated

Impacts related to construction noise and stationary noise would remain less than significant with implementation of Mitigation Measures N-1 through N-5.

Significant Unavoidable Impacts

All noise impacts associated with implementation of the proposed Specific Plan would remain less than significant through compliance with the City Noise Ordinance, General Plan policies and implementation measures, and General Plan Mitigation Measures N-1 through N-5. No significant unavoidable noise impacts would result from the proposed Specific Plan.

Reference

1 California Department of Transportation. Basics of Highway Noise: Technical Noise Supplement. November 2009.

3 California Department of Transportation. Transportation- and Construction-Induced Vibration Guidance Manual. June 2004

4 Gary Hamrick, Senior Associate. Cambridge Systematics, Inc. Written Communication. June 13, 2016

5 Federal Transit Administration. *Transit Noise and Vibration Impact Assessment.* 2006

6 California Department of Transportation. *Transportation and Construction Vibration Guidance Manual. Division of Environmental Analysis.* September 2013

This Page Intentionally Left Blank

This section describes the existing geologic and seismic hazards in the City of Duarte as evaluated under the General Plan EIR as well as with respect to the proposed Specific Plan. This section analyzes the potential impacts from geologic and seismic hazards that could result from Specific Plan implementation.

The Initial Study prepared for the proposed Town Center Specific Plan determined that impacts related to geology and soils would result in less than significant or no impact. However, the certified General Plan EIR analyzed seismic ground-shaking, seismic-related ground failure, landslides, soil erosion and loss of topsoil, unstable soils or geologic unit, and expansive soils; therefore, these impacts have been analyzed in this Supplemental EIR.

Environmental Setting

Geology

Duarte is categorized by three topographical terrain districts: the San Gabriel Mountain Range of the Angeles National Forest, the foothills and canyons of the San Gabriel Mountains, and the alluvial slopes of the mountains. Below this area, the southern portion of the City consists of urbanized land on predominately flat topography.

The San Gabriel Mountains are an east- to west-trending mountain range that extends for approximately 60 miles from the San Fernando Valley on the west to Cajon Pass on the east, near the western edge of the San Bernardino Mountains. The San Gabriel Mountains are part of the Transverse Ranges physiographic province of southern California. This mountainous area is partially covered with coastal sage brush, chaparral, riparian, and woodland habitat.

The San Gabriel River, adjacent to the City of Duarte, originates from the foot of the Mountain San Antonio (Old Baldy) and carries snow melt and runoff from a 635 square-mile watershed. Alluvial deposits approximately 1,000 feet thick, consisting predominantly of marine and non-marine sand and silt, underlie this portion of the coastal plain. Newer alluvial deposits exist along the San Gabriel River.

The General Plan EIR stated that geologic conditions that exist within and around Duarte have the potential to cause problems if proper precautions are not taken. The northeast mountainous areas of the City are generally too steep, and bedrock is too unstable, for typical construction. Erosion, landslides, and shaking from earthquakes can be severe within these areas.

Soils

According to the General Plan EIR, soil type varies throughout the City. The General Plan EIR stated the City's soil types likely consist of coastal plain marine and non-marine sand and silt and newer alluvial deposits that exist along the San Gabriel River. The EIR also stated that the soils likely to occur in the northern and northeastern portions of the City include: Ramona-Placentia (9 to 15 percent grade), Tujunga-Soboba, and Vista-Amargosa associations. From the likely soils to occur in the City, soils of the Tujunga-Soboba association have an erosion potential from slight to moderate, where soils of the Ramona-Placentia (9 to 15 percent grade) and Vista-Amargosa associations have high erosion potential. Soils in the southern portion of the City may consist of soils of the Hanford association, which have only slight erosion potential. Additionally, soil types and textures under areas characterized as urban land have historically consisted of native alluvial soils comprised of dry, dense, silty and occasionally gravelly sand, rocks, and boulders. Several feet of introduced fill material of unknown origin and varying composition may cover some sites currently occupied by landscaped/ruderal vegetation.

The Planning Area is located on urbanized land and likely contains soil types and textures consistent with the soils and textures found in the southern portion of the City, as described above and in the General Plan EIR (i.e., slight erosion potential).

Seismic Hazards

The following section describes the presence and characteristics of seismic hazards in Duarte, including earthquake faults, surface rupture, ground shaking, liquefaction, hazardous buildings, and seismic response, as evaluated in the General Plan EIR.

Earthquake Faults

Alquist-Priolo fault zones are regulatory zones that encompass surface traces of active faults that have the potential for future surface fault rupture.[1] According to the State of California Department of Conservation California Geological Survey (2014), there are no Alquist-Priolo Earthquake Fault zones in the Planning Area.[2] However, according to the General Plan EIR, active faults and historically destructive earthquakes generally characterize southern California. Other local and regional faults still have potential to affect the project area, they are discussed in the following sections

The Sierra Madre Fault Zone is classified as a "master" fault and consists of five primary segments and thousands of feet of vertical and significant left-lateral offsets located along the base of the San Gabriel Mountains and southward up and over the San Gabriel Mountains. The General Plan EIR identified fault section D (also known as the Duarte Fault) located close to Royal Oaks Drive, of the Sierra Madre Fault Zone. This fault has been delineated by the County of Los Angeles as active and by the State of California as potentially active.

Sierra Madre Fault

The Sierra Madre Fault Zone is classified as a "master" fault. The General Plan EIR identified fault section D (also known as the Duarte Fault) located close to Royal Oaks Drive, of the Sierra Madre Fault Zone. According to the General Plan EIR, the Sierra Madre Fault Zone is divided into five primary segments plus thousands of feet of vertical and significant left-lateral offsets located along the base of the San Gabriel Mountains. The fault is approximately 47 miles long and extends from San Fernando to San Dimas. The Duarte Fault, delineated as active by the County and potentially active by the State, and the Upper Duarte Fault present the greatest threat to the City. The Sierra Madre Fault has the potential to cause significant damage and, according to the Southern California Earthquake Data Center, is capable of a 6.0 to 7.0 magnitude earthquake that could occur once every few hundred years.[3]

Raymond Hill Fault

According to the General Plan EIR, the Raymond Hill Fault is located approximately ten miles northwest of Duarte and is linked to the Sierra Madre Fault system. The fault is a left-lateral north-facing fault, approximately 16 miles in length. According to the Southern California Earthquake Data Center, the fault was the origin of the Pasadena Earthquake in 1988 and is capable of a 6.0 to 7.0 magnitude earthquake.[4]

San Andreas Fault

According to the General Plan EIR, the San Andreas Fault is located approximately 30 miles northeast of Duarte and extends more than 600 miles through the length of California. The Southern California Earthquake Data Center estimated the fault capable of a 6.8 to 8.0 magnitude earthquake, which can affect most of Southern California.[5]

Puente Hills Fault

According to General Plan EIR, the Puente Hills Fault is an approximately 25-mile blind thrust fault located from northern Orange County through Downtown Los Angeles and culminating in Beverly Hills. A blind thrust fault is located underground with nothing on the surface revealing their presence.[6] This fault has potential to cause substantial damage due to its proximity to populated areas and is capable of a 7.2 to 7.5 magnitude earthquake.

Fault Rupture and Ground Shaking

Potential impacts from earthquakes depend on the magnitude, fault type, location, and distance from the affected area. The most immediate earthquake damage occurs at the epicenter, where fault rupture can occur when the

ground above a fault breaks. No faults are located in the Planning Area, so surface rupture is not a hazard. Ground shaking, however, can cause extensive damage, even from distant faults.

Liquefaction Hazards

Soil liquefaction occurs when a soil, saturated or partially saturated with water, experiences reduced strength and stiffness by the ground shaking. This can cause severe damage to infrastructure and structural foundations. According to the General Plan EIR, the City is most susceptible to the effects of liquefaction in its low-lying areas and the western portion of the urbanized area.

The Planning Area is not located in any identified liquefaction zone.[7]

Landslides

A landslide is when a mass of earth or rock slides down a sloped hill, mountain, or cliff. According to the General Plan EIR, the mountainous areas of the City are at highest risk for landslides. The northeast mountainous areas are particularly susceptible to landslides resulting from earthquakes and are too unstable for typical construction.

The Planning Area is not located in any identified landslide hazard zone.[8]

Hazardous Buildings

During an earthquake, Duarte may be susceptible to high levels of ground shaking, which may cause buildings to sustain substantial damage. Most of the buildings in Duarte have been built under modern building codes and design criteria, which were developed after the 1971 San Fernando earthquake. The threat of partial to total collapse could occur among the very few pre-1933 buildings, tilt-up structures, unreinforced masonry buildings, buildings over four stories, and mobile homes.

Seismic Response

According to the General Plan EIR, the City prepared a Multi-Hazard Functional Plan for emergency response to comply with the State Standardized Emergency Management System requirements. The plan identifies critical hazard areas, as well as areas for meeting, staging, and medical response. Communication protocols between agencies and evacuation routes in the event of an emergency are also identified.

An Emergency Operation Center (EOC) is located at City Hall (1600 Huntington Drive) and functions as the Emergency Operations Headquarters. Facilities throughout Duarte are designated as emergency shelters and function as such during an earthquake or other man-made or natural disaster. The EOC is fully equipped with emergency communication equipment and cooking, showering, and sleeping facilities. A citywide operating system has been implemented in the event that other communication systems fail.

The City's emergency evacuation routes are critical to ensure an efficient and safe evacuation of residents, and for police and fire vehicles that respond to emergency calls. Huntington Drive, Buena Vista Street, and Mountain Avenue are the designated emergency evacuation routes. The direction of travel on these roadways, and any restrictions to vehicular movement, will depend largely on the nature, location, and spatial characteristics of the event leading to the evacuation.

General Plan

The General Plan includes the following policies and implementation measures pertaining to geology and seismic hazards.

P Safe 1.1.3 Expand and intensity in high risk areas to reduce loss from natural or man-made disasters

IM Identify high risk areas and prepare programs which will help minimize loss.

P Safe 1.1.4 Enforce requirements that all development proposals be reviewed in order that they may be analyzed for safety implications.

IM Continue to update and enforce the City's fire and building codes as appropriate.

P Safe 1.1.5 Provide adequate levels of service to ensure the public is protected from natural and man-made disasters.

P Safe 1.1.6 Cooperate with federal, state, and county agencies responsible for the enforcement of all health, safety, and environmental laws.

P Safe 4.1.1 Restrict development in areas prone to seismic safety hazards.

IM Comply with the provisions of the Alquist-Priolo Act requiring site-specific soils, geologic, or geotechnical engineering studies prior to development approval of sites potentially subject to seismic activities.

P Safe 4.1.2 New construction directly astride or across known active faults, or fault zones, should be regulated.

IM Require appropriate engineering and design mitigations for structures proposed in these areas.

Thresholds of Significance

Geology, soils, and seismic impacts resulting from Specific Plan implementation would be considered significant if they would result in the following:

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
  - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault (refer to Section 7.0, Effects Found Not to be Significant);
  - Strong seismic ground shaking;
  - Seismic-related ground failure, including liquefaction;
  - Landslides;
- Result in substantial soil erosion or the loss of topsoil;
- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in landslides, lateral spreading, subsidence, liquefaction or collapse;
- Be located on expansive soil, as defined as Table 18-1-B of the Uniform Building Code, creating substantial risk to life or property; and/or
- Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water (refer to Section 7.0, Effects Found Not to be Significant).

Environmental Impacts

Impacts related to building damage during a seismic ground shaking event would remain less than significant.

the City of Duarte is situated directly above segments of the Sierra Madre Fault, which include the Duarte, Upper Duarte, and "D" Fault Zones, which are delineated as active or potentially active faults. In addition, several major regional faults are located within the surrounding area.

As discussed in the General Plan EIR, build-out of the General Plan would result in an increase of 726 residential dwelling units and 658,744 square feet of non-residential uses, exposing more people to the effects of seismic ground shaking from locally and regionally generated earthquakes. The effects of seismically induced ground shaking could include property damage, personal injury, and loss of life. New development must comply with the Uniform Building Code (UBC), which requires structures to be set back 50 feet from the furthest extent of an active fault. The General Plan EIR determined that impacts would be less than significant with implementation of General Plan Safety Element policies and mandatory compliance with the UBC. In addition, the General Plan Safety Element includes policies and implementation measures that will minimize potential impacts related to seismic ground shaking. Therefore, the General Plan EIR determined that impacts would be less than significant.

Build-out of the proposed Specific Plan would result in an increase of 1,036 residential units, 331 hotel rooms, and 217,021 square feet of non-residential square footage, exposing more people to the effects of seismic ground shaking from locally and regionally generated earthquakes. Development facilitated by the Specific Plan would be subject to General Plan Safety Element policies and implementation measures, and Uniform Building Code (UBC) and California Building Code (CBC) standards. In addition, City of Duarte Municipal Code Section 19.78.110 (Soils Reports) requires that a preliminary soils report be prepared when soils conditions warrant the investigation and report. If soils problems which, if not corrected, would lead to structural defects or environmental impacts, a subsequent soils investigation may be required and subject to the review and approval by the Building Inspection Department and the City Engineer. The report shall recommend corrective action for the purpose of preventing structural damage to subdivision improvements and structures. Implementation of and compliance with General Plan policies and UBC, CBC, and Municipal Code standards would minimize potential impacts related to seismic ground shaking. Impacts would remain less than significant.

Impacts related to liqufaction would remain less than significant.

Liquefaction occurs when the strength and stiffness of soil is reduced by intense ground shaking. When intense ground shaking occurs, water in highly saturated soils mixes with that soil, resulting in ground failure. The area of highest risk within Duarte is near the San Gabriel River and at the base of the San Gabriel Mountains, in the northeastern portion of the City. New development is required to comply with the Uniform Building Code (UBC) regarding slopes and hazards from landslide, settlement, or slippage. The General Plan EIR determined that impacts would be less than significant with implementation of General Plan policies and implementation measures.

The Planning Area is not located near the San Gabriel River or at the base of the San Gabriel Mountains. In addition, the earthquake zones of required investigation for the Azusa 7.5 Minute Quadrangle released by the California Geological Survey does not identify liquefaction hazard zones within the Planning Area. Additionally, development facilitated by the Specific Plan would be subject to General Plan Safety Element policies and implementation measures, and Uniform Building Code (UBC) and California Building Code (CBC) standards. In addition, City of Duarte Municipal Code Section 19.78.110 (Soils Reports) requires that a preliminary soils report be prepared when soils conditions warrant the investigation and report. If soils problems which, if not corrected, would lead to structural defects or environmental impacts, a subsequent soils investigation may be required and subject to the review and approval by the Building Inspection Department and the City Engineer. The report shall recommend corrective action for the purpose of preventing structural damage to subdivision improvements and structures. Implementation of and

compliance with General Plan policies and UBC, CBC, and Municipal Code standards would minimize potential impacts related to liquefaction. Impacts would remain less than significant.

Impacts related to landslides would remain less than significant.

As discussed in the certified General Plan EIR, the northcentral portion of Duarte is where the foothills begin and the threat of landslides increases. Land most susceptible to earthquake-induced landslides exists throughout most of the wilderness areas in the northernmost portions of the City, where development is not permitted. Because development is not permitted in the areas where risk of landslide is greatest, minimal threats to safety exist. New development is required to comply with the Uniform Building Code (UBC) regarding slopes and hazards from landslide, settlement, or slippage. The General Plan EIR determined that impacts would be less than significant with mandatory compliance with the UBC.

The Planning Area is not located in the foothills and is not located within an area susceptible to landslides. In addition, the earthquake zones of required investigation for the Azusa 7.5 Minute Quadrangle released by the California Geological Survey does not identify landslide hazard zones within the Planning Area. Additionally, future development would be subject to General Plan Safety Element policies and implementation measures, and UBC and California Building Code (CBC) standards. Implementation of and compliance with General Plan policies and UBC, CBC, and Municipal Code standards would minimize potential impacts related to landslides. Impacts would remain less than significant.

Impacts related to soil erosion would remain less than significant.

As discussed in the certified General Plan EIR, the potential for soil erosion in Duarte varies. The northern mountainous areas are associated with slight to moderate erosion potential. The urbanized area in the southern portion of the City is predominately flat and has slight erosion potential. Much of the area available for new development would be on infill sites covered primarily by disturbed vegetation or impermeable surface sand and, thus, would result in minimal soil erosion. The lower foothill area has the potential to generate impacts associated with soil erosion. However, no long-term development for the hillside areas was proposed and, therefore, no additional impacts to topsoil were anticipated. The foothill area of the City has the greatest soil erosion potential; however, development is prohibited there. All new development would be required to conform to all City standards and requirements set by the Storm Water Pollution Prevention Plans (SWPPP) mandated by the California State Water Resources Control Board (see Section 4.8 for additional information on SWPPP requirements). The General Plan EIR determined that impacts would be less than significant.

The Planning Area is primarily built out and flat, with slight erosion potential. Development facilitated by the proposed Specific Plan would be on infill sites that are currently covered by primarily disturbed vegetation or impermeable surface sand. As discussed in the General Plan EIR, all new development would be subject to the requirements set by the SWPPP. In addition, Duarte Municipal Code Section 6.15.070 (Construction Pollutant Reduction) sets minimum requirements such as implementation of best management practices (BMPs) and the retention of construction-related materials, wastes, spills, or residue at the project site to avoid discharge to streets, drainage facilities, receiving waters, or adjacent properties for all construction activity, in order to reduce runoff from construction sites. Erosion from slopes and channels would be minimized by implementing BMPs such as limiting of grading scheduled during the wet season, inspecting graded areas during rain events, planning and maintenance of vegetation on slopes, and covering erosion-susceptible slopes. Compliance with applicable standards would ensure that impacts related to soil erosion remain less than significant.

Impacts related to expansive soil and soil strength would remain less than significant.

As discussed in the certified General Plan EIR, the wilderness area and the area at the base of the San Gabriel Mountains are comprised of sand and silt and may become unstable during intense ground shaking. The City is 98 percent built out, and new development facilitated by the General Plan Update would primarily be distributed throughout the urbanized portion of Duarte. The General Plan EIR determined that impacts would be less than

significant with compliance with the Uniform Building Code (UBC) in regard to slope, hazards from landslides, and settlement or slippage.

The Planning Area is located within the urbanized portion of Duarte. Development facilitated by the proposed Specific Plan would be subject to General Plan Safety Element policies and implementation measures, and Uniform Building Code (UBC) and California Building Code (CBC) standards. In addition, City of Duarte Municipal Code Section 19.78.110 (Soils Reports) requires that a preliminary soils report be prepared when soils conditions warrant the investigation and report. If soils problems which, if not corrected, would lead to structural defects or environmental impacts, a subsequent soils investigation may be required and subject to the review and approval by the Building Inspection Department and the City Engineer. The report shall recommend corrective action for the purpose of preventing structural damage to subdivision improvements and structures. Implementation of, and compliance with, General Plan policies and UBC, CBC, and Municipal Code standards would minimize potential impacts related to expansive soil and soil strength. Impacts would remain less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance with Mitigation Incorporated

Not applicable.

Significant Unavoidable Impacts

All geologic and seismic impacts associated with implementation of the proposed Specific Plan would remain less than significant with implementation of policies and implementation measures in the General Plan and mandatory standard regulations. No significant unavoidable significant geologic and seismic impacts would result from the proposed Specific Plan.

References

[1] California Department of Conservation. Natural Hazards Disclosure: Alquist-Priolo Earthquake Fault Zones. http://www.conservation.ca.gov/cgs/rghm/ap/Pages/disclose.aspx [June 2015]

[2] California Geological Survey. Earthquake Zones of Required Investigation. Azusa 7.5 Minute Quadrangle. March 25, 1999

[3] Southern California Earthquake Data Center. Significant Earthquakes and Faults. Sierra Madre Fault Zone. http://scedc.caltech.edu/significant/sierramadre.html [June 2016]

[4] Southern California Earthquake Data Center. Significant Earthquakes and Faults. Raymond Fault. http://scedc.caltech.edu/significant/raymond.html [June 2016]

[5] Southern California Earthquake Data Center. Significant Earthquakes and Faults. San Andreas Fault Zone. http://scedc.caltech.edu/significant/sanandreas.html [June 2016]

[6] California Department of Conservation. Frequently Asked Questions. http://www.conservation.ca.gov/index/Earthquakes [June 2016]

[7] California Geological Survey. Earthquake Zones of Required Investigation. Azusa 7.5 Minute Quadrangle. March 25, 1999

[8] California Geological Survey. Earthquake Zones of Required Investigation. Azusa 7.5 Minute Quadrangle. March 25, 1999

This Page Intentionally Left Blank

4.8 Hydrology and Drainage

This section describes the existing conditions related to hydrology and drainage within the City of Duarte as evaluated under the previously certified General Plan EIR as well as with respect to the proposed Town Center Specific Plan. This section analyzes the potential hydrologic and drainage impacts that could result from Specific Plan implementation.

The Initial Study prepared for the proposed Town Center Specific Plan (Appendix B) determined that no impacts would result in the following areas: (1) the alteration of on-site drainage patterns resulting in increased runoff, erosion, or flooding; (2) the creation or contribution of runoff water which would exceed the capacity of the existing stormwater drainage system; (3) placing housing within a 100-year flood zone; or (4) inundation by seiche, tsunami, or mudflow. The Initial Study determined that the following impacts would be less than significant: (1) violation of water quality standards, (2) degradation of water quality, and (3) flooding as a result of the failure of a levee or dam.

However, the certified General Plan EIR analyzed all impacts except for placing housing within a 100-year flood zone and inundation by seiche, tsunami, or mudlflow. Therefore, all hydrology and drainage impacts except for impacts related to placing housing within a 100-year flood zone and inundation by seiche, tsunami, or mudlflow have been analyzed in this Supplemental EIR.

Environmental Setting

Watershed

The City of Duarte is located within two watersheds, as defined by the Los Angeles Regional Water Quality Board. The portion of the City west of I-605 is located within the Los Angeles River watershed, and the eastern half is within the San Gabriel River watershed. The San Gabriel River, adjacent to the City of Duarte to the east, originates from Mt. San Antonio (Old Baldy) and carries snow melt and runoff from a 635 square-mile watershed. Additional intermittent seasonal streams within canyons in the wilderness area of Duarte include Fish Canyon, Fern Canyon, Van Tassel Canyon, Spinks Canyon, and Maddock Canyon

The Los Angeles River watershed covers approximately 324 square miles of the watershed and is covered by forest or open space land, including the area near the headwaters, part of which originates in the San Gabriel Mountains. The rest of the watershed is highly developed, which includes the urbanized area of Duarte, west of I-605.

The San Gabriel River receives drainage from eastern Los Angeles County. Its headwaters originate in the San Gabriel Mountains. The watershed consists of extensive areas of undisturbed riparian and woodland habitats in its upper reaches. Much of the watershed of the West Fork and East Fork of the river is set aside as a wilderness area. Other areas in the upper watershed are subject to heavy recreational use. The upper watershed also contains a series of flood control dams. Additionally, southeast of Duarte, near the intersection of I-605 and I-210, is the Santa Fe Flood Control Basin and Dam, where flows are channeled until reaching the Santa Fe Basin and continuing farther south to the Whittier Narrows. The watershed is hydraulically connected to the Los Angeles River through the Whittier Narrows Reservoir and the lower part of the river.

Groundwater

Local groundwater for the City of Duarte originates from eight wells within and around Duarte. The California American Water Company Southern Division – Los Angeles County District provides potable water to the Duarte service area, which includes the cities of Azusa, Bradbury, Duarte, Irwindale, and Monrovia. Groundwater is the primary source of supply for the Los Angeles County District. The Duarte service area overlies the Main San Gabriel Basin (MSGB), an unconfined aquifer which provides up to 90 billion gallons of groundwater annually to the San Gabriel Valley.[1]

The Duarte service area is classified as an "Integrated Producer," which provides for two types of water allocation rights. Duarte has an adjudicated right to 1.84634 percent of the annual safe yield of the MSGB as well as a fixed surface water allocation of 1,672 acre feet per year.[2] According to the Urban Water Management Plan for the Los Angeles County District, the Duarte service area pumped 5,830 acre feet in the year 2010.

Surface Water Hydrology

The City of Duarte contains no natural, permanent water features. The San Gabriel River Channel flows along the eastern boarder of the City into the Santa Fe Basin, where it is channeled by the San Gabriel Dam and released into the San Gabriel River. The Angeles National Forest lands and water recharge lands within the San Gabriel River, and other seasonal waterways, contain surface water during winter months. Existing storm drain facilities carry water during wet weather. The City of Duarte Public Works Department and the County of Los Angeles Department of Public Works manage water runoff and storm drainage.

Stormwater Quality

Point Source Pollutants

According to the certified General Plan EIR, point-source pollutants have historically consisted of industrial operations with discrete discharges to receiving waters. Industrial operations, often potential sources of pollutant discharges, require coverage under the State of California's General Industrial Permit. The General Industrial Permit requires industrial operations to comply with regulations that significantly lessen the impact of industry on water quality.

Non-Point Source Pollutants

Effects of urbanization most often result in an increase in pollutant export from the urban area. An important consideration in evaluating stormwater quality within a City is to evaluate whether it impairs the beneficial use to the receiving waters. Non-point source pollutants have been characterized by the major parameters described below to assist in determining and using the pertinent data. Receiving waters can assimilate a limited quantity of various constituent elements; however, there are thresholds beyond which the measured amount becomes a pollutant and results in an undesirable impact. The General Plan EIR describes the following typical urbanization impacts.

Sediment

Sediment is made up of tiny soil particles that are washed or blown into surface waters. It is the major pollutant by volume in surface water. Suspended soil particles can cause the water to look cloudy or turbid. The fine sediment particles also act as a vehicle to transport other pollutants, including nutrients, trace metals, and hydrocarbons. Construction sites are typically the largest source of sediment for urban areas under development.

Nutrients

Nutrients (especially phosphorous and nitrogen) are a major concern for surface water quality because they can cause algal blooms and excessive vegetative growth. Of the two, phosphorus is usually the limiting nutrient that controls the growth of algae in lakes.

The orthophosphorous form of phosphorus is readily available for plant growth. The ammonium form of nitrogen can also have severe effects on surface water quality. The ammonium is converted to nitrate, and nitrite forms nitrogen in a process called nitrification. The process consumes large amounts of oxygen, which can impair the dissolved oxygen levels in water. The nitrate form of nitrogen is very soluble and is found naturally at low levels in water. When nitrogen fertilizer is applied to lawns or other areas in excess of plant needs, nitrates can leach below the root zone, eventually reaching groundwater. Orthophosphate from auto emissions also contributes phosphorus in areas with heavy automobile traffic. Other problems resulting from excess nutrients are surface algal scums, water discolorations, odors, toxic releases, and overgrowth of plants. Common measures for nutrients are total nitrogen, organic nitrogen, total Kjeldahl nitrogen (TKN), nitrate, ammonia, total phosphate,

and total organic carbon (TOC). Generally, nutrient export is greatest from development sites with the most impervious areas.

Trace Metals

Trace metals are primarily a concern because of their toxic effects on aquatic life and their potential to contaminate drinking water supplies. The most common trace metals found in urban runoff are lead, zinc and copper. Fallout from automobile emissions is also a major source of lead in urban areas. A large fraction of the trace metals in urban runoff are attached to sediment, and this effectively reduces the amount that is immediately available for biological uptake and subsequent bioaccumulation. Metals associated with the sediment settle out rapidly and accumulate in the soils. Also, urban runoff events typically occur over a shorter duration, which reduces the aquatic environment's amount of exposure to toxics. The toxicity of trace metals in runoff varies with the hardness of the receiving water. As total hardness of the water increases, the threshold concentration levels for adverse effects increases.

Oxygen-Demanding Substances

Aquatic life is dependent on the dissolved oxygen (DO) in the water, and when organic matter is consumed by microorganisms, DO is consumed in the process. A rainfall event can deposit large quantities of oxygen-demanding substances in lakes and streams. The biochemical oxygen demand (BOD) of typical urban runoff is on the same order of magnitude as the effluent from an effective secondary wastewater treatment plant. A problem from low DO results when the rate of oxygen-demanding material exceeds the rate of replenishment. Oxygen demand is estimated by direct measure of DO and indirect measures such as BOD, chemical oxygen demand (COD), oils and greases, and TOC.

Bacteria

Bacteria levels in undiluted urban runoff typically exceed public health standards for water contact recreation. Studies have found that total coliform counts typically exceed U.S. EPA water quality criteria almost every time it rained. The coliform bacteria that are detected may not be a health risk in themselves, but are often associated with human pathogens.

Oil and Grease

Oil and grease contain a wide variety of hydrocarbons, some of which could be toxic to aquatic life in low concentrations. These materials initially float on water and create the familiar rainbow-colored film. Hydrocarbons have a strong affinity for sediment and quickly become absorbed by it. The major source of hydrocarbons in urban runoff is crankcase oil and other lubricating agents that leak from automobiles. Hydrocarbon levels are highest in the runoff from parking lots, roads, and service stations. Residential land uses generate less hydrocarbons export, although illegal disposal of waste oil into stormwaters can be a problem.

Priority Pollutants

Priority pollutants are generally related to hazardous wastes or toxic chemicals and can sometimes be detected in storm water. According to the General Plan EIR, priority pollutant scans have been conducted in previous studies of urban runoff, which evaluated the presence of over 120 toxic chemicals and compounds. The scans rarely revealed toxins that exceeded the current safety criteria. The urban runoff scans were primarily conducted in suburban areas not expected to have many sources of toxic pollutants (with the possible exception of illegally disposed or applied household hazardous wastes). Priority pollutants in stormwater are: phthalate (plasticizer compound), phenols and creosols (wood preservatives), pesticides and herbicides, oils and greases, and metals.

Physical Characteristics of Stormwater

The physical properties and chemical constituents of water traditionally are used to monitor and evaluate water quality. The water quality parameters for stormwater are numerous and are classified in several ways. In many cases, the concentration of an urban pollutant, rather that the annual load (amount) of that pollutant, is needed to

assess a water quality problem. The General Plan EIR describes common physical, chemical, and biological characteristics relevant to surface runoff quality as follows:

Dissolved Oxygen (DO)

Dissolved oxygen (DO) in the water has a pronounced effect on the aquatic organisms and the chemical reactions that occur. It is one of the most important biological water quality characteristics in the aquatic environment. The DO concentration of a water body is determined by the solubility of oxygen, which is inversely related to water temperature, pressure, and biological activity. DO is a transient property that can fluctuate rapidly in time and space and, therefore, represents the status of the water system at a particular point and time of sampling. The decomposition of organic debris in water is a slow process, and the responding changes in oxygen status are also slow.

Oxygen Demand

The oxygen demand is an indication of the pollutant load and includes measurements of biochemical oxygen demand or chemical oxygen demand. The biochemical oxygen demand (BOD) is an index of the oxygen-demanding properties of the biodegradable material in the water. Samples are taken from the field and incubated in the laboratory at 20 degrees Celsius, after which the residual dissolved oxygen is measured. The BOD values are useful in assessing stream pollution loads and for comparison purposes.

The chemical oxygen demand (COD) is a measure of the pollutant loading in terms of complete chemical oxidation using strong oxidizing agents. It can be determined quickly because it does not rely on slow bacteriological actions, as does BOD. COD does not necessarily provide a good index of oxygen-demanding properties in natural waters.

Total Dissolved Solids (TDS)

Total dissolved solids concentration is determined by evaporation of a filtered sample to obtain residue whose weight is divided by the sample volume. The TDS of natural waters varies widely. TDS is an important indicator of water quality for several reasons:

- Dissolved solids affect the ionic bonding strength related to other pollutants such as metals in the water;
- TDS is a major determinant of aquatic habitat;
- TDS affects the saturation concentration of dissolved oxygen and influences the ability of a water body to assimilate wastes; and
- Eutrophication rates, the richness of nutrients of a water body, depend on TDS.

pH

The pH of water is the negative log, base 10, of the hydrogen ion (H+) activity. A pH of 7 is neutral; a pH greater than 7 indicates alkaline water; a pH less than 7 represents acidic water. In natural water, carbon dioxide (CO2) reactions are some of the most important in establishing pH. The pH at any one time is an indication of the balance of chemical equilibrium in water and affects the availability of certain chemicals or nutrients in water for uptake by plants. The pH of water directly affects fish and other aquatic life; generally, toxic limits are pH values of less than 4.8 and greater than 9.2.

Alkalinity

Alkalinity is the opposite of acidity, representing the capability of water to neutralize acid. Alkalinity is also linked to pH and is caused by the presence of carbonate, bicarbonate, and hydroxide, which are formed when carbon dioxide is dissolved. A high alkalinity is associated with a high pH and excessive solids. Most streams have alkalinities of less than 200 milligrams per liter (mg/l) and alkalinity ranges of 100 – 200 mg/l seem to support well-diversified aquatic
life.

Specific Conductivity
The specific conductivity of water (its ability to conduct an electric current) is related to its total dissolved ionic solids. Long-term monitoring of a project's waters can develop a relationship between specific conductivity and TDS. Its measurement is quick and inexpensive and can be used to approximate TDS. Specific conductivities in excess of 2,000 micro-ohms per centimeter (µohms/cm) indicate a TDS level that is too high for most freshwater fish.

Turbidity
Turbidity is an indicator of the property of water that causes light to become scattered or absorbed. Suspended clays and other organic particles cause turbidity. The clarity of water is an important indicator of water quality that relates to the ability of photosynthetic light to penetrate. Turbidity can be used as an indicator of certain water quality constituents, such as predicting the sediment concentrations.

Nitrogen (N)
Sources of nitrogen in stormwater are from the additions of organic matter to water bodies or chemical additions. Ammonia and nitrate are important nutrients for the growth of algae and other plants. Excessive nitrogen can lead to eutrophication, because nitrification consumes dissolved oxygen in the water. Nitrogen occurs in many forms. Organic nitrogen breaks down into ammonia, which eventually becomes oxidized to nitrate-nitrogen, a form available for plants. High concentrations of nitrate-nitrogen (N/N) in water can stimulate growth of algae and other aquatic plants, but if phosphorus (P) is present, only about 0.30 mg/l of nitrate-nitrogen is needed for algal blooms. Some fish life can be affected when nitrate-nitrogen exceeds 4.2 mg/l. There are a number of ways to measure the various forms of aquatic nitrogen. Typical measurements of nitrogen are Kjeldahl nitrogen (organic nitrogen plus ammonia); ammonia; nitrite plus nitrate; nitrite; and nitrogen in plants. The principal water quality criteria for nitrogen focus on nitrate and ammonia.

Phosphorus (P)
Phosphorus is an important component of organic matter. In many water bodies, phosphorus is the limiting nutrient that prevents additional biological activity from occurring. The origin of this constituent in urban stormwater discharge is generally from fertilizers and other industrial products. Orthophosphate is soluble and is considered to be the only biologically available form of phosphorus. Because phosphorus strongly associates with solid particles and is a significant part of organic material, sediments influence concentration in water and are an important component of the phosphorus cycle in streams. The primary methods of measurement are detecting orthophosphate and total phosphorus.

Existing Stormwater Quality
The General Plan EIR discussed stormwater runoff quality qualitatively by evaluating the pollutants expected from specific land uses. The General Plan EIR expected existing pollutants to largely consist of oil and grease, suspended solids, trash, nutrients, bacteria, and household hazardous wastes. The proposed Town Center Specific Plan does not allow for industrial uses; land uses would remain commercial and residential, which would likely produce pollutants similar to those evaluated in the General Plan EIR.

Residential Activities and Development
Residential and urban development is often a significant source of stormwater pollution. Development and redevelopment activities have two primary effects on water quality: (1) they are sources of erosion and sedimentation during the construction phase, and (2) they have long-term effects on runoff once the development is in operation. Residential and urban development can affect water quality in three ways:

- Impervious surfaces associated with development increase the rate and volume of stormwater runoff, which increase downstream erosion potential;
- Urban activities generate dry-weather ("nuisance") flows, which may contain pollutants and/or change the ephemeral nature of streams and increase the degradation of certain habitats; and

- Impervious surfaces increase the concentration of pollutants during wet weather flows.

The potential for negative water quality effects is generally correlated with the density of development and the amount of impervious area associated with the development. Detached residential development has the potential to generate sediments such as nutrients and organic substances (including fertilizers), pesticides (from landscape application), trash and debris (including household hazardous waste), oil and grease (from driveways and roads), and bacteria and viruses. Residential uses located within the hillside area of Duarte are most susceptible to stormwater runoff pollution due to the slope of the hillsides. The Planning Area is located south of the hillside areas in Duarte and is characterized primarily by flat, urbanized land.

Municipal Activities and Development

Infrastructure and facilities (roads, streets, highways, parking facilities, storm drains, and flood management facilities) present a threat to water quality. Other facilities such as parks, airfields, water treatment plants, wastewater reclamation plants, landfills and transfer centers, and corporate yards also present water quality issues. Municipalities may also own and administer areas and activities that might be harmful to water quality in tributary, impaired water bodies or water quality sensitive areas. The Planning Area does not contain any parks, airfields, water treatment plants, wastewater reclamation plants, landfills and transfer centers, or corporate yards.

Commercial, Civic, and Industrial Activities and Development

Certain commercial activities have the potential to generate pollutants that can negatively affect stormwater quality. Auto repair shops, in particular, have the potential to generate heavy metals, oils, toxic chemicals, and other oxygen-demanding substances. In addition, restaurants have the potential to generate pollutants such as grease, trash, and other oxygen-demanding substances.

Industrial activities can significantly affect water quality, depending on the type of pollutants and activity. In general, industrial activity is associated with effects on ambient water temperature, alkalinity levels of total suspended solids, and oxygen demand. Certain industrial uses may entail the generation of heavy metals, nutrients, toxic chemicals, and other pollutants. Industrial uses that take place indoors do not have stormwater pollutant exposure and present little threat to stormwater quality. The proposed Planning Area has several existing auto repair shops and restaurants but does not have any industrial uses.

Regulatory Framework

Federal Requirements

The following section describes regulatory programs relevant to hydrology and water quality. While it does not purport to list all regulations relevant to hydrology and water quality, the section does outline major programs applicable to the proposed Specific Plan.

Clean Water Act

Passed in 1972, the Clean Water Act (CWA) established the National Pollutant Discharge Elimination System (NPDES) permit program. The Clean Water Act prohibits the discharge of pollutants from point sources to United States (U.S.) waters unless an NPDES permit authorizes the discharge. It requires that municipal NPDES permits include a requirement to prohibit non-storm water discharges into the storm sewer and controls to reduce the discharge of pollutants in storm water discharges to the maximum extent practicable, including management practices, control techniques, system design and engineering methods and such other provisions that the U.S. EPA or the California State Water Resources Control Board deem appropriate for the control of such pollutants. Reduction of conventional forms of pollution, such as sewage treatment plants and industrial facilities, has been considerable since implementation of the NPDES program. However, it was shown that pollution from land runoff contributed a larger portion of pollutants than the regulated conventional sources. The 1987 Clean Water Act amendments established a framework for regulating urban storm water runoff. Urban runoff includes dry and wet weather flows

from urbanized areas through a storm water conveyance system. Pollutants can be intercepted and deposited into U.S. waters as water flows over streets, parking lots, construction sites and industrial, commercial, residential, and municipal areas. If not properly controlled, urban runoff could be a significant source of pollutants in waters of the U.S.

National Pollution Discharge Elimination System (NPDES) Stormwater Program

The National Pollutant Discharge Elimination System (NPDES) Stormwater Program is a comprehensive two-phased national program for addressing the non-agricultural sources of stormwater discharges adversely affecting the quality of the nation's waters. The Program uses the NPDES permitting mechanism to require control and monitoring measures designed to prevent harmful pollutants from being washed into local bodies by stormwater runoff. The NPDES program requires the owner or operator of any facility, or any person responsible for any activity that discharges waste into the surface waters of the U.S. to obtain an NPDES permit from the Regional Water Quality Control Board, as mandated by the Clean Water Act.

State and Regional Requirements

The Clean Water Act allows individual States to operate their own NPDES programs provided such programs meet minimum Federal requirements. The Los Angeles Regional Water Quality Control Board issues the municipal stormwater National Pollutant Discharge Elimination System permit, MS4, which encompasses the City of Duarte.

The objective of Order No. 01-182 is to protect the beneficial uses of receiving waters in Los Angeles County. To meet this objective, the Order requires that the Los Angeles Countywide Stormwater Quality Management Plan (SQMP) specify Best Management Practices (BMPs) that would be implemented to reduce the discharge of pollutants in stormwater to the maximum extent practicable. Further, Permittees are to assure that stormwater discharges from the MS4 shall neither cause nor contribute to the exceedance of water quality, standards and objectives nor create conditions of nuisance in the receiving waters, and that the discharge of non-storm water to the MS4 has been effectively prohibited.

Permit No. CAS004001 requires implementation of a Stormwater Quality Management Plan, which provides specific guidelines to control, reduce and monitor discharges of waste to storm drain systems. The emphasis of the Stormwater Quality Management Plan is pollution prevention through education, public outreach, planning and implementation as source control BMPs first and structural and treatment control BMPs second.

Standard Urban Stormwater Mitigation Plan (SUSMP)

The Standard Urban Stormwater Mitigation Plan (SUSMP) was developed as part of the Los Angeles Regional Water Quality Control Board's Municipal Stormwater Program. The Standard Urban Stormwater Mitigation Plan addresses stormwater pollution from certain types of new development and redevelopment. The Standard Urban Stormwater Mitigation Plan specifies the minimum required Best Management Practices (BMPs) that must be used for a designated project. Additional BMPs may be required on certain targeted categories of projects based on these regulations at the discretion of the City of Duarte. Applicable project applicants are required to incorporate appropriate Standard Urban Stormwater Mitigation Plan requirements into their development plans.

Colbey-Alquist Floodplain Management Act

The Colbey-Alquist Floodplain Management Act encourages local governments to plan, adopt and enforce land use regulations for floodplain management, in order to protect people and property from flooding hazards. This act also identifies requirements which jurisdictions must meet in order to receive state financial assistance for flood control.

State Resolution No. W-4976

In recent years, the State of California has been experiencing dry weather conditions due to less rainfall in the area, thus, causing a statewide drought emergency. In an effort to promote water conservation effort, Resolution No. W-4976 was adopted by the California Public Utilities Commission on February 27, 2014 to establish procedures for water conservation measures in order to ensure a reduction in consumption. Since many water utility agencies or companies secure their water supply from multiple sources, including water wholesaler, surface water and/or ground water; the adoption of this mandate has affected how water utility districts plan their service distribution while encountering various levels of water supply adjustments within each service areas.

Low Impact Development

The State of California adopted sustainability as a core value for all California Water Boards' activities and programs on January 20, 2005. Low Impact Development (LID) practices benefit water supply and contribute to water quality protection by taking a different approach to development and using site design and storm water management to maintain the site's pre-development runoff rates and volumes.[3] The amount of impervious surface, infiltration, water quality, and infrastructure costs can all be addressed by LID techniques, tools, and materials. LID practices include: bioretention facilities or rain gardens, grass swales and channels, vegetated rooftops, rain barrels, cisterns, vegetated filter strips, and permeable pavements.

Local Requirements

Implementation of Federal, State, and regional stormwater regulations is done locally through ordinances, policies, and programs adopted by the City of Duarte.

Stormwater and Urban Runoff Pollution Control Ordinance

The Stormwater and Urban Runoff Pollution Control Ordinance (Chapter 6.15 of the Duarte Municipal Code) is intended to enhance and protect the water quality of the receiving waters of the County and the United States, consistent with the Federal Water Pollution Control Act (Ord. 756 § 1 (part), 2000). The Ordinance: (1) includes specific local regulations for stormwater pollution prevention; (2) regulates non-stormwater discharge to the storm drain system; (3) mandates the control of spillage, dumping, or disposal of materials into the storm drain system; and (4) mandates the reduction of pollutants in stormwater and urban runoff to the maximum extent practicable.

Stormwater Pollution Prevention Plan (SWPPP)

The City of Duarte requires completion of a Stormwater Pollution Prevention Plan (SWPPP) prior to any construction activity on projects that would disturb more than one acre of soil. SWPPPs develop, implement, and monitor BMPs. The SWPPP must identify the source control and/or treatment control practices (BMPs) that would avoid, significantly reduce, or mitigate runoff pollutants to the maximum extent practicable.

Water Conservation

The City's Municipal Code addresses water supply in Section 19.52.050 (Water Conservation). The purpose of the article is to implement voluntary and mandatory water conservation measures. Projects are required to comply with applicable provisions of Section 19.40.120 (Water-Efficient Landscape Worksheet) and Section 19.40.220 (Landscape Irrigation and Maintenance) of the Municipal Code. In addition, public education to promote efficient use of water in landscape/irrigation systems and the use of appropriate principles of design, installation, management, and maintenance to save water, is required by Resolution 14-R-21. Resolution 14-R-21 requires that compliance with State Emergency Regulations addressing the severe drought conditions.

General Plan

The Duarte General Plan Open Space and Conservation Element includes the following goals and policies pertaining to hydrology and drainage:

P Con 1.1.3 To preserve the characteristics of the mountains, river beds, and canyons and to protect the valuable watershed, grading of lots should be kept to a minimum. Streets should be carefully designed to reduce or eliminate the possibility of erosion in the hillside and mountainous areas.

P Con 1.1.5 Form partnerships with Federal, State, County, other agencies, and private entities to help protect and preserve hillside land.

IM Work with other cities and agencies to partner in preserving open space.

P Con 2.1.1 Work to conserve current water supplies and seek new sources of water.

P Con 2.1.2 Maintain groundwater recharge areas to protect water quality and ensure continued recharge of groundwater basins.

IM Comply with NPDES/SUSMP requirements.

P Con 2.1.3 Require the use of native and other drought-resistant plants to reduce the amount of water used for landscaping.

P Con 2.1.4 Require the installation of water saving irrigation systems for all new development.

P Con 2.1.5 Reduce the amount of impervious surfaces through the use of porous ground cover materials.

IM Amend the Development Code to require impervious materials where warranted.

P Con 2.1.6 Encourage water conservation in residential, commercial, and industrial development.

IM Continue to examine water consumption impacts of new development in conjunction with environmental review.

P Con 3.1.2 Analyze all projects as defined in the California Environmental Quality Act (CEQA) for potential impacts on the community and utilize the proper mitigation measures to mitigate any potential adverse impacts on the community

P Con 5.1.1 Encourage the planned unit development or specific plan approach to land use which will minimize streets and provide more open space or green belts.

P Con 5.1.2 Discourage the extension of urban service into areas which are to remain open as open space. Streets and roadways should avoid large open areas as much as possible.

Thresholds of Significance

Hydrology and drainage impacts resulting from the implementation of the proposed Specific Plan may be considered significant if they would result in the following:

- Violate any water quality standards or waste discharge requirements;

- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted);
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
- Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
- Otherwise substantially degrade water quality;
- Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map (refer to Section 7.0, Effects Found Not to be Significant);
- Place within a 100-year flood hazard area structure which would impede or redirect flood flows (refer to Section 7.0, Effects Found Not to be Significant);
- Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam (refer to Section 4.9, Public Health and Safety); and/or
- Inundation by seiche, tsunami, or mudflow (refer to Section 7.0, Effects Found Not to be Significant).

Environmental Impacts

Implementation of the proposed Specific Plan would not violate water quality standards and waste discharge requirements. Impacts would remain less than significant with mitigation incorporated.

As discussed in the certified General Plan EIR, future development projects may contribute to water quality degradation resulting from long-term increase in the sediment load of the storm drain system and the potential for chemical releases at future construction sites. Runoff containing silt and debris may contribute to the sediment load, and substances such as oils, fuels, paints, and solvents may be transported to nearby drainages, watersheds, and groundwater in stornwater runoff, wash water, and dust control water. The General Plan Open Space and Conservation Element and Safety Element include policies to preserve water quality to ensure that the presence of pollutants is reduced. In addition, the certified General Plan EIR includes Mitigation Measures HYD-1 and HYD-2 requiring preparation of drainage/grading plans and the construction of parkway drains or similar devices prior to issuance of grading and building permits, respectively. The General Plan EIR determined that impacts would be less than significant with implementation of General Plan policies and General Plan EIR Mitigation Measures HYD-1 and HYD-2.

Future development within the Planning Area would be subject to the provisions of the National Pollution Discharge Elimination System (NPDES) to protect downstream water quality pursuant to the Federal Clean Water Act (CWA). Discharges into stormwater drains or channels from construction sites of one acre or larger are regulated by the General Permit for Storm Water Discharges Associated with Construction Activity (Order 2009-0009-DWQ as amended by 2010-0014-DWQ and 2012-0006-DWQ) issued by the State Water Quality Control Board. The General Permit was issued pursuant to NPDES regulations of the Environmental Protection Agency (EPA), as authorized by the Clean Water Act. Compliance with the General Permit involves developing and implementing a SWPPP specifying BMPs that a project would use to minimize pollution of stormwater. The SWPPP BMPs would follow the guidelines set forth by the State Water Resources Control Board (SWRCB). Proponents of future projects within the Planning Area would be required to comply with NPDES permit requirements through the preparation and implementation of a SWPPP for construction activities.

The City implements NPDES requirements through Municipal Code Chapter 6.15 (Stormwater and Urban Runoff Pollution Control). Impacts to water quality of receiving waters due to construction activities- including but not limited

to the potential for discharge of pollutants from areas of material storage, vehicle or equipment fueling and maintenance, waste handling, delivery areas, and other outdoor areas - would be less than significant with implementation of existing regulations.

Operationally, the proponents of future development within the Planning Area would be required to prepare a water quality management plan (WQMP) to implement measures as outlined by the Los Angeles RWQCB in the Los Angeles Countywide Standard Urban Standard Urban Stormwater Mitigation Plan (SUSMP). The SUSMP typically includes, but is not limited to: 1) guidance, operation, and maintenance for all source control, site design, and treatment control BMPs; and 2) operation and maintenance activities, which include maximizing canopy interception and water conservation, landscape planning, roof runoff controls, efficient irrigation, storm drain system signage, trash storage areas and litter control, employee training/education program, protect slopes and channels, common area catch basin inspection, energy dissipaters, pervious concrete/alternative materials, and storm filter filtration systems. Standard conditions of the WQMP will also include providing a thorough description of operation and maintenance activities, and providing a schedule of the frequency of operation and maintenance for each BMP.

As required by the General Plan Open Space and Conservation Element Policy 2.1.2, future developments would comply with NPDES/SUSMP requirements. In addition, future development within the Planning Area would be subject to Genera Plan Mitigation Measures HYD-1 and HYD-2 requiring preparation of drainage/grading plans and the construction of parkway drains or similar devices prior to issuance of grading and building permits, respectively.

The Specific Plan includes the following objectives for new development to improve water quality:

- Encourage storm water mitigation improvements in both the public and private realms through the development of storm water planters and green infrastructure, such as bioswales, detention basins, bioretention areas, and flow-through planter boxes.
- Work with developers to promote, approve, and implement designs that include the integration of low impact design (LID) strategies.
- Encourage site designs that maximize permeable surface cover and infiltration potential.

The potential impacts to water quality of receiving waters resulting from operation of future development within the Planning Area would be less than significant with implementation of existing regulations, Specific Plan policies, and General Plan EIR mitigation. Impacts would remain less than significant with mitigation incorporated.

Impacts related to groundwater depletion would remain less than significant.

The City of Duarte obtains 100 percent of its water from local groundwater. As discussed in the certified General Plan EIR, General Plan build-out would result in an anticipated increase of 726 residential dwelling units and 658,744 square feet of commercial, office, and industrial uses. Projected development and increases in population would increase the demand for water supplies and strain existing water facilities. The General Plan EIR determined that impacts related to groundwater depletion would be less than significant with implementation of General Plan policies and implementation measures, and compliance with Federal and State requirements related to water conservation.

Implementation of the proposed Specific Plan is anticipated to result in an increase of 1,036 residential units, 331 hotel rooms, and 217,021 square feet of retail, office, restaurant, and civic uses. As discussed in Section 4.2 (Population and Housing), build-out of the proposed Specific Plan would result in an anticipated increase of 3,150 residents for a citywide population of 25,327. Projected development and increases in population would increase the demand for groundwater.

The 2010 Urban Water Management Plan (UWMP) for the Los Angeles County District of California American Water has been prepared to support regional long-range planning documents and provides a standardized methodology to assess water resource needs and availability. Supply projections indicated in Tables 4-1 and 3-2 of the UWMP are summarized in Table 4.8-1 (UWMP Projected Water Supply).

Table 4.8-1
UWMP Projected Water Supply

Scenario	Projected Supply (AFY)
Normal Year 2030	7,362
Single Dry Year Event	8,377
Multiple Dry Year Event Year 1	8,377
Multiple Dry Year Event Year 2	9,027
Multiple Dry Year Even Year 3	7,416
Source: California American Water Southern Division – Los Angeles County District. 2010 Urban Water Management Plan. Tables 4-1 and 3-2 June 2012	

Table 4.8-1 indicates that there is sufficient supply available to meet projected demand of 6,452 AFY in the Duarte Service Area. Based on default air quality modeling results (see in Appendix E), the proposed project is anticipated to require an increase of 579.7 AFY of water compared to existing conditions. Table 3-2 of the UWMP indicates that the Duarte Service Area required a total of 5,450 AFY in 2010 and was projected to require 6,471 AFY by 2015. With an anticipated supply of 7,362 AFY during a normal year and a 2015 demand of 6,471, there would be sufficient capacity to serve anticipated increases in water demand. In addition, protection and conservation of future water resources are supported by General Plan policies and implementation measures, and would reduce demand on water resources. Measures include utilization of local groundwater resources, water conservation, and conservation programs established by the City. Impacts related to depletion of groundwater supplies would remain less than significant.

The Planning Area is primarily built out and covered with impermeable surfaces. The Planning Area does not contain land that serves as groundwater recharge areas and will therefore not interfere with the recharge of groundwater supplies. In addition, future development would be subject to Low Impact Development (LID) techniques that would limit impermeable surfaces, including bioretention facilities or rain gardens, grass swales and channels, vegetated rooftops, rain barrels, cisterns, vegetated filter strips, and permeable pavements. Policies in the Specific Plan include:

- Maximize efficient use of water resources within the Town Center through conservation, demand reduction, and water recycling.
- Encourage projects to incorporate water conservation best management practices including but not limited to low-flow showers and toilets, low-flow and gray-water irrigation systems, and the use of drought tolerant landscaping.

Impacts related to groundwater depletion and groundwater recharge would remain less than significant.

Impacts related to drainage patterns and runoff to the City's stormwater drainage systems would remain less than significant.

There are no naturally occurring permanent surface water features within Duarte. Water is carried through the City via the San Gabriel River Channel. As discussed in the certified General Plan EIR, development of vacant and underutilized properties within the City may cause erosion, siltation, and surface water runoff to the existing storm drainage system. Chapter 6.15 of the Duarte Municipal Code (Stormwater and Urban Runoff Pollution Control) outlines existing City standards, guidelines, and criteria for specific discharges, connections, and/or Best Management Practices (BMPs) for new development. Implementation of General Plan policies and implementation measures would ensure that project-related stormwater mitigation techniques are employed and monitored. Further, future development would be subject to Federal and State regulations related to stormwater and urban runoff. The General Plan EIR determined that impacts on the City's stormwater drainage system would be less than significant with implementation of Municipal Code regulations, General Plan policies and implementation measures, and Federal and State regulations.

The Planning Area is primarily built out and has a fully functional storm drain system. The drainage patterns of properties within the Planning Area have been engineered through past and present development to avoid on- or off-

site erosion and flooding; all properties convey storm water to the existing storm drain system. Future redevelopment within the Planning Area would be subject to entitlement and building permit requirements, including grading and drainage plans that identify on-site drainage design and any necessary drainage conveyance to off-site facilities. Future development within the Planning Area would be subject to Duarte Municipal Code Chapter 6.15 (Stormwater and Urban Runoff Pollution Control), described above. Implementation of Federal and State regulations, local requirements, and General Plan policies and implementation measures would ensure that on- and off-site erosion, flooding, and increases in flow velocity do not occur. Impacts would remain less than significant.

The Planning Area is primarily built out and constructed primarily with impervious surfaces. Future redevelopment within the Planning Area would result in development that could increase impervious surfaces and result in additional stormwater runoff to local and regional storm drain and flood control facilities. Pursuant to NPDES requirements and the current focus on LID standards, no net increase in stormwater runoff from any development within the Planning Area would be permitted. Any calculated increase in stormwater runoff, as identified in the project WQMP, would be required to be absorbed and/or retained on site; therefore, no increase in stormwater runoff would occur, and storm drain capacity would not be impacted. Impacts would remain less than significant.

Mitigation Measures

With regard to water quality standards and waste discharge requirements, the following mitigation was required by the certified General Plan EIR and would remain applicable to the proposed Specific Plan.

HYD-1 Individual development projects shall be required to prepare a drainage/grading plan for approval by the City of Duarte Department of Public Works prior to issuance of grading permits.

HYD-2 Individual development projects shall be required to construct any parkway drains or similar devices required by the draining/grading plan prior to issuance of a building permit.

Level of Significance with Mitigation Incorporated

Impacts related to groundwater depletion and drainage and runoff would remain less than significant. Impacts related to water quality standards and waste discharge requirements would remain less than significant with incorporation of General Plan Mitigation Measures HYD-1 and HYD-2.

Significant Unavoidable Impacts

All hydrology and drainage impacts associated with implementation of the proposed Specific Plan would remain less than significant with implementation of General Plan policies and implementation measures and compliance with mandatory standard regulations, General Plan Mitigation Measures HYD-1 and HYD-2. No significant unavoidable hydrology and drainage impacts would result from the proposed Specific Plan.

References

1 California American Water Southern Division – Los Angeles County District. 2010 Urban Water Management Plan. June 2012

2 California American Water Southern Division – Los Angeles County District. 2010 Urban Water Management Plan. June 2012

3 California Environmental Protection Agency. State Water Resources Control Board. Low Impact Development – Sustainable Storm Water Management. http://www.waterboards.ca.gov/water_issues/programs/low_impact_development/ [June 2016]

This Page Intentionally Left Blank

This section describes the means by which hazardous substances are regulated from a Federal, State, and local perspective, and discusses potential adverse impacts to human health and the environment due to the exposure of hazardous materials as evaluated under the certified General Plan EIR as well as with respect to the proposed Town Center Specific Plan. For this Supplemental EIR, the term "hazardous material" includes any material that, because of its quantity, concentration, or physical, chemical or biological characteristics, poses a considerable present or potential hazard to human health or safety, or to the environment. It refers generally to hazardous chemicals, radioactive materials, and biohazard materials. "Hazardous waste," a subset of hazardous material, is a material that is to be abandoned, discarded, or recycled and incudes chemicals and radioactive and bio-hazard waste (including medical waste).

The Initial Study for the proposed Town Center Specific Plan determined that no impacts related to transport, use, or disposal of hazardous materials, unforeseeable accident conditions, hazardous emissions near schools, proximity to private or public airport operations, emergency response planning, or wildland fires would result. However, because the certified General Plan EIR analyzes transport, use, and disposal of hazardous materials, unforeseeable accident conditions, hazardous emissions near schools, and emergency response planning, those issues have been analyzed in this Supplemental EIR.

Environmental Setting

Transport of Hazardous Materials

According to the General Plan EIR, in Duarte, a hazardous chemical release would most likely occur as a result of either transportation of chemicals by railroad or truck, use of chemicals at a business, or illegal dumping of chemical waste. Interstates 210 and 605 (I-210 and I-605) are heavily traveled by trucks and, thus, represent potential locations of a release. According to the General Plan EIR, the Burlington Northern/Santa Fe (BNSF) Railroad line poses a potential threat due to its use as a logistics route for the transportation of chemicals and its location in the south of the city near Duarte Road.[1]

The southern boundary of the proposed Planning Area is located approximately 0.03-mile north of the I-210, 0.43 mile west of the I-605, and 0.25-mile north of the BNSF right-of-way.

Fixed Facilities

According to the General Plan EIR, the second most likely threat from hazardous materials comes from the potential of an accidental spill and/or incident at known facilities that manufacture, store, and process toxic chemicals, and/or generate hazardous waste materials within or adjacent to the City; these are known as "fixed facilities." According to the General Plan EIR, there were 50 listed major hazardous waste handlers legally operating within the City as of October 2006 based on Los Angeles County Fire Department data.

According to the Environmental Protection Agency (EPA), there are three small quantity generators (SQG) and two large quantity generators (LQG) of hazardous wastes operating within the Planning Area (listed below). SQGs generate more than 100 kilograms and less than 1,000 kilgrams of hazardous waste per month. LQGs generate more than 1,000 kilograms of hazardous waste per month or more than one kilogram of acutely hazardous waste per month.

Small Quantity Generators

- Performance Nissan (1434 Buena Vista Street) – new car dealer[2]
- Roman Cleaners (1309 Huntington Drive) – dry cleaning and laundry services[3]
- Shell Service Station (1263 E. Huntington Drive) – gasoline station[4]

Large Quantity Generators

- Conocophillips (1250 E. Huntington Drive) – gasoline station[5]
- Rite Aid No 5528 (1335 E. Huntington Drive) – pharmacy and drug store[6]

GeoTracker

The Geographic Environmental Information Management System (GEIMS) is a database that tracks regulatory data about underground fuel tanks, fuel pipelines, and public drinking water supplies using GeoTracker. GeoTracker and GEIMS were developed pursuant to a mandate by the California State Legislature (AB 592, SB 1189) to investigate the feasibility of establishing a Statewide GIS for leaking underground fuel tank (LUFT) sites.

GeoTracker contains well, tank, and pipeline data for California. According to the General Plan EIR, a search revealed a total of 26 sites in Duarte. As of 2006, two of the 26 site reported in Duarte according to the GeoTracker database maintained open cases: one is a Leaking Underground Fuel Tank (LUFT) on Huntington Drive and the other is a Spills, Leaks, Investigations, and Cleanups report (SLIC) located on South Mountain Avenue.

As of June 2016, there is one open case within the Planning Area. The Alex Romo Automotive Repair is designated as a LUST Cleanup Site, with potential gasoline contaminants in the soil.[7]

Forest Fires

According the General Plan EIR, the City's location at the base of the San Gabriel Mountains creates an urban/wildland interface that makes Duarte more susceptible to wildfires than cities that do not border the foothills. The General Plan EIR analyzed Wildfire Risk Areas and determined rural residential located in the northern portion of the City to be within extremely high and high hazard zones, specifically homes north of Royal Oaks Drive.

The northernmost portion of the Planning Area is located a quarter-mile south of areas that have been determined to be high or extremely high fire risk. The Planning Area is located in an urbanized area of the City.

County Facilities Unit (CFU)

The County Facilities Unit is responsible for plan check and field inspection activity for new construction projects for many of the 36 Los Angeles County Departments, which includes Duarte. They act as the Departments' liaison and/or represent county facilities outside of county jurisdiction and are responsible for all required plan reviews.

Flooding and Dams

A one-percent annual chance for flooding is defined as the 100-year flood.[8] The Planning Area is in an area designated as Zone X by FEMA, an area that is determined to be outside the 0.2% annual chance floodplain and is not located within a 100-year flood zone.[9]

There are three major dams in the upper watershed of the San Gabriel River which provide flood protection for the City of Duarte: Cogswell, San Gabriel, and Morris Dam. According to the General Plan EIR, if a dam were to rupture, flood waters would reach the City in 20 to 40 minutes, and flood waters would last approximately one hour before they recede.

Regulatory Framework

State and Federal

Underground Tank Regulations

Title 23, Division 3, Chapter 16 (Underground Tank Regulations) of the California Code of Regulations identifies the regulations applicable to new and existing underground storage tanks. These regulations establish monitoring,

maintenance, reporting, abatement, and closure procedures for all underground storage tanks in the state. These regulations are administered by the Los Angeles Regional Water Quality Control Board.

California Porter Cologne Water Quality Control Act

Division 7 of the California Water Code (Water Code) identifies the enforcement and implementation rights of the Regional Water Quality Control Board to remedy discharges to surface waters or groundwater that would or could violate water quality standards. Standard remedies include issuance of Cease and Desist Orders and cleanup and abatement procedures.

Code of Regulations Title 22

Title 22 of the California Code of Regulations contains all applicable State and Federal laws governing hazardous wastes in the State. Title 22 is more stringent and broader in its coverage of wastes than Federal law. Chapter 51 (Site Remediation) identifies the minimum standards of performance for site investigations and response actions performed by the private sector in site cleanup efforts.

Hazardous waste is any waste with properties that make it potentially dangerous or harmful to human health or the environment.[10] Hazardous waste is defined in one of two ways. Waste is considered hazardous if it appears on one of the five lists created pursuant to the Federal Resource Conservation Recovery Act (RCRA). The lists are known as the F-, K-, P-/U-, and M- lists and reflect non-specific source waste, source-specific waste, discarded commercial chemical products, discarded mercury-containing products, respectively. A waste may also be categorized as hazardous if it exhibits one of the four characteristics of hazardous materials: ignitibility, corrosivity, reactivity, and toxicity. Because of its toxicity, solid wastes containing certain levels of lead are considered hazardous and must be handled, transported, and disposed of in accordance with Federal and State law. In California, two thresholds have been established by State regulation to determine if a waste is hazardous due to its lead content.[11] The Total Threshold Limit Concentration (TTLC) establishes a threshold of 1,000 milligrams (mg) of lead per one kilogram (kG) of waste. The Soluble Threshold Limit Concentration (STLC) establishes a threshold of 5 mg of lead per liter (L) of waste extract solution. Hazardous Waste must be disposed of at Class I landfills that are specifically designed to accept hazardous waste.

California Asbestos Standards in Construction

The California Division of Occupational Safety and Health (Cal/OSHA) enforces the California Asbestos Standards in Construction (8 CCR Section 1529). These standards regulate exposure to asbestos in all construction work including demolition of structures. These regulations establish entry and exit procedures after working in asbestos contaminated areas and establish specific control measures designed to protect workers depending on the type of asbestos they are handling. Such procedures include minimum air circulations, use of respirators, wetting of materials, clothing laundering, construction and demolition equipment requirements, and shielding specifications. Notification procedures are also in place that require building owner and employee noticing as well as external and internal hazard signage. All asbestos workers are required to complete training programs and register as an asbestos contractor, depending on the type of asbestos being removed. Medical examination requirements are also required to monitor worker health, generally on an annual basis.

California Construction Safety Orders for Lead

Title 8, Section 1532.2 (Lead) of the California Code of Regulations establishes the requirements for any construction worker who may be exposed to lead during demolition or salvage, removal or encapsulation, new construction, and cleanup activities. The construction safety orders establish an action level of 30 micrograms of lead per cubic meter ($\mu g/cm^3$) of air calculated over an 8-hour time-weighted average without regard for the use of a respirator, meaning this is the limit where safety protocols must be initiated, such as use of a respirator. Under no circumstance may a worker be exposed to 50 $\mu g/cm^3$ over an 8-hour weighted period. These regulations require implementation of engineering and work practice controls such as respiratory protection, protective clothing, housekeeping, hygiene

practices, and signage requirements to meet worker exposure limits. Medical monitoring and training requirements are also identified.

Assembly Bill 2948

In response to the growing statewide concern of hazardous waste management, State Assembly Bill 2948 (Tanner 1986) enacted legislation authorizing local governments to develop comprehensive hazardous waste management plans. The intent of each plan is to ensure that adequate treatment and disposal capacity is available to manage the hazardous wastes generated within its jurisdiction.

Regional

South Coast Air Quality Management District Rule 1403

Rule 1403 (Asbestos Emissions from Demolition/Renovation Activities) specifies work practices to limit asbestos emissions from building demolition and renovation activities including the removal and disturbance of asbestos containing material (ACM).[12] This rule is generally designed to protect uses surrounding demolition or renovation activities from exposure to asbestos emissions. Rule 1403 requires of any facility being demolished or renovated for the presence of all friable and Class I and Class II non-friable ACM. Rule 1403 also establishes notification procedures, removal procedures, handling operations, and warning label requirements. Approved procedures for ACM removal to protect surrounding uses identified in Rule 1403 include HEPA filtration, the glovebag method, wetting, and some methods of dry removal.

Local

Health Hazardous Materials Division

In May 1982, the Los Angeles County Board of Supervisors established the Hazardous Materials Control Program in the Department of Health Services. The program focuses on inspection of businesses that generate hazardous waste, hazardous materials inspections, criminal investigations, site mitigation oversight, and emergency response operations. On July 1, 1991, the program was transferred to the Fire Department's Health Hazardous Materials Division (HHMD). The HHMD's mission is to protect the public health and the environment throughout Los Angeles County from accidental releases and improper handling, storage, transportation, and disposal of hazardous materials and wastes through coordinated efforts of inspections, emergency response, enforcement, and site mitigation oversight.

Unified Hazardous Waste and Hazardous Materials Management Regulatory Program

The Los Angeles County Fire HHMD administers the Unified Hazardous Waste and Hazardous Materials Management Regulatory Program for the City of Duarte.

Senate Bill 1082 (1993) established the "Unified Hazardous Waste and Hazardous Materials Management Regulatory Program." The Unified Program consolidates, coordinates, and makes consistent the following hazardous materials and hazardous waste programs (Program Elements):

- Hazardous Waste Generation (including onsite treatment under Tiered Permitting);
- Aboveground Petroleum Storage Tanks (only the Spill Prevention Control and Countermeasure Plan or "SPCC");
- Underground Storage Tanks (USTs);
- Hazardous Material Release Response Plans and Inventories;
- California Accidental Release Prevention Program (Cal ARP); and
- Uniform Fire Code Hazardous Material Management Plans and Inventories.

Household Hazardous and E-Waste Program

The Sanitation Districts of Los Angeles County have established the Household Hazardous and Electronic Waste (E-Waste) Collection Program to provide County residents a legal and cost-free way to dispose of unwanted household chemicals that cannot be disposed of in the regular trash. The Household Hazardous Waste Program allows residents to dispose of the following household chemicals and E-waste.

- Household Chemicals
- Motor oil, oil filters, brake fluid
- Used antifreeze
- Paint, paint thinner, turpentine
- Cleaners with acid or lye
- Pesticides or herbicides
- Household batteries or car batteries
- Pool chemicals
- CRTs, old TVs, misc. electronics
- Mercury thermometers or thermostats
- Fluorescent light bulbs
- Used needles or sharps (In a Sharps container or sturdy box labeled "SHARPS")
- Unwanted or expired prescriptions

LA Sanitation (LASAN) has established permanent collection sites throughout the County known as S.A.F.E. Centers (Solvents/Automotive/Flammables/Electronics). The S.A.F.E. Centers operate on weekends, with the closest facility to Duarte located in the City of Glendale.

General Plan

The Duarte General Plan includes the following goals and policies pertaining to hazardous materials.

P Circ 2.1.2 Restrict heavy duty truck traffic to arterial roadways.

IM Post signs to designate the arterial roadways that are legal ruck routes and strictly enforce all truck route laws on city streets.

P LU 2.1.5 Restrict development in areas prone to seismic and other safety hazards.

P LU 2.1.7 Make every effort to ensure that industry and residences, where located in close proximity, will be compatible neighbors with non-industrial uses located nearby, and with neighboring cities as well.

P LU 3.1.6 Promote the use of mixed land use techniques and construction methods to provide more housing and minimize housing costs without compromising basic health, safety and aesthetic qualities.

P Safe 1.1.3 Expand and intensify precautionary measures in high risk areas to reduce loss from natural or man-made disasters.

P Safe 1.1.6 Cooperate with federal, state, and county agencies responsible for the enforcement of all health, safety, and environmental laws.

IM Support federal, state, and county regulations pertaining to health and safety, and fire regulations and ordinances. Train city personnel to help identify hazardous materials and associated violations.

P Safe 1.1.2 Support community programs that train volunteers to assist police, fire, and civil defense personnel how to perform effectively after the occurrence of a natural or man-made disaster.

IM Prepare a registry of volunteers who live and work in the city and will be able to perform medical assistance, security, and damage assistance in an emergency.

P Safe 1.1.3 Expand and intensity precautionary measures in high risk areas to reduce loss from natural or man-made disasters.

IM Identify high risk areas and prepare programs which will help minimize loss.

P Safe 1.1.4 Enforce requirements that all development proposal be reviewed in order that they may be analyzed for safety implementations.

P Safe 1.1.5 Provide adequate levels of service to ensure the public is protected from natural and man-made disasters.

IM Incorporate fire and police department expansion needs in each year's operating budget as the yearly budget provides.

P Safe 1.1.6 Cooperate with federal, state, and county agencies responsible for the enforcement of all health, safety, and environmental laws.

IM Support federal, state, and county regulations pertaining to health and safety, and fire regulations and ordinances. Train city personnel to help identify hazardous materials and associated violations.

P Safe 2.1.1 Establish and support all appropriate media for reaching all segments of the community (English-speaking and non-English speaking) to educate residents concerning emergency preparedness and safety.

P Safe 3.1.1 Maintain high levels of emergency services and monitor safety services annually and evaluate safety services alternatives. Review, on an annual basis, the effectiveness of safety services relying on citizen input.

P Safe 5.1.1 Continue to support "mutual assistance" agreements between the fire departments of local cities, Los Angeles County, and the U.S. Government.

P Safe 5.1.2 Continue to support programs to reduce fire hazards of vegetation in areas of extreme to high fire risk. Such programs may take a variety of forms, but may include weed and brush removal and control and use of fire resistant plantings.

IM Ensure that all buildings and areas be accessible to fire vehicles and firefighting equipment. Support fire department policy of controlled burns in high risk areas.

P Safe 5.1.3 Provide an adequate level of fire equipment, peakload water supply and personnel to protect the community.

P Safe 6.1.1 Monitor to the greatest extent possible the location of hazardous materials that could adversely impact Duarte residents, and businesses.

P Safe 6.1.2 Regulate the delivery, use, and storage of hazardous materials within the city limits according to regulations and guidelines set forth by the Los Angeles County Fire Department.

IM Prepare a hazardous materials storage permit ordinance.

P Con 5.1.4 To protect the public health, safety, and welfare, the city should designate open space where there is danger of flood, fire, or earthquake, unless these risks can be adequately mitigated.

IM Consider open space as a devise for hazardous mitigation in the review of future development.

Thresholds of Significance

Public health and safety impacts resulting from the implementation of the proposed Specific Plan would be considered significant if they would result in the following:

- Create a significant hazard to the public or the environment through the routing transport, use, or disposal of hazardous materials;
- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or wastes within one-quarter mile of an existing or proposed school;
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment (refer to Section 7.0, Effects Found Not to be Significant);
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area (refer to Section 7.0, Effects Found Not to be Significant);
- For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working the project area (refer to Section 7.0, Effect Found Not to be Significant);
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan;
- Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands;

Environmental Impacts

Impacts related to increased risk of upset associated with the routine generation, transport, use, or disposal of hazardous materials, and hazardous air emissions would remain less than significant with mitigation incorporated.

Residential and residential/commercial mixed-use developments do not cause or contribute substantially to potential hazards to the public or the environment because these uses do not involve the generation, transport, use, or disposal of appreciable amounts of hazardous materials or wastes. Residential uses are characterized by the use of common, widely available hazardous materials including paints and other solvents, cleaners, and pesticides. The remnants of these and other products are disposed of as household hazardous waste (HHW) that includes batteries, electronic wastes, and other wastes that are prohibited or discouraged from being disposed of at local landfills. Use of common household hazardous materials are not subject to Federal or State permitting at the consumer level, and it is reasonably foreseeable that upset and accident conditions would not result from residential and mixed-use developments. Consumer-level household hazardous materials and wastes are not subject to Federal or State permitting, and their use is at levels low enough to not result in risk of upset or accident that could harm a substantial number of people, including children attending schools, or have a substantial effect on the functions of the local or regional ecosystem.

The certified General Plan EIR concluded that the future development of additional non-residential development has the potential to increase the use and transport of hazardous materials and increase generation of hazardous waste. Future development would be subject to Federal, State, and local regulations. California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986) requires businesses to notify Californians about significant amounts of chemicals in the products they purchase, in their homes or workplaces, or that are released into the environment.[13] Fire departments inspect these businesses annually for adequate storage, handling, and labeling practices. Chemicals and wastes stored in aboveground or underground storage tanks are subject to guidelines mandated by the California State Water Resources Control Board.[14] Generators of toxic air emissions are required to obtain facility permits for equipment producing those emissions from the South Coast Air Quality Management District (SCAQMD). SCAQMD also requires periodic emissions stack testing to ensure that emission limits are not exceeded.

The General Plan includes policies and implementation measures to protect against impacts of creating, handling, and storing hazardous waste and emissions. For example, Land Use Element Policy 2.1.7 encourages that industrial and residences located in close proximity are compatible neighbors, to limit exposure of sensitive uses to hazardous materials and emissions. In addition, the certified General Plan EIR adopted Mitigation Measures PHS-1 and PHS-2 requiring that viable alternatives to hazardous materials be provided to businesses and listed on the City's website to encourage the use of non-hazardous substitutions. The General Plan EIR determined that impacts would be less than significant with compliance with Federal, State, and local guidelines, and with implementation of General Plan policies and General Plan EIR mitigation measures.

Future development within the Planning Area would consist of residential, office, retail, restaurant, and hotel uses. No industrial uses would be allowed within the Planning Area. Sensitive uses, including but not limited to, residential uses, Duarte High School, Northview Intermediate School, Monrovia Convalescent Hospital, Royal Terrace Health Care, and The Manor at Santa Teresita Hospital are located within one quarter mile of the Planning Area. Future development within the Planning Area would be subject to Federal, State, and local regulations as detailed above. In addition, future development within the Planning Area would be subject to General Plan policies and implementation measures and General Plan EIR Mitigation Measures PHS-1 and PHS-2. Impacts would remain less than significant with compliance with Federal, State, and local guidelines and implementation of General Plan policies and General Plan EIR mitigation measures.

Impacts related to the accidental release of hazardous materials and interference with the adopted emergency response plan would remain less than significant.

As discussed in the certified General Plan EIR, future commercial and industrial development has the potential to increase the use and transport of hazardous materials within the City, potentially increasing accidental releases of hazardous materials. Typical incidents that result in accidental releases of hazardous materials include leaking underground storage tanks, accidents at facilities that handle hazardous materials, and accidents along transport routes such as the I-210, I-605, Huntington Drive, Duarte Road, and Buena Vista Street. The General Plan EIR explains that the use and storage of hazardous substances is regulated by CalEPA, the State Water Resources Control Board, and the Health Hazards Materials Division (Los Angeles County Fire Department). The Los Angeles County Fire Department provides emergency response to accidental release of hazardous substances, and the Hazardous Materials Release Response Plans and Inventory Law of 1985 requires businesses that use, handle, or store hazardous materials above a certain quantity to prepare a response plan. When located in proximity to sensitive land uses, business may be required to prepare a Risk Management and Prevention Plan (RMPP). In addition, General Plan policies and implementation measures work to reduce or eliminate hazards associated with accidental release of hazardous materials. The certified General Plan EIR determined that impacts would be less than significant.

According to the EPA, there are three SQGs and two LQGs of hazardous waste within the Planning Area, all located in the western portion of the Planning Area along Huntington Drive and Buena Vista Street. Both the Federal

government and the State of California require all businesses that handle hazardous materials or extremely hazardous materials to submit a business risk management plan to the local Certified Unified Program Agency (CUPA). The CUPA with responsibility for the City is the County's Environmental Health department. The business risk management plan must include an inventory of the hazardous materials and emergency response plans and procedures to be used in the event of a significant release of a hazardous material. Implementation of Federal and State requirements for the operation of these types of facilities would ensure that exposure to residential uses would be minimized or avoided.

According to the General Plan EIR, hazardous materials pass through the City in route to other destinations via the I-210, I-605, the surface street system, and rail. Transportation of hazardous materials and wastes by truck and rail is regulated by the U.S. Department of Transportation (DOT). DOT regulations establish criteria for safe handling procedures. Federal safety standards are also included in the California Administrative Code. The California Health Services Department also regulates certain haulers of hazardous waste. Although there is some reasonably foreseeable potential for exposure of future residents to hazardous materials and wastes under upset and accident conditions due to pass-through transport of chemicals, Federal and State regulations are in place, with a focus on prevention of accidental releases and measures for appropriate containment and cleanup when accidents occur. No new significant sources of hazardous materials are anticipated to be located within the Planning Area, as industrial uses are not permitted.

Emergency response plans are in place with the City per the Standard Emergency Management System (SEMS) Multi-Hazard Functional Plan in case a hazardous or toxic materials event occurs. In addition, the County of Los Angeles Fire Department provides emergency response related to hazardous materials through their Health Hazardous Material Division. The proposed Specific Pan does not include any land use, circulation, or safety changes that could conflict with implementation of emergency response programs.

The proposed Specific Plan would not create a significant risk of accident conditions or cause conflict with implementation of emergency response programs. With implementation of existing regulations, standards, and General Plan policies and implementation measures, impacts would remain less than significant.

Impacts related to the exposure of persons and structures to a risk of loss, injury, or death involving wildland fires would remain less than significant.

As discussed in the certified General Plan EIR, fire threat is based on four determinants: vegetative cover, human proximity, access, and slope. The San Gabriel Mountains are located adjacent to the City to the north and are highly susceptible to fire hazards. The portion of the City exposed to the greatest threat of wildfire is the very low-density residential development in the hillside area directly north of the urbanized portion of the City. Future development is required to comply with building code requirements and the Los Angeles County Fire Department's fuel modification requirements. In addition, the General Plan establishes policies and implementation measures to protect citizens, their property, and public facilities from fire hazards. The General Plan EIR determined that impacts related to wildfire would be less than significant.

The proposed Planning Area is located within the urbanized portion of the City and is not susceptible to wildland fire.[15] Impacts would remain less than significant.

Impacts related to the dam inundation would remain less than significant.

Three major dams in the upper watershed of the San Gabriel River provide flood protection for the City of Duarte: Cogswell Dam, San Gabriel Dam, and Morris Dam. If a dam were to fail, flood waters would reach Duarte in 20 to 40 minutes. Based on the analysis in the General Plan EIR, potential impacts related to dam inundation are unlikely and were determined to be less than significant because new development would primarily consist of infill development, which would not increase the hazards of dam inundation.

The National Dam Safety Act authorized programs to reduce the risks to life and property from dam failure by establishing a safety and maintenance program. The program requires regular inspection of dams to reduce the risks associated with dam facilities. In addition, potential impacts related to dam inundation would be decreased through General Plan Safety Element policies that require precautionary measures in high risk areas; cooperation with Federal, State, and County agencies; and strategic land use planning. Based on the analysis documented in the General Plan EIR, implementation of General Plan policies implementation of Specific Plan policies to encourage infill development in urbanized areas, and regulatory requirements for dam safety, potential impacts related to dam inundation would remain less than significant under the proposed Specific Plan.

Mitigation Measures

With regard to hazardous materials use, generation, and transport, the following mitigation was required by the certified General Plan EIR and remains applicable to the proposed Specific Plan.

PHS-1 Provide information to businesses on viable alternatives to hazardous materials. Create an informational pamphlet with existing hazardous material substitutions and retailers that sell the materials. Offer the information to applicable business owners who are required to file as a hazardous waste handler in the City.

PHS-2 Provide information on viable alternatives to household hazardous materials on the City's website so households may use alternatives. Information will also educate the public to the health, safety, and environmental benefits of using non-hazardous substitutions.

Level of Significance with Mitigation Incorporated

Impacts related to accidental release of hazardous materials, wildland fires, damn inundation, and flooding would remain less than significant. Impacts related to hazardous materials use, generation, and transport would remain less than significant with incorporation of General Plan Mitigation Measures PHS-1 and PHS-2.

Significant Unavoidable Impacts

All public health and safety impacts associated with implementation of the proposed Specific Plan would remain less than significant through compliance with General Plan policies and implementation measures, mandatory standard regulations, and incorporation of Mitigation Measures PHS-1 and PHS-2. The Specific Plan would not introduce new industrial uses, which could contribute significant amounts of hazardous materials. The Planning Area is located outside of flood and wildfire prone areas. No significant unavoidable public health and safety impacts would result from the proposed Specific Plan.

References

1 City of Azusa General Plan and Development Code EIR, November 2003.

2 United States Environmental Protection Agency. Envirofacts. Performance Nissan (CAD983608589) https://oaspub.epa.gov/enviro/multisys2_v2.get_list?facility_uin=110002863009 [June 2016]

3 United States Environmental Protection Agency. Envirofacts. Roman Cleaners (CAD981672322) https://oaspub.epa.gov/enviro/multisys2_v2.get_list?facility_uin=110002744996 [June 2016]

4 United States Environmental Protection Agency. Envirofacts. Shell Service Station (CAR000120576) https://oaspub.epa.gov/enviro/multisys2_v2.get_list?facility_uin=110012538502 [June 2016]

5 United States Environmental Protection Agency. Envirofacts. Conocophillips (CAL000276914) https://oaspub.epa.gov/enviro/multisys2_v2.get_list?facility_uin=110038854861 [June 2016]

6 United States Environmental Protection Agency. Envirofacts. Rite Aid No 5528 (CAR000211151) https://oaspub.epa.gov/enviro/multisys2_v2.get_list?facility_uin=110042172092 [June 2016]

[7] State Water Resources Control Board. GeoTracker. http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0603706372 [June 2016]

[8] United States Geological Survey. The USGS Water Science School. http://water.usgs.gov/edu/100yearflood.html [September 2015]

[9] Federal Emergency Management Agency. Flood Map Service Center. Map 06037C1415F. https://msc.fema.gov/portal/search?AddressQuery=duarte%2C%20ca [September 2015]

[10] California Department of Toxic Substances. Defining Hazardous Waste. February 2007.

[11] California Department of Toxic Substances. Draft Lead Report. June 2004.

[12] South Coast Air Quality Management District. Rule 1403: Asbestos Emissions from Demolition/Renovation Activities. October 2007.

[13] Office of Environmental Health Hazard Assessment. Proposition 65. http://oehha.ca.gov/proposition-65 [June 2016]

[14] California State Water Resources Control Board. Division of Water Quality – Underground Storage Tank Program. http://www.swrcb.ca.gov/ust/ [June 2016]

[15] California Department of Forestry and Fire Prevention. Los Angeles County Fire Hazard Severity Zones Map. http://www.fire.ca.gov/fire_prevention/fhsz_maps_losangeles.php [September 2015]

This Page Intentionally Left Blank

This section identifies the cultural and historical resources reported by the General Plan EIR as well as with respect to the Town Center Specific Plan Planning Area. This section analyzes the potential for adverse changes on cultural and historical resources that could result from future development within the Planning Area. Potential impacts associated with archaeological remains, historic buildings, traditional customs, tangible artifacts, historical documents, and public records resulting from implementation of the Specific Plan are also addressed as evaluated under the General Plan EIR.

Environmental Setting

Historical Development of Duarte

According to the certified General Plan EIR, the City of Duarte was once inhabited by the Gabrielino Native Americans. The area was named Rancho Azusa de Duarte by the ex-Mexican Corporal Andres Duarte, who was granted 7,000 acres of land in the upper San Gabriel Valley in 1841. In the mid-1800s, Andres Duarte sold most of the Rancho to settle debts. Dr. Nehemiah Beardslee purchased a portion of the land to start the first school in Duarte and lay out the first section of Duarte's water lines.

In the early 1900s, the city was focused on agricultural production, primarily citrus. Agriculture was supported by the Southern Pacific Railway's Duarte branch. Duarte's early residents consisted of English settlers, Americans, Latinos who remained from the Rancho, and Japanese immigrants. In 1928, the Jewish Relief Association opened a tuberculosis sanitarium on 40 acres of land South of Duarte Road. The sanitarium evolved into the City of Hope Medical Center, which specializes in cancer treatment and catastrophic diseases. Also, a group of Carmelite Sisters established the Santa Teresita Rest Home in 1930 as a tuberculosis sanatorium, which then transitioned into an acute care hospital in the 1950s, and remains today as an assisted living facility.
In 1957, the City of Duarte was incorporated and the Duarte Unified School District (DUSD) was established.

The General Plan EIR recognizes the importance of historical preservation in Duarte.. To preserve cultural and historic resources, the City established an all-volunteer museum, the Duarte Historical Museum. In the 1960s, the Duarte Historical Society was formed as a non-profit organization funded by private donations, membership dues, a small endowment, and other contributions.

The City adopted a Historic Preservation Element as part of the General Plan to affirm its commitment to historic preservation.

Historical Structures

Record Searches

For the General Plan EIR, a record search was conducted for historical resources within the City of Duarte listed on the California Historical Landmarks for Los Angeles County, National Register of Historic Places, and National Historical Landmarks.

Properties of historical importance in California are currently designated as significant resources in three State registration programs: State Historical Landmarks, Points of Historical Interest, and the California Register of Historic Places. The California Environmental Resources Evaluation System (CERES) provides a list of the California State Historical Landmarks for Los Angeles County from data provided by the Office of Historic Preservation (OHP) – California Department of Parks and Recreation, and in the California Historical Landmarks Book.

Record searches conducted on March 14, 2007 from the California State Historical Landmarks for Los Angeles County, and on June 17, 2016 from the California OHP, did not identify any historic landmarks in Duarte.[1] [2]

Record searches conducted on October 4, 2006 and March 14, 2007 in the National Register Information System (NRIS) database, and on June 17, 2016 in the National Park Service Listing of National Historic Landmarks by State, did not identify any national historic places within Duarte.[3] [4]

The General Plan EIR did not identify any national historic landmarks within Duarte after a review of the National Historic Landmarks Survey (dated September 2006 and December 2006).

A historical resources records search conducted for the General Plan EIR by the South Central Coastal Information Center (SCCIC), the designated repository of the California Historical Resources Information System (CHRIS), on October 4, 2006 identified two historic properties listed on the Historic Property Data File (HPDF) maintained by the OHP.[5]

- 1431 Buena Vista Street, Duarte School, Duarte School Administration (19-179339), built in 1908; and
- 903 Oak Avenue, built in 1901.

1431 Buena Vista Street is located within the Planning Area and is currently occupied by a restaurant, Old Spaghetti Factory. 903 Oak Avenue is outside the Planning Area.

Survey of Historical Resources

In October 2002, the City conducted a "windshield" survey that identified buildings and structures which displayed architectural elements and structures that contribute to the historical fabric of Duarte.

In December 2002, the Duarte City Council approved a student project from California State Polytechnic University, Pomona (Cal Poly Pomona) to complete an intensive research survey of each of the properties identified in the City's "windshield" survey. The purpose of the survey was the catalog the historical and architectural significance of each structure that was identified. The historic preservation study was conducted by a group of Cal Poly Pomona senior undergraduate students in spring of 2003. Table 4.10-1 (Historic Preservation Study [2003]) summarizes their findings as listed in the General Plan EIR and identifies whether or not these resources are located within the Planning Area. As shown in Table 4.10-1, portions of three significant streets and no significant structures are located within the Planning Area.

Table 4.10-1
Historic Preservation Study (2003)

Resource	Description	Within Specific Plan Planning Area?
Significant Streets and Bridge		
Buena Vista Street	North/South	Yes
Highland Avenue	North/South	Yes
Oak Avenue	North/South	Yes
Royal Oaks Drive	East/West	No
Oak Street Bridge	North/South	No
Significant Residential Structures		
1620 Cotter	California Craftsman bungalow, built in 1926	No
1005 Oak Avenue	Victorian style built in 1878, one of two oldest existing homes, resided by Moore family between 1930 and 1950	No
903 Oak Avenue	Colonial Revival, built in 1901.	No
1017 Oak Avenue	Victorian style built in 1878, one of two oldest existing homes, resided by the Moore family between 1930 and 1950	No

1632 Royal Oaks Drive	Spanish Colonial style built in 1884, known as the Winkler house	No
963 Lewiston	Colonial Revival style, built in 1901, true to original design, use of extensive wood, one of the original Duarte Homes, known as the Marquat house	No
330 Las Lomas	Shingle Style built in 1904, built by and resided by the Maddock family, one of the first ranchos named Las Lomas Ranch, remained intact until subdivided in the 1970s	No
1721 Buena Vista	Victorian style home, built in 1893	No
2155 Buena Vista	American Foursquare style built in 1906, use of river rock on chimney, wood siding, wooden window casings large front porch, known as the Simmons house	No
453 Tocino Drive	Adobe Structure built in 1908, original house of Andres Duarte founder of Rancho Azusa de Duarte, one of the oldest homes in Duarte, site of the Duarte Ranch, resided by Bill Beacon who was instrumental in the avocado and citrus industry.	No
623 Vineyard	Victorian style home, built in 1896	No
1003 Highland	Prairie style built in 1914, home has been the same since the 1960s, known as the Debow house	No
821 Highland	Spanish Colonial Revival built in 1919, Spanish red tiles, known as the Blum House	No
1713 First Street	Craftsman bungalow, built in 1921	No
2018 Mountain	Built in 1918	No
2230 Mountain	Built in 1912	No
2330 Park Rose	Built in 1926	No
915 Edie	Kellogg House, French Eclectic Style built in 1937, original home of Samuel and Linda Kellogg, functioned as a resting home called sheltering wings, structure situated perpendicular to the street	No
220 Las Lomas	Craftsman Bungalow built in 1940, owned by Manuel Garcia an instrumental figure in the avocado industry, the last remaining Rancho remaining in Duarte, the avocado trees on the property are over 80 years old	No
1714 Royal Oaks Drive	Victorian style home, built in 1894	No
2760 Royal Oaks Drive	Ranch style built in 1946 by Bill Bacon Junior, uses rock from nearby riverbed, once resided by Fulbright family, known as the rock house	No
Significant Commercial Structures		
805 Highland Avenue	Nestor Carpet built in 1908, one of Duarte's earliest markets and post office, part of first building may be incorporated into existing building	No
1159 Three Ranch	Packing House built in 1937, one of the original Commercial Fruit packing houses in Duarte, used to be Randolph Fruit Company/Santa Fe Packing House before it was known as Duarte Orchards	No

Archaeological Resources and Historical Resources

Duarte is within the archaeological Santa Barbara sub-region. According to the General Plan EIR, the General Plan Update Draft Background/Existing Condition Report, no data regarding archaeological remains, traditional customs, or historical documents in Duarte were found.

Regulatory Framework

The treatment of cultural resources is governed by Federal and State laws and guidelines. There are specific criteria for determining whether prehistoric and historic sites or objects are significant and/or protected by law. Federal and State significance criteria generally focus on the resource's integrity and uniqueness, its relationship to similar resources, and its potential to contribute important information to scholarly research. Some resources that do not meet Federal significance criteria may be considered significant under State criteria. The laws and regulations are intended to preserve significant prehistoric and historic resources. Federal and State laws and guidelines for protecting historic resources that are pertinent to a local community development and planning program are summarized below.

The National Historic Preservation Act of 1966

Enacted in 1966, the National Historic Preservation Act (NHPA) has become the foundation and framework for historic preservation in the United States. The NHPA authorizes the Secretary of the Interior to expand and maintain a National Register of Historic Places (NRHP); it establishes an Advisory Council on Historic Preservation as an independent federal entity; requires federal agencies to take into account the effects of their undertakings on historic properties, and affords the Advisory Council a reasonable opportunity to comment on any undertakings that may affect historic properties listed, or eligible for listing, in the NRHP; and makes the heads of all federal agencies responsible for the preservation of historic properties owned or controlled by their agencies. In addition, the NHPA authorizes funding for State programs with provisions for pass-through funding and participation by local governments. In summary, the NHPA provides the legal framework for most State and local preservation laws.

The National Park Service has issued regulations governing the NRHP (36 CFR 60). Among the topics covered in detail in these regulations are the effects of listing under Federal law, definition of key terms (e.g. building, site, structure, and district), nomination procedures, nomination appeals, and removing properties from the NRHP. Importantly, Section 60.4 of the regulations presents the criteria by which historic properties are evaluated for the NRHP.

The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

A. that are associated with events that have made a significant contribution to the broad patterns of our history; or that are associated with lives of persons significant in our past; or
B. that are associated with lives of persons significant in our past; or
C. that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
D. that have yielded, or may be likely to yield, information important in prehistory or history.

A point to be emphasized is that a historic property does not have to be nominated for or listed in the NRHP to be afforded protection under the NHPA. Indeed, most of the properties managed under this and other Federal historic-preservation authorities have never been nominated for the NRHP. The significance of a historic district, site, building structure or object—and thus its required consideration under the law—is determined by the property's eligibility for the NRHP with respect to the criteria set forth in 36 CFR 60.4.

The Native American Graves Protection and Repatriation Act

The Native American Graves Protection and Repatriation Act is a Federal law passed in 1990. NAGPRA provides a process for museums and federal agencies to return certain Native American cultural items—human remains, funerary objects, sacred objects, or objects of cultural patrimony—to lineal descendants and culturally affiliated Native American tribes and Native Hawaiian organizations. NAGPRA includes provisions for unclaimed and culturally unidentifiable Native American cultural items, intentional and inadvertent discovery of Native American cultural items on Federal and tribal lands, and penalties for noncompliance and illegal trafficking.

Federal Curation of Archaeological Collections

Federal curation regulations are also provided in 36 CFR Part 79, which apply to collections that are excavated or removed under the authority of the Antiquities Act (16 USC. 431-433), the Reservoir Salvage Act (16 USC. 469-469c), Section 110 of the National Historic Preservation Act (16 USC. 470h-2), or the Archaeological Resources Protection Act (16 USC. 470aa-mm). Such collections generally include those that are the result of a prehistoric or historic resources survey, excavation, or other study conducted in connection with a Federal action, assistance, license, or permit.

California Environmental Quality Act (CEQA)

Enacted in 1971, the California Environmental Quality Act (CEQA) directs lead agencies to first determine whether a cultural resource is a *historically significant* cultural resource. In the protection and management of the cultural environment, CEQA guidelines provide definitions and standards for cultural resources management. The term *historical resource* is defined as follows:

A. A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Registrar of Historical Resources (Pub. Res. Code § 5024.1, Title 14 CCR, Section 4850 et seq.).
B. A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the Public Resources Code or identified as significant in a historical resource survey meeting the requirements of Section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
C. Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be a historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources (Pub. Res. Code § 5024.1, Title 14 CCR, Section 4852).
D. The fact that a resource is not listed in, or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to Section 5020.1(k) of the Public resources Code), or identified in a historical resources survey (meeting the criteria in Section 5024.1(g) of the Public Resources Code) does not preclude a lead agency from determining that the resource may be a historical resource as defined in Public Resources Sections 5020.1(j) or 5024.1.

CEQA also applies to effects on *unique* archeological resources. This is defined in Section 21083.2 of Public Resources Code as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.

2. Has a special and particular quality such as being the oldest of its type or the best available example of its type.
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

If an archeological resource is neither a unique archeological nor a historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment; however, a project with an effect that may cause a substantial adverse change in the significance of a historical resource or unique archeological resource is a project that may have a significant effect on the environment. Effects on cultural properties that qualify as historical resources or unique archeological resources can be considered adverse if they involve physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired.

The California Office of Historic Preservation (OHP)

The State of California OHP administers the California Register program. As a recipient of Federal funding, the OHP meets the requirements of the NHPA with a State Historical Preservation Officer (SHPO) who enforces a designation and protection process, has a qualified historic preservation review commission, maintains a system for surveys and inventories, and provides for adequate public participation in its activities. As the recipient of Federal funds that require pass-through funding to local governments, the OHP also administers the Certified Local Government program for the State of California. The OHP also administers the California Register of Historical Landmarks and California Points of Historical Interest programs. In addition, the State of California Governor's Office of Planning and Research (OPR) published a supplement to the 2003 General Plan Guidelines on November 14, 2005 which provides advisory guidance to cities and counties on the process for consulting with Native American Indian tribes during the adoption or amendment of local general plans, such as the City's General Plan Update, or specific plans, in accordance to Senate Bill 18 (SB18) (Chapter 905, Statutes of 2004).

The California Register of Historic Resources

SHPO maintains the California Register of Historic Resources (CRHR). Properties listed, or formally designated eligible for listing, on the NRHP are automatically listed on the CRHR, as are State Landmarks and Points of Interest. The CRHR also includes properties designated under local ordinances or identified through local historical resource surveys.

Native American Historic Cultural Sites

State law (Public Resources Code 5097-5097.993) addresses the disposition of Native American burials in archaeological sites and protects such remains from disturbance, vandalism, or inadvertent destruction; establishes procedures to be implemented if Native American skeletal remains are discovered during construction of a project; and establishes the Native American Heritage Commission to resolve disputes regarding the disposition of such remains. In addition, the Native American Historic Resource Protection Act makes it a misdemeanor punishable by up to a year in jail to deface or destroy an Indian historic or cultural site that is listed or may be eligible for listing in the California Register of Historic Resources.

California Health and Safety Code

In the event human remains are encountered in any form outside of a cemetery, whoever makes this discovery is required to comply with State of California Public Resources Health and Safety Code Section 7050.5-7055. Specifically, Health and Safety Code Section 7050.5 describes the requirements if any human remains are accidentally discovered during excavation of a site.

State Historic Building Code

Alternative State building regulations may be used for the rehabilitation, preservation, restoration, or relocation of nominated resources. Specifically, the State Historical Building Code, or HBC, (part 8 of Title 24 of the California Administrative Code) shall be used for any historic resource through the city's building permit procedure.

The purpose of the HBC is to provide regulations for the preservation, restoration, rehabilitation, relocation or reconstruction of buildings or properties designated as qualified historical buildings or properties. The HBC is intended to provide solutions for the preservation of qualified historical buildings or properties, to promote sustainability, to provide access for persons with disabilities, to provide a cost-effective approach to preservation, and to provide for the reasonable safety of the occupants or users. The HBC requires enforcing agencies to accept solutions that are reasonably equivalent to the regular code when dealing with qualified historical buildings or properties. The intent of the HBC is to facilitate the preservation and continuing use of qualified historical buildings or properties while providing reasonable safety for the building occupants and access for persons with disabilities.

Assembly Bill 52

AB 52 went into effect on July 1, 2015 and establishes a consultation process with all California Native American Tribes on the NAHC list. If requested by a California Native American Tribe, lead agencies must begin consultation prior to the release of a Negative Declaration, Mitigated Negative Declaration, or Draft EIR. AB 52 establishes a new class of resource, Tribal Cultural Resources (TCR), which takes into consideration Tribal Cultural Values in the determination of project impacts and mitigation. A TCR is a site feature, place, cultural landscape, sacred place or object, which is of cultural value to a Tribe and (1) is either on or eligible for the California Historic Register or a local historic register, or (2) the lead agency, at its discretion, chooses to treat the resource as a TCR.

General Plan

The General Plan includes the following policies and implementation measures pertaining to cultural resources.

P HP 1.1.1 Establish and support all appropriate media for reaching all segments of the community to educate residents and decision-makers concerning the protection of historical resources.

P HP 1.1.2 Encourage public outreach and access to historical information.

P HP 1.2.1 Utilize creative funding sources to promote the development of a comprehensive historic preservation program for the City.

P HP 1.3.1 Encourage training of City staff related to the development and application of historic preservation. Develop a database and update maps which identify potentially historical resources and designated resources.

P HP 2.1.1 Encourage on-going research regarding the City's history and built environment.

P HP 3.1.1 Encourage property owners to preserve the character defining features of historical resources.

P HP 3.1.2 Promote the preservation of historic and cultural resources by providing incentives and technical assistance.

IM Prepare and implement an incentives and technical assistance program for the City.

IM Seek grant opportunities for the development of a preservation incentives program in the City.

IM Develop and promote a Mills Act Program which provides a tax reduction for property owners in return for maintenance and rehabilitation of the property.

IM Establish a process with the Building and Safety Department which makes use of the State Historical Building Code.

IM Develop literature that provides property owners with technical assistance for maintaining historical properties (i.e. maintenance of wood siding, repairing broken windows, etc.).

Thresholds of Significance

Cultural impacts resulting from the implementation of the proposed Specific Plan may be considered significant if they cause any of the following:

- A substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5;
- A substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5;
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or
- Disturb any human remains, including those interred outside of formal cemeteries.

Environmental Impacts

Implementation of the proposed Specific Plan could result in the degradation or loss of historical or cultural resources, destroy paleontological resources, or disturb human remains. Impacts would remain less than significant with mitigation incorporated.

Historic Resources

As discussed in the General Plan EIR, no historical resources within the City of Duarte were listed on the California Historical Landmarks for Los Angeles County, National Register of Historic Places, or National Historical Landmarks. Two historical buildings were listed on the California Historic Resources Inventory, 35 local historical resources of significance were identified in the Cal Poly Pomona Survey, and a previous records search identified one prehistoric archaeological site located near the foothills. Although the City of Duarte is essentially built out and no archaeological resources were identified, implementation of the General Plan Update could result in development unearthing previously unknown archaeological or historical resources or human remains. Future development would be required to comply with applicable Federal, State, and local regulations concerning the preservation of historic resources.

The California Historical Landmarks, National Register of Historic Places, and National Historical Landmarks do not list any resources within the Planning Area. One structure listed on the California Historic Resources Inventory is located within the Planning Area and is currently occupied by a restaurant, Old Spaghetti Factory. Out of the 35 local historical resources identified within the City by the Cal Poly Pomona Survey, three significant roadways are located within the Planning Area: Buena Vista Street, Highland Avenue, and Oak Avenue.

Implementation of the proposed Specific Plan could impact historic resources where new development supplants older development. Adverse modification of historic resources may also occur if appropriate restoration methods are not implemented, thereby permanently altering the historic character of the resource. One historic structure, Old Spaghetti Factory, is located within the Planning Area and could be potentially impacted if the current or future uses do not appropriately restore the building when restoration or rehabilitation is required or proposed. Any modification of this structure, or any other structure identified as a historic property, would be subject to the Secretary of the Interior's Standards for Rehabilitation. The Standards encompass the exterior, interior, and related landscape features and are applied to specific rehabilitation projects in a reasonable manner.[6]

Future development within the Planning Area would be subject to Federal and State regulations regarding preservation of historic resources. In addition, the Specific Plan requires the protection and retention of the Old Spaghetti Factory Building. Further, General Plan policies and implementation measures promoting and encouraging historic preservation would reduce impacts to potentially historic structures that are not already officially listed by the California Historical Landmarks, National Register of Historic Places, and National Historical Landmarks. Impacts to historic resources would remain less than significant.

Archaeological and Paleontological Resources

As discussed in the General Plan EIR, ground-disturbing activities associated with future development could unearth previously unknown archaeological resources. General Plan Mitigation Measure CR-1 requires that all work be stopped and that a qualified archaeologist be retained to evaluate the significance of any resources uncovered during excavation and grading activities. The treatment of all resources uncovered are subject to State requirements and regulations of the Native American Heritage Commission (NAHC).

Future development within the Planning Area would also be subject to General Plan Mitigation Measure CR-1 in addition to applicable State, Federal, and NAHC requirements. Impacts related to the potential uncovering of archaeological and paleontological resources would remain less than significant with mitigation incorporated.

Human Remains

In California, the Native American Graves Protection and Repatriation Act is implemented through the California Native American Historical, Cultural, and Sacred Sites Act, which applies to Federal, State, and private lands. Upon discovery of human remains, the activity must cease, and the County Coroner shall be notified. If remains are of a Native American, the coroner notifies the NAHC, which then notifies the most likely descendants. Compliance with Federal, State, and local regulations and implementation of General Plan policies and implementation measures would minimize potential impacts. General Plan EIR Mitigation Measure CR-2 requires that all activity cease and the County Coroner and a qualified archaeologist and Native American monitor are notified. The certified General Plan EIR determined that potential impacts related human remains would be less than significant with implementation of mitigation.

Future development within the Planning Area would also be subject to General Plan Mitigation Measure CR-2 in addition to applicable State, Federal, and NAHC requirements. Impacts related to the potential uncovering of human remains would remain less than significant with mitigation incorporated.

Mitigation Measures

With regard to historical and cultural resource impacts, the following mitigation was required by the certified General Plan EIR and remains applicable to the proposed Specific Plan.

CR-1 During excavation and grading activities of any future development project, if archaeological resources are discovered, the project contractor shall stop all work and shall retain a qualified archaeologist to evaluate the significance of the finding and appropriate course of action. Salvage operation requirements pursuant to Section 15064.5 of the CEQA Guidelines shall be followed, and the treatment of discovered Native American remains shall comply with State codes of regulations of the Native American Heritage Commission.

CR-2 If human remains are discovered during the development of any projects, all activity shall cease immediately, and the project contractor shall notify the Los Angeles County Coroner's Office immediately under State law, and a qualified archaeologist and Native American monitor shall be contacted. Should the Coroner determine the human remains to be Native American, the Native American Heritage Commission shall be contacted pursuant to Public Resources Code Section 5097.98.

Level of Significance with Mitigation Incorporated

Impacts on historical and cultural resources will remain less than significant with incorporation of General Plan Mitigation Measures CR-1 and CR-2.

Significant Unavoidable Impacts

All impacts related to historical and cultural resources associated with implementation of the proposed Specific Plan would remain less than significant with implementation of General Plan policies and implementation measures, mandatory State regulations (see Regulatory Framework, above), the Specific Plan requirement to protect and retain the building located at 1431 Buena Vista Street, and General Plan Mitigation Measures CR-1 and CR-2. No significant unavoidable historical or cultural impacts would result from the proposed Specific Plan.

References

1 City of Duarte. Duarte General Plan Update Environmental Impact Report. August 2007

2 California Office of Historic Preservation. California Historical Landmarks by County. http://ohp.parks.ca.gov/?page_id=21427 [June 2016]

3 City of Duarte. Duarte General Plan Update Environmental Impact Report. August 2007

4 National Park Service. National Historic Landmarks Program – Listing of National Historic Landmarks by State. https://www.nps.gov/history/nhl/find/statelists/ca/CA.pdf [June 2016]

5 City of Duarte. Duarte General Plan Update Environmental Impact Report. August 2007

6 National Park Service U.S. Department of the Interior. Secretary's Standards for Rehabilitation. https://www.nps.gov/tps/standards/rehabilitation.htm [June 2016]

4.11 Biological Resources

This section describes the local and regional biological resources in the City of Duarte and evaluates whether the proposed Specific Plan would cause a substantial change in biological resource impacts as evaluated under the certified General Plan EIR.

The Initial Study prepared for the Proposed Town Center Specific Plan determined that no impacts on biological resources would result. However, because the General Plan EIR analyzed impacts related to candidate, sensitive, and special status species, sensitive communities, and the movement of migratory species, these impacts are analyzed in this Supplemental EIR.

Environmental Setting

The City of Duarte is located at the base of the San Gabriel Mountains. Its boundaries encompass approximately 3.6 square miles (about 53 percent of the City) of wilderness/hillside areas. As such, the biology of the City varies greatly from the north to the south.

The southern portion of the City is urbanized and approximately 98 percent built out. Little naturally occurring vegetation exists in this area. The northern portion of the urbanized City merges into the foothills and consists of rural residential, transitioning into wilderness area. The Angeles National Forest is located north of the City.

Vegetation Communities

According to the General Plan EIR, the dominant plant communities located within the wilderness/hillside areas include chaparral and riparian communities, with isolated islands of common coastal sage scrub species. The topographical terrain in this area is divided into three districts: (1) the San Gabriel Mountain Range of the Angeles National Forest; (2) the foothills and canyons of the San Gabriel Mountains; and (3) the alluvial slopes of the mountains.

The Angeles National Forest consist of 693,667 acres of forest land and associated habitat; approximately 1,909 acres are within the northern portion of the City's boundaries. The mountainous area provides riparian habitat and is partially covered with coastal sage brush, chaparral, and woodlands. The southern portion of the City consists of urban development with vegetation consisting primarily of landscaped vegetation and ruderal vegetation located along roadways and in shallow soils.

Landscaped vegetation plant species are the dominant species throughout the southern urbanized portion of the City, where the proposed Planning Area is located. This habitat is not considered endangered or of special status by any Federal or State agency. Landscaped vegetation plant species are moderately to very dependent on property owners for water, minerals and nutrients, pruning and maintenance, pest and pathogen control, and for their establishment in an urban setting.

Ruderal vegetation is largely composed of both introduced weedy species and cultivated ornamental, horticultural plants that may be introduced, or native tree, shrub, forb, and grass species. Generally, non-native grassland makes up the ruderal component of this non-native, unnatural plant community.

Wildlife

A field survey of Duarte's northern hillside area was conducted in 2002. During the survey, three reptile species, 25 bird species, and ten mammal species were observed. It was noted that adaptive species may be located throughout the southern portion of the City. According to the General Plan EIR, wildlife species have diminished in the southern portion of the City due to urbanization and lack of adequate habitat.

Sensitive Species and Habitats

The "sensitive" or "special" label denotes a species as a State or Federally listed threatened or endangered species and/or a potential candidate for threatened or endangered listings. In some cases, species are not listed but are monitored because they are near expiration or extinction. The City of Duarte is located on the Azusa, California 7.5-minute series United States Geological Survey (USGS) topographic quadrangle map. Table 4.11-1 (Federally- and State-Listed Species and Other Special Status Species) lists Federally- and State-listed species in Duarte, as identified by the General Plan EIR.

Table 4.11-1
Federally- and State-Listed Species and Other Special Status Species

Type	Scientific Name	Common Name	Federal, State, or Other Status
Plants	Astragalus brauntonii	Braunton's milkvetch	FE
	Calochortus clavatus var. gracilis	Slender mariposa lily	FSC
	Dodecahema leptoceras	Slender-horned spineflower	FE, SE
	Dudleya cymosa ssp. crebrifolia	San Gabriel River dudleya	FSC
	Dudleya densiflora	San Gabriel Mountains dudleya	FSC
	Galium grande	San Gabriel bedstraw	FSC
	Thelypteris puberia var. sonorensis	Sonoran maiden fern	CSC
Fish	Catostomus santaanae	Santa Ana sucker	FT, FS Sensitive, CSC
	Gila orcutti	Arroyo chub	FSC, FS Sensitive, CSC
	Rhinichthys osculus (ssp. 3)	Santa Ana speckled dace	FSC, FS Sensitive, CSC
Reptiles	Clemmys marmorata pallida	Southwestern pond turtle	FSC, FS Sensitive, BLM Sensitive, CSC
Birds	Accipiter cooperii	Cooper's hawk	CSC
	Polioptila californica	Coastal California gnatcatcher	FT, CSC
	Vireo bellii pusillus (nesting)	East Bell's vireo	FE, SE
Mammals	Ovis canadensis nelson	Nelson's bighorn sheep	BLM Sensitive

Relevant Species Status Codes:
FE = Federally listed as endangered
FT = Federally Threatened
FSC = Federal Special Concern Species (a "term-of-art" for former Category 2 candidates)
SE = State-listed as Endangered
CSC = California Special Concern species by CDGF
BLM Sensitive = Species with rapidly declining numbers, and/or small and widely dispersed populations
FS Sensitive = Forest Service "Sensitive Species" recovery program (in cooperation with CDFG and USFWS) identifies and manages species whose populations are declining.

Source: City of Duarte. Duarte General Plan Update Final Environmental Impact Report, Table 4.11-3, Page 4.11-6. August 2007

Regionally sensitive natural communities or habitat types are an important indicator of the existence of sensitive species because appropriate and healthy habitat is essential for survival. The following habitat types are listed in the General Plan EIR because they are either necessary for the existence of the sensitive species listed in Table 4.11-1 or they may be located within the City's boundaries independent from sensitive species.

Canyon Live Oak Ravine Forest – occurs at high elevations in the San Gabriel Mountains along perennial waters such as the San Gabriel River and its tributaries.

Riversidian Alluvial Fan Sage Scrub – occurs in certain sites within the San Gabriel River drainage and Sawpit Wash near Ruby Canyon.

Southern California Arroyo Chub/Santa Ana Sucker Stream – occurs in perennial streams such as the San Gabriel River and its tributaries.

Southern Coast Live Oak Riparian Forest – occurs in areas of the San Gabriel Mountains with perennial or intermittent streams in Bliss, Bradbury, and Spinks canyons north of Duarte. Forest habitats suggest a greater geographical distribution and density of trees compared with woodlands.

Southern Sycamore Alder Riparian Woodland – occurs along perennial and/or intermittent streams such as the San Gabriel River and its tributaries, or in other canyons of the foothills with sufficient natural water flows.

According to the General Plan EIR, no available data has indicated that the regionally sensitive plant communities listed above exist within the urbanized area of the City.

The California Natural Diversity Database (CNDDB) was consulted to determine the potential for occurrence of sensitive species within or in vicinity of the Planning Area.[1] The result identified an area of Riversidian Alluvial Fan Sage Scrub located within the Santa Fe Flood Control Basin and San Gabriel River, but not within the Planning Area. According to the CNDDB database, no occurrence of sensitive species has been identified within the Planning Area.

Regulatory Framework

A variety of Federal, State and local regulations address sensitive plants and wildlife resources. These plans and programs have been enacted through Federal, State and local action, and are administered by agencies and special districts. The following paragraphs summarize the regulatory context that biological resources are managed within the planning area.

Federal Endangered Species Act

The Federal Endangered Species Act (FESA) is administered by the United States Fish and Wildlife Service (USFWS) and was established to protect wildlife species and habitats from extinction and diminishment. FESA applies to federally listed species and habitat occupied by federally listed species. FESA Section 9 forbids acts that directly or indirectly harm listed species. Section 9 also prohibits 'taking' of any species of wildlife or fish listed as endangered. These restrictions apply to all federal agencies and all persons subject to U.S. jurisdiction. Specifically, Section 9 (16 U.S.C. 1538) identifies prohibited acts related to endangered species and prohibits all persons, including Federal, State and local governments, from 'taking' listed species of fish and wildlife except as specified under the provisions for exemptions (16 U.S.C. 1539). The term *take* is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct (16 U.S.C. 1532[18]).

California Endangered Species Act

The California Endangered Species Act (CESA) (Fish and Game Code, Section 2050 et seq.) generally parallels the main provisions of FESA and is administered by the California Department of Fish and Game (CDFG). Under CESA the term *endangered species* is defined as a species of plant, fish, or wildlife that is "in serious danger of becoming extinct throughout all, or a significant portion of its range" and is limited to species or subspecies native to California. CESA prohibits the taking of listed species, except as provided in State law. Specifically, section 2053 of CESA prohibits projects that would jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat essential to the continued existence of those species if there are reasonable and prudent alternatives available consistent with conserving the species or its habitat that would prevent jeopardy. Any future development or redevelopment in the planning area that has the potential to affect wildlife is subject to the restrictions contained in CESA.

Native Plant Protection Act

California's Native Plant Protection Act (NPPA) (California Fish and Game Code Section 1900-1913) requires all State agencies to establish criteria for determining if a species, subspecies, or variety of native plant is endangered or rare. Provisions of the NPPA prohibit the taking of listed plants from the wild and require notification of the CDFG at least 10 days in advance of any change in land use that would adversely impact listed plants. This requirement allows CDFG to salvage listed plant species that would otherwise be destroyed.

Migratory Bird Treaty Act of 1918

The Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703) implements various treaties and conventions between the U.S., Canada, Japan, Mexico and the former Soviet Union for the protection of migratory birds. Under the MBTA, the taking, killing or possessing of migratory birds is unlawful, unless expressly permitted by other Federal regulations. The MBTA provides that it is unlawful to pursue, hunt, take, capture or kill any migratory bird, part, nest, egg or product. The MBTA requires that project-related disturbance at active nesting territories be reduced or eliminated during critical phases of the nesting cycle (1 February to 31 August, annually). Migratory bird species protected by this act are defined in Title 50, CFR Section 10.13.

General Plan

The General Plan includes the following policies and implementation measures pertaining to biological resources.

P Con 1.1.4 Promote and encourage multi-agency involvement in identifying opportunities for hillside preservation and protection.

P Con 1.1.5 Form partnerships with Federal, State, County, other agencies, and private entities to help protect and preserve hillside land.

IM Work with other cities and agencies to partner in preserving open space.

P Con 1.1.6 Continue to investigate open space land opportunities for the preservation of natural resources and sensitive habitat.

P Con 3.1.2 Analyze all projects as defined in the California Environmental Quality Act (CEQA) for potential impacts on the community and utilize the proper mitigation measures to mitigate any potential adverse impacts on the community.

P Con 6.1.1 Maintain very low densities in the northernmost portion of the city not included in the national forest. Further development must be sensitive to the terrain, natural environment and aesthetics.

IM Implement the General Plan land use policy. Implement the city's hillside development ordinance.

Thresholds of Significance

Biological resources impacts resulting from the implementation of the proposed Specific Plan may be considered significant if they would result in the following:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;

- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means (refer to Section, 7.0 Effects Found Not to be Significant);
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (refer to Section 7.0, Effects Found Not to be Significant); or
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan (refer to Section 7.0, Effects Found Not to the Significant).

Environmental Impacts

Impacts on species identified as candidate, sensitive, or special status species would remain less than significant.

As discussed in the certified General Plan EIR, no endangered, threatened, or rare species listed by the United States Fish and Wildlife Service (USFWS) or California Department of Fish and Wildlife (CDFW) are known to be within the area of the Duarte where development is permitted. The urbanized areas of the City are built out and therefore do not contain habitat that would support endangered, threatened, or rare species. Suitable habitat for one federally listed plant species, Braunton's milkvetch, is located in the lower hillside area in the norther portion of the City; however, Braunton's milkvetch was not observed during the field survey conducted in 2002. None of the sensitive or legally protected animal species identified on the Azusa quadrangle regulatory database occur due to lack of suitable habitat, with the exception of the Cooper's hawk. Additional environmental review would be required for development located in the lower hillside area to determine the potential for the presence of Cooper's hawk (however, this area is outside the Town Center Planning Area). Implementation of General Plan policies and implementation measures would reduce potential threat to candidate, sensitive, or special status species. The General Plan EIR determined that impacts would be less than significant.

The Planning Area is located in the urbanized area of Duarte. The General Plan EIR notes that the urbanized portions of the City are built out and therefore do not contain habitat that would support endangered, threatened, or rare species. The Planning Area is completely urbanized and lacks any native habitat. The California Natural Diversity Database (CNDDB) was consulted to determine the potential for occurrence of sensitive species within or in vicinity of the Planning Area.[2] According to the CNDDB database, no occurrence of sensitive species has been identified within the Planning Area. Considering the lack of habitat supporting sensitive species in the Planning Area, impacts would remain less than significant.

Impacts to sensitive natural communities would remain less than significant.

As discussed in the General Plan EIR, no sensitive natural communities or habitats exist in the urbanized portions of Duarte because it is approximately 98 percent built out. The hillside area south of the foothills has the potential to support sensitive natural communities; however, none of the five endangered/threatened or sensitive habitats were located within the area. Implementation of General Plan policies and implementation measures would ensure that impacts to potential sensitive natural communities would be minimized. The certified General Plan EIR determined that impacts would be less than significant.

The proposed Planning Area is located in the urbanized area of Duarte. According to the U.S. Fish & Wildlife Service National Wetlands Inventory, there are no areas designated as riparian habitat within the Planning Area. As noted in the General Plan EIR, the urbanized portions of the City are built out and therefore would not have the potential to support sensitive natural communities. Therefore, impacts would remain less than significant.

Implementation of the proposed Specific Plan would not interfere substantially with the movement of a native resident or migratory wildlife species. Impacts would remain less than significant.

As discussed in the General Plan EIR, the southern portion of Duarte is highly urbanized and lacks sufficient habitat. No migratory wildlife species are known to exist within this portion of the City. The increase in residential units and non-residential square footage throughout this area would have minimal additional effect on migratory species. The vegetative hillside and mountainous wilderness area in the northern portion of the City have the potential to support native resident or migratory wildlife species; however, a study did not identify any wildlife corridor in the area. Therefore, the certified General Plan EIR determined that impacts would be less than significant. In order to minimize impacts in the northern portion of the City, General Plan policies and implementation measures have been implemented.

The proposed Planning Area is located in the urbanized area of Duarte. As noted in the General Plan EIR, the urbanized portions of the city are built out and therefore would not have the potential to serve as a wildlife corridor for native resident or migratory wildlife species. Therefore, impacts would remain less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance with Mitigation Incorporated

Not applicable.

Significant Unavoidable Impacts

All biological impacts associated with implementation of the proposed Specific Plan would remain less than significant with implementation of General Plan policies and implementation measures. No significant unavoidable biological impacts would result from the proposed Specific Plan.

References

1 California Department of Fish and Wildlife. California Natural Diversity Database. http://bios.dfg.ca.gov [September 2015]

2 California Department of Fish and Wildlife. California Natural Diversity Database. http://bios.dfg.ca.gov [September 2015]

This section analyzes projected impacts on water supplies and distribution systems that may result from the implementation of the proposed Specific Plan. This section evaluates whether the proposed Specific Plan would cause a substantial change in water supply impacts as evaluated under the certified General Plan EIR.

Environmental Setting

Urban Water Management Plan

The Urban Water Management Plan Act passed in 1983, California Water Code Sections 10610 through 10657, was created to provide assistance to water agencies in their long-term water resources planning and to ensure adequate water supplies for existing and future water demand. The Act requires every Urban Retail Water Supplier or Water Agency to prepare and adopt an urban water management plan every five years. The Act underwent a significant amendment in 2009, after the drought of 2007-2009 and as a result of the governor's call for a statewide 20 percent reduction in urban water use by the year 2020. This was the Water Conservation Act of 2009 or SB X7-7 which required agencies to establish water use targets for 2015 and 2020 that would result in statement saving of 20 percent by 2020.

Los Angeles Division Urban Water Management Plan

The 2010 Urban Water Management Plan (UWMP) was prepared by the California American Water Company (Cal Water) Southern Division - Los Angeles County District. The Los Angeles County District includes the Baldwin Hills, Duarte, and San Marino service areas. The final 2010 Southern Division Los Angeles County District UWMP was formally adopted by California American Water on January 9, 2012.

Water Supply and Distribution System

Water Supply

The City of Duarte lies within the San Gabriel Groundwater Basin.[1] Forty-six separate water agencies, including municipal water departments, private water companies (including Cal Water), and other water agencies, draw approximately 200,000 acre-feet per year (AFY) of water from the San Gabriel Groundwater Basin.[2] The basin is replenished by stream runoff from the San Gabriel Mountains, rainfall onto the valley floor, and subsurface inflow from the adjacent Raymond and Puente Basins. The basin is also recharged through percolation from urban water usage and discharges from the San Jose Creek Wastewater Reclamation Plant and Whittier Narrows Reclamation Plant. In addition, imported water purchases from the Metropolitan Water District and the State Water Project are used to recharge the basin.[3]

The Duarte service area encompasses approximately 6,484 acres and is located approximately 20 miles northeast of downtown Los Angeles. The Duarte service area provides water to 7,594 customers.[4]

The surface water diversion right for Duarte is fixed at an annual allocation of 1,672 AFY and does not change from year to year. Historically, the surface water has been diverted from the San Gabriel River located in the San Gabriel watershed. The Duarte irrigation system is currently in use by 52 customers and is under a plan to be retired between 2015 and 2017, once system upgrades have been made to absorb the additional demand of irrigation customers from a portion of the San Gabriel River surface waters.

Local groundwater for the City of Duarte originates from eight wells within and around Duarte. The California American Water Company Southern Division – Los Angeles County District provides potable water to the Duarte service area, which includes the cities of Azusa, Bradbury, Duarte, Irwindale, and Monrovia. Groundwater is the primary source of supply for the Los Angeles County District. The Duarte service area overlies the Main San Gabriel Basin (MSGB), an unconfined aquifer which provides up to 90 billion gallons of groundwater annually to the San Gabriel Valley.[5]

The Duarte service area is classified as an "Integrated Producer," which provides for two types of water allocation rights. Duarte has an adjudicated right to 1.84634 percent of the annual safe yield of the MSGB as well as a fixed surface water allocation of 1,672 acre feet per year.[6] According to the Urban Water Management Plan for the Los Angeles County District, the Duarte service area pumped 5,830 acre feet in the year 2010.

In compliance with the State of California and the United States Environmental Protection Agency, Cal Water issues annual water quality reports. The purpose of the report is to inform the public about potable water quality and awareness of the need to protect drinking water sources. In 2015, Cal Water conducted its annual water quality assessment of potable water sources, which included testing for contaminants at various locations within the Duarte water system, all of which were found to be below State and Federal maximum allowable levels.[7]

Peakload water supply is defined as the supply of water available to meet both domestic water and firefighting needs during a given season and time of day when domestic water demand on a water system is at its peak. Peakload water demand is always highest during the hottest summer months. Knowledge of the peakload water demand is critical information required to allocate adequate water supplies in case of an emergency. According to the 2010 UWMP for California American Water, Duarte had a supply of 6,139 AFY of water in 2010 and was projected to have a supply of 7,382 AFY in 2015.[8] Duarte consumed a total of 6,145 AFY in 2005 and 5,450 AFY in 2010.

Distribution System

According to the General Plan, Cal Water provides potable water to the Duarte service area through approximately 300 metered connections in Bradbury and all of the incorporated areas of Duarte. Water distribution pipelines and related infrastructure within the Duarte service area are operated and maintained by Cal Water. At the time of preparation of the General Plan EIR, water distribution pipelines within the Duarte service area had a design capacity to carry a maximum flow of 39.10 cubic feet per second (cfs). Approximately 91 miles of water main pipelines, ranging in size from one-inch to 30-inches in diameter, traverse through the Duarte service area.

Regulatory Framework

State Resolution No. W-4976

In recent years, the State of California has been experiencing dry weather conditions due to less rainfall in the area, thus causing a statewide drought emergency. In an effort to promote water conservation efforts, Resolution No. W-4976 was adopted by the California Public Utilities Commission on February 27, 2014 to establish procedures for water conservation measures in order to ensure a reduction in consumption. Since many water utility agencies and companies secure their water supply from multiple sources, including water wholesalers, surface water and groundwater; the adoption of this mandate has affected how water utility districts plan their service distribution while encountering various levels of water supply adjustments within each service area.

General Plan

The General Plan includes the following policies and implementation measures pertaining to water supply.

P Con 2.1.1 Work to conserve current water supplies and seek new sources of water.

P Con 2.1.2 Maintain groundwater recharge areas to protect water quality and ensure continued recharge of groundwater basins.

IM Comply with NPDDES/SUSMP requirements.

P Con 2.1.3 Require the use of native and other drought-resistant plants to reduce the amount of water used for landscaping.

P Con 2.1.4 Require the installation of water saving irrigation systems for all new development.

P Con 2.1.5 Reduce the amount of impervious surfaces through the use of porous ground cover materials.

P Con 2.1.6 Encourage water conservation in residential, commercial, and industrial development.

IM Continue to examine water consumption impacts of new development in conjunction with environmental review.

P Con 5.1.3 Provide an adequate level of fire equipment, peakload water supply, and personnel to protect the community.

IM Develop a system of fire hazard mitigations based upon the probability of occurrence and number of people at risk. Replace out-of-date apparatus and equipment on a scheduled basis. Determine peakload water demand and supply.

P HOU 7.2 Encourage energy and water conservation measures in the design of future residential development.

Thresholds of Significance

Water supply and distribution systems impacts resulting from the implementation of the proposed Specific Plan may be considered significant if they would result in the following:

- Have sufficient water supplies available to serve the project from existing entitlements and resources, or require new or expanded entitlements; or
- Require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

Environmental Impacts

Implementation of the proposed Specific Plan would not result in increased demand for water supplies and infrastructure within the City. Impacts would remain significant and unavoidable.

As discussed in the certified General Plan EIR, the 2005 Urban Water Management Plan (UWMP) for the entire Cal Water Los Angeles Division projected water usage based on a population of 22,440 persons in 2005 and 23,053 persons in 2020 for the Duarte District, as well as populations for Baldwin Hills and San Marino Districts. Implementation of the General Plan Update would result in a population of approximately 25,507 persons in 2020 within the City of Duarte, which exceeds the anticipated population accounted for in the 2005 UWMP. In addition, Cal Water prepared the 2000 Comprehensive Planning Study (2000 CPS) to assess if it has sufficient water supplies to accommodate future planned development and new customers. The 2000 CPS did not anticipate build-out of the General Plan Update.

The General Plan EIR notes that new developments would be subject to fees required by Cal Water to mitigate impacts on water services prior to connection to the water system in Duarte. Cal Water would not allow new developments to connect to its water distribution system unless there are sufficient water supplies to accommodate the proposed uses. In addition, the certified General Plan EIR includes Mitigation Measure WS-1 to help ensure that adequate water supplies and infrastructure are available prior to approval of project tract maps. Compliance with General Plan policies and implementation measures, and implementation of certified General Plan EIR Mitigation

Measure WS-1, would minimize impacts on water supplies and infrastructure; however, the certified General Plan EIR determined that availability of water supply and facilities to accommodate General Plan build-out could not be guaranteed at that time. Therefore, the certified General Plan EIR determined that impacts would be significant and unavoidable.

Implementation of the proposed Specific Plan is anticipated to result in an increase of 1,036 residential units, 331 hotel rooms, and 217,021 square feet of retail, office, restaurant, and civic uses. As discussed in Section 4.2 (Population and Housing), build-out of the proposed Specific Plan would result in an anticipated increase of 3,150 residents, for a citywide population of 25,327. Projected development and increases in population would increase the demand for water supplies and infrastructure.

The Planning Area is primarily built out and water distribution pipelines and infrastructure are currently in place to serve future development. All future development within the Planning Area would be subject to pay development fees to upgrade or extend local sewer lines and connection fees, if necessary.

The 2010 Urban Water Management Plan (UWMP) for the Los Angeles County District of California American Water has been prepared to support regional long-range planning documents and provides a standardized methodology to assess water resource needs and availability. Supply projections indicated in Tables 4-1 and 3-2 of the UWMP are summarized in Table 4.12-1 (UWMP Projected Water Supply).

Table 4.12-1
UWMP Projected Water Supply

Scenario	Projected Supply (AFY)
Normal Year 2030	7,362
Single Dry Year Event	8,377
Multiple Dry Year Event Year 1	8,377
Multiple Dry Year Event Year 2	9,027
Multiple Dry Year Even Year 3	7,416
Source: California American Water Southern Division – Los Angeles County District. 2010 Urban Water Management Plan. Tables 4-1 and 3-2 June 2012	

Table 4.12-1 indicates that there is sufficient supply available to meet projected demand of 6,452 AFY in the Duarte Service Area. Based on default air quality modeling results (see in Appendix E), the proposed project is anticipated to require an increase of 579.7 AFY of water compared to existing conditions. Table 3-2 of the UWMP indicates that the Duarte Service Area required a total of 5,450 AFY in 2010 and was projected to require 6,471 AFY by 2015. With an anticipated supply of 7,362 AFY during a normal year and a 2015 demand of 6,471, there would be sufficient capacity to serve anticipated increases in water demand under the Specific Plan. If the Specific Plan is adopted, its projected water demand would be incorporated into subsequent UWMP analyses and forecasts.

Although the 2010 UWMP indicates that sufficient water supply would be available to serve anticipated growth within the Planning Area, drought conditions may affect long-term water supply. As noted in the certified General Plan EIR, new developments would be subject to fees required by Cal Water to mitigate impacts on water services prior to connection to the water system in Duarte. Cal Water would not allow new development to connect to its water distribution system unless there are sufficient water supplies available to accommodate the proposed uses. In addition, future development would be subject to General Plan EIR Mitigation Measure WS-1 and General Plan policies and implementation measures. However, due to the uncertainty of future water supply availability and facilities, impacts would remain significant and unavoidable.

Mitigation Measures

With regard to water supply, the following mitigation was required by the General Plan EIR and remains applicable to the proposed Specific Plan.

WS-1 Prior to approval of project tract maps, the project owner/developer(s) shall be required to coordinate with California American Water to determine requirements necessary to mitigate impacts to water supplies and distribution on-site and off-site. Proposed projects shall implement mitigation measures, if required, to the satisfaction of California American Water and the City of Duarte.

Level of Significance with Mitigation Incorporated

With implementation of General Plan policies and implementation measures, and General Plan EIR Mitigation Measure WS-1, impacts related to water supply and distribution would remain significant and unavoidable.

Significant Unavoidable Impacts

Compliance with General Plan policies and implementation measures, and with General Plan EIR Mitigation Measure WS-1, would reduce impacts on water supplies and distribution facilities. Nonetheless, the certified General Plan EIR determined that implementation of the General Plan would result in significant and unavoidable impacts on water supplies and distribution facilities. Impacts on water supplies and distribution facilities with implementation of the proposed Specific Plan would remain significant and unavoidable, Individual projects would continue to be reviewed by Cal Water according to its standard, mandatory procedures and regulations.

References

1 Duarte General Plan Update Draft Background/Existing Condition Report, 2005
2 Duarte General Plan Update Draft Background/Existing Condition Report, 2005
3 Duarte General Plan Update Draft Background/Existing Condition Report, 2005
4 California American Water Southern Division – Los Angeles County District. 2010 Urban Water Management Plan. June 2012
5 California American Water Southern Division – Los Angeles County District. 2010 Urban Water Management Plan. June 2012
6 California American Water Southern Division – Los Angeles County District. 2010 Urban Water Management Plan. June 2012
7 California American Water. 2015 Annual Water Quality Report PWS ID: 1910186. 2015
8 California American Water Southern Division – Los Angeles County District. 2010 Urban Water Management Plan. June 2012

This Page Intentionally Left Blank

This section identifies the nature and location of wastewater conveyance and treatment facilities, and existing related infrastructure, for the City of Duarte. This section provides an analysis of projected impacts on wastewater conveyance and treatment facilities, as well as the estimated demands that may result, from implementation of the Specific Plan.

Environmental Setting

Wastewater Conveyance

Wastewater services within the City of Duarte are provided by the Los Angeles County Department of Public Works (LACDPW). Local sewer lines within Duarte are owned by the City. LACDPW operates and maintains Duarte's local wastewater conveyance infrastructure, which connects to the County Sanitation Districts of Los Angeles County (CSDLAC), District 22, regional trunk sewer pipelines. According to the certified General Plan EIR, wastewater is conveyed through the CSDLAC's trunk sewer pipelines to the San Jose Creek Water Reclamation Plant (SJCWRP) and the Whittier Narrows Water Reclamation Plant (WNWRP).

According to the General Plan EIR, Duarte's local sewer lines, which are typically eight inches in diameter, are located throughout the City in public street rights-of-way. The General Plan EIR reported that LACDPW average sewer flows are not tracked. New development undergoes mandatory, standard review by the City and LACDPW through an engineering study to determine available capacity of local sewer lines.

CSDLAC District 22 serves the majority of Duarte, Azusa, Irwindale, Glendora, San Dimas, Covina, and West Covina. Currently, undeveloped portions of Duarte within the foothills are located outside of the jurisdictional boundaries of the Sanitation District and will require annexation into District 22 before sewer service can be provided to these areas; the Town Center Planning Area is completely within District 22. According to the General Plan Housing Element, there are five regional trunk sewer pipelines within the City maintained by the CSDLAC. The pipeline size, conveyance capacity, peak flow, and date last measured for each of these trunk sewer lines are listed below.[1]

- Duarte Trunk Sewer, 12-15 inches in diameter, design capacity of 2.75 to 9.08 cubic feet per second (cfs), and peak flow of 1.32445 cfs, measured in 2010.
- Duarte Relief Trunk, 18 inches in diameter, design capacity of 7.98 to 8.15 cfs (peak flow and date measured unavailable).
- Joint Outfall B Unit 8H Trunk Sewer, 10-15 inches in diameter, design capacity of 1.76 to 6.29 cfs, and peak flow of 0.8 cfs, measured in 2012.
- Buena Vista Trunk Sewer, 15 inches in diameter, design capacity of 7.64 cfs, and peak flow of 0.79383 cfs, measured in 2010.
- Joint Outfall B Unit 8G Trunk Sewer, 12-15 inches in diameter, design capacity of 3.88 to 6.18 cfs, and peak flow of 1.30443, measured in 2012.
- Joint Outfall B Unit 8G Relief Trunk Sewer, 15-21 inches in diameter, design capacity of 7.44 to 36.02 cfs, and peak flow of 3.46433 cfs, measured in 2012.

Treatment Facilities

Effluent generated in the City flows through regional trunk pipelines to SJCWRP and WNWRP. SJCWRP provides primary, secondary, and tertiary wastewater treatment with a design capacity of 100 million gallons per day (mgd) and currently processes an average flow of 65 mgd. WNWRP provides both primary and secondary treatment and has a design capacity of 15 mgd and currently processes an average flow of 7 mgd.[2]

SJCWRP serves a residential population of approximately one million people. Approximately 42 million gallons per day of reclaimed water are reused at over 130 different reuse sites. These sites include groundwater recharge, plus

irrigation of parks, schools, and greenbelts, with the remainder discharged into the San Gabriel River. SJCWRP also supplies water to dozens of cities in the Central Los Angeles Basin.

Existing Wastewater Generation

As of January 1, 2016, the City of Duarte generated the following amounts of wastewater:[3]

- Per-Capita Generation Rate – 71 gallons per day (gpd)
- Residential Commercial Flow – 1,574,567 gpd
- Industrial Flow – 240,139 gpd
- Total City of Duarte Wastewater Flow – 1,814,706 gpd
- Total City of Duarte Wastewater Cubic Feet Per Second (cfs) – 2.8

Thresholds of Significance

Wastewater conveyance and treatment impacts resulting from the implementation of the proposed Specific Plan may be considered significant if they would result in the following:

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;
- Require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects; or
- Result in a determination by the wastewater treatment provider that serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

Environmental Impacts

Impacts related to increased demand for sewer service would remain less than significant with mitigation incorporated.

As discussed in the certified General Plan EIR, wastewater service within the City of Duarte is provided by County Sanitation Districts of Los Angeles County (CSDLAC), District 22. Build-out of the General Plan is estimated to generate an average wastewater flow of 417,147 gallons per day (gpd). The San Jose Creek Water Reclamation Plant (SJCWRP) and the Whittier Narrows Water Reclamation Plant (WNWRP) have the capacity to convey and treat up to 100 and 88.5 million gallons per day (mgd), respectively, and increases in wastewater flow generated by General Plan build-out would not significantly impact overall operation of the LACDPW Consolidated Sewer Maintenance District. All developments would undergo mandatory, standard review by the City of Duarte and the CSDLAC to ensure sufficient local and trunk sewer capacity. All developments would be required to pay development fees to the City of Duarte to upgrade or extend local sewer lines and connection fees to CSDLAC. Additionally, CSDLAC would allow new developments to connect to its sewer system only if there is sufficient capacity or planned expansions of its facilities to accommodate proposed developments. Further, the General Plan EIR includes Mitigation Measures WW-1 and WW-2 to ensure that impacts on wastewater conveyance and treatment facilities would be minimized. Therefore, the certified General Plan EIR determined that impacts would be less than significant with implementation of Mitigation Measures WW-1 and WW-2.

As of January 2016, the City of Duarte generated a total of 1.8 mpd of wastewater flow. Build-out of the proposed Specific Plan would result in decreases in retail, places of worship, and nursing home square footage and increases in office, restaurant, civic use, hotel, and multi-family uses, which are summarized in Table 4.13-1 (Projected Increase in Daily Sewer Flow). According to Los Angeles County Sanitation District generation factors, build-out of the proposed Specific Plan would generate an additional 378,448 gpd of wastewater, for a total City flow of 2.2 mpd. SJCWRP and WNWRP currently treat approximately 65 mgd and 7 mgd, and have the capacity to treat 100 mgd and 88.5 mgd, respectively. Therefore, there is sufficient capacity to treat the additional wastewater flows generated by build-out of the proposed Specific Plan. All future development within the Planning Area would be subject to review

on a project-by-project basis and would be required to pay development fees to upgrade or extend local sewer lines and connection fees. Additionally, General Plan Mitigation Measures WW-1 and WW-2 would ensure that impacts would be minimized. Impacts would remain less than significant.

Table 4.13-1
Projected Increase in Daily Sewer Flow

Land Use	Generation Factor	Units	Total (gpd)
Restaurant	1,000 gpd/1,000 SF	176,194 SF	176,194
Multi-Family Residential (5 or more DU)	156 gpd/du	1,036 du	161,616
Hotel	125 gpd/room	331 Rooms	41,375
Office Use	200 gpd/1,000 SF	62,230 SF	12,446
Civic	200 gpd/1,000 SF	35,518 SF	7,103
Nursing Home	125 gpd/bed	(140 Beds)	(17,500)
Retail	326 gpd/1,000 SF	(6,764 SF)	(2,205)
Church	50 gpd/1,000 SF	(11,630 SF)	(581)
		Total	378,448

Source: Sanitation Districts and Los Angeles County. Table 1 – Loadings for Each Class of Land Use. http://www.lacsd.org/civicax/filebank/blobdload.aspx?blobid=3531 [June 2016]

Mitigation Measures

With regard to wastewater treatment, the following mitigation was required by the certified General Plan EIR and remains applicable to the proposed Specific Plan.

WW-1 Prior to issuance of a wastewater permit, payment of connection fees shall be made to connect (directly or indirectly) to CSDLAC's sewerage systems.

WW-2 Prior to issuance of building permits, an engineering study shall be required to determine the adequacy of the sewer systems.

Level of Significance with Mitigation Incorporated

Impacts related to wastewater treatment would remain less than significant with incorporation of General Plan Mitigation Measures WW-1 and WW-2.

Significant Unavoidable Impacts

All wastewater impacts associated with implementation of the proposed Specific Plan would be less than significant with incorporation of General Plan Mitigation Measures WW-1 and WW-2. No significant unavoidable wastewater impacts would result from the proposed Specific Plan.

References

1 Adriana Raza. Sanitation Districts of Los Angeles County. Written Communication. June 15, 2016
2 Paul Prestia. Sanitation Districts of Los Angeles County. Written Communication. June 14, 2016
3 Adriana Raza. Sanitation Districts of Los Angeles County. Written Communication. June 15, 2016

This Page Intentionally Left Blank

This section identifies fire protection services within the City of Duarte and provides an analysis of the potential impacts associated with the build-out of the proposed Town Center Specific Plan.

The Initial Study prepared for the proposed Town Center Specific Plan determined that impacts to fire protection would be less than significant. However, the certified General Plan EIR analyzed fire protection, so it has been analyzed in this Supplemental EIR.

Environmental Setting

Fire Protection Services

Fire protection services in the City of Duarte are provided by the Los Angeles County Fire Department (LACFD). The primary first-in response jurisdictional station for the City is Fire Station 44, Battalion 16, located at 1105 South Highland Avenue within Duarte. This station provides the following apparatus and personnel:

- 2 engines (truck numbers 44, and 244);
- 1 patrol truck (patrol 44);
- 1 water truck (water tender 44); and
- 21 personnel (three shifts of 7).

LACFD Station 44 had an average response time (from the time of dispatch) in the 2015 calendar year of 4:41 minutes for emergency response calls and 5:46 minutes for non-emergency response calls for Engine 44.[1]

Six fire stations outside of Duarte city limits also provide fire protection services to Duarte.[2] LACFD Station 29 (located at 14334 East Los Angeles Street, Baldwin Park), Station 32 (located at 605 North Angeleno Avenue, Azusa), and Station 48 (located at 15546 East Arrow Highway, Irwindale) have first-in assistance to the City of Duarte, depending on the severity and location of the fire. LACFD Station 169 (located at 5112 North Peck Road, El Monte) has a first-in response jurisdictional area in the southwest portion of Duarte. The Monrovia Fire Department (MFD) Station 101 (located at 141 East Lemon Avenue) and Station 102 (located at 2055 South Myrtle Avenue) in Monrovia provide mutual aid to Duarte.

The City of Duarte encompasses 1,909 acres of the Angeles National Forest. Under a mutual aid agreement, both the U.S. Forest Service (USFS) and the Forestry Division of the LACFD would respond to a forest fire in the Angeles National Forest, depending on the severity of the incident. The USFS in San Dimas provides wildfire service in the Angeles National Forest.[3] The USFS Fire Management Program includes fire prevention, fire suppression, and fire use. The LACFD Forestry Division San Dimas Unit serves the Pomona Valley, San Gabriel Valley, and surrounding foothills. According to the General Plan EIR, four foresters provide natural resource protection, tree planting, and conservation education programs to four million residents in a 963 square-mile area. The San Dimas Unit also provides fire clearance plans, vegetation management, and logistics services in wildfire emergencies. The LACFD also provides hazardous material services. The LACFD's allocation of resources, stations, equipment, and staffing is based on population, development, assessed valuation, incident volume and type, and response distances/times.

Fire Hazard Potential

Refer to Section 4.9, Public Health and Safety, for a discussion of wildland fire risks in the City.

General Plan

The General Plan includes the following policies and implementation measures pertaining to fire protection service.

P Safe 1.1.2 Support community programs that train volunteers to assist police, fire, and civil defense personnel how to perform effectively after the occurrence of a natural or man-made disaster.

IM Prepare a registry of volunteers who live and work in the city and will be able to perform medical assistance, security, and damage assistance in an emergency.

P Safe 1.1.4 Enforce requirements that all development proposal be reviewed in order that they may be analyzed for safety implications.

P Safe 1.1.5 Provide adequate levels of service to ensure the public is protected from natural and man-made disasters.

P Safe 3.1.1 Maintain high levels of emergency services and monitor safety services annually and evaluate safety services alternatives. Review, on an annual basis, the effectiveness of safety services relying on citizen input.

IM Establish a minimum level of emergency service. Ensure that these services are responsive to the community's needs by periodically evaluating these services through the use of surveys and questionnaires.

P Safe 5.1.1 Continue to support "mutual assistance" agreements between the fire departments of the local cities, Los Angeles County, and the U.S. Government.

IM Continue to participate in the mutual assistance program.

P Safe 5.1.2 Continue to support programs to reduce fire hazards of vegetation in areas of extreme to high fire risk. Such programs may take a variety of forms, but may include weed and brush removal and control and use of fire resistant plantings.

IM Ensure that all buildings and areas be accessible to fire vehicles and firefighting equipment. Support fire department policy of controlled burns in high risk areas.

P Safe 5.1.3 Provide an adequate level of fire equipment, peakload water supply and personnel to protect the community.

IM Develop a system of fire hazard mitigations based upon the probability of occurrence and number of people at risk. Replace out-of-date apparatus and equipment on a scheduled basis. Determine peakload water demand and supply.

P Safe 6.1.2 Regulate the delivery, use, and storage of hazardous materials within the city limits according to regulations and guidelines set forth by the Los Angeles County Fire Department.

Thresholds of Significance

Fire protection service impacts resulting from the implementation of the proposed Specific Plan may be considered significant if they would result in the following:

- Substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities, or result in the need for new or physically altered fire protection facilities, the construction of which may cause significant environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives.

Environmental Impacts

Implementation of the proposed Specific Plan would not result in the need for additional fire protection facilities or personnel. Impacts would remain less than significant.

Station 44 of the Los Angeles County Fire Department (LACFD) provides fire protection services to the City of Duarte. As discussed in the General Plan EIR, increased demand for fire protection services would result from General Plan build-out. The average response time in 2007 was four minutes for all emergency response calls. According to the LACFD, that level of fire protection is considered adequate. New developments would be required to comply with standard, mandatory, applicable fire code and ordinance regulations. Compliance with applicable code and ordinance regulations and LACFD review would ensure that individual projects would not reduce staffing, response times, or existing levels of service within the City. The certified General Plan EIR determined that impacts would be less than significant with implementation of General Plan policies and compliance with standard, mandatory, applicable code and ordinance regulations.

The average response time in 2015 was 4:41 for emergency calls and 5:46 for non-emergency calls. According to LACFD, potential impacts on fire protection services would be addressed during site- and project-specific environmental review when detailed information on a development project is available.[4] During LACFD review, each development is required to comply with standard, mandatory applicable code and ordinance regulations. Implementation of General Plan policies and compliance with applicable code and ordinance requirements would ensure that impacts on fire protection facilities would remain less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance with Mitigation Incorporated

Not applicable.

Significant Unavoidable Impacts

Fire protection impacts associated with implementation of the proposed Specific Plan would remain less than significant through compliance with General Plan policies and implementation measures, as well as with standard, mandatory code and ordinance regulations. No significant unavoidable fire protection impacts would result from the proposed Specific Plan.

References

1 Lorraine Buck, Los Angeles County Fire Department Planning Division. Written Communication. June 10, 2016

2 Juan Palomino, Los Angeles County Fire Department, Station 44. Oral Communication. June 13, 2016

[3] City of Duarte. General Plan 2005-2020, Safety Element.
[4] Lorraine Buck, Los Angeles County Fire Department Planning Division. Written Communication. June 10, 2016

4.15 Police Protection

This section identifies police protection services and programs within the City of Duarte and provides an analysis of the potential impacts on these services associated with the build-out of the proposed Town Center Specific Plan.

The Initial Study prepared for the proposed Town Center Specific Plan determined that impacts on police protection would be less than significant. However, the certified General Plan EIR analyzed police protection, so it has been analyzed in this Supplemental EIR.

Environmental Setting

The Los Angeles County Sheriff's Department (LACSD) provides police protection services for the City of Duarte out of the Duarte Satellite Station, located at 1042 Huntington Drive. This facility was opened in 1995 and serves Duarte, Bradbury, Monrovia, and County area.

Duarte reported an 8.5 percent increase in Part 1 Crime in 2015 compared to 2014.[1] Part 1 crime includes homicide, rape, robbery, assault, residential burglary, other burglary, vehicle burglary, grand theft, auto theft, and arson. The increase in Part 1 crime is attributed to an increase in assaults, robberies, and stolen cars. Residential burglaries have decreased for a period of six years. The City's increase in crime is less than reported Part 1 crime in Los Angeles County, which has experienced a 20 percent increase in property and violent crime for the first time in the last decade.[2]

Law Enforcement

Patrol Deputies
As of 2016, the Duarte Satellite Station has 30 officers. Law enforcement services are provided 24 hours a day for Duarte and Bradbury. However, the station does not have dispatch or booking ability.

Special Assignment Deputies
Special Assignment Deputies are responsible for investigation of potential rising crimes, gang identification, narcotic crime operations, and the management of Duarte Residents Against Graffiti Neighborhood Enhancement Team (DRAGNET).

School Resource Officers
School Resource Officers work directly with schools in Duarte to provide prevention, intervention, and suppression services. Deputies also assist Duarte's gang enforcement and the Duarte Area Resource Team Program (DART).

Detective Services
The Duarte Detective services are responsible for criminal investigation cases assigned from the City of Duarte.

Special Law Enforcement Programs

Duarte and Monrovia Active Gang Enforcement (DAMAGE)
DAMAGE is a collaboration between the law enforcement agencies of Duarte and Monrovia to reduce gang activity through shared information and resources. The program was also created to reduce graffiti and thefts.

Duarte Residents Against Graffiti Neighborhood Enhancement Team (DRAGNET)
DRAGNET is comprised of community volunteers that assist Specific Assignment Deputies in surveillance, graffiti reduction, and other special operations.

Neighborhood Watch

The Neighborhood Watch Program is comprised of community members who report crimes to law enforcement. Members of Neighborhood Watch meet with neighbors, learn how to make their homes more secure, watch out for their neighborhood, and report suspicious activities in the LACSD. Members also receive Neighborhood Watch alerts for incidents that occur within their immediate area.

General Plan

The General Plan includes the following policies and implementation measures pertaining to police protection.

P Safe 1.1.2 Support community programs that train volunteers to assist police, fire, and civil defense personnel how to perform effectively after the occurrence of a natural or man-made disaster.

IM Prepare a registry of volunteers who live and work in the city and will be able to perform medical assistance, security, and damage assistance in an emergency.

P Safe 1.1.4 Enforce requirements that all development proposal be reviewed in order that they may be analyzed for safety implications.

IM Identify high risk areas and prepare programs which will help minimize loss.

Thresholds of Significance

Police protection impacts resulting from the implementation of the proposed Specific Plan may be considered significant if they would result in the following:

- Substantial adverse physical impacts associated with the provision of new or physically altered police facilities, or result in the need for new or physically altered police facilities, the construction of which may cause significant environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives.

Environmental Impacts

Implementation of the proposed Specific Plan would not result in the need for additional police facilities or personnel. Impacts would remain less than significant with mitigation incorporated.

The City of Duarte contracts with the Los Angeles County Sheriff's Department (LACSD) for police services. Increased demand for police services would result from General Plan build-out. New development would be required to pay development fees necessary for LACSD to maintain adequate levels of service within the City. In addition, the General Plan EIR adopted Mitigation Measure PP-1, which would further reduce police protection impacts. The certified General Plan EIR determined that impacts would be less than significant with implementation of General Plan policies and implementation measures and General Plan EIR Mitigation Measure PP-1.

Build-out of the proposed Specific Plan would result in increased demand for police services within the Planning Area due to a larger potential service population. The Specific Plan would also replace existing vacant lots, which are often associated with higher crime levels, with new occupied buildings and uses, and promotes the installation of pedestrian lighting and other safety features. The Specific Plan also introduces mixed-use development into the Planning Area, providing more "eyes on the street" for community policing at a variety of times of the day. Furthermore, General Plan policies and implementation measures, as well as General Plan Mitigation Measure PP-1, would ensure that impacts are minimized. Impacts would remain less than significant with implementation of General Plan Mitigation Measure PP-1.

Mitigation Measures

With regard to police protection, the following mitigation was required by the certified General Plan EIR and remains applicable to the proposed Specific Plan.

PP-1 Promote citizen involvement in crime prevention and public safety through programs, education, and other methods.

Level of Significance with Mitigation Incorporated

Impacts on police protection would remain less than significant with incorporation of General Plan Mitigation Measure PP-1.

Significant Unavoidable Impacts

Police protection impacts associated with implementation of the proposed Specific Plan would remain less than significant with implementation of General Plan policies and implementation measures and incorporation of Mitigation Measure PP-1. No significant unavoidable police protection impacts would result from the proposed Specific Plan.

References

[1] City of Duarte. Crime Statistics. http://www.accessduarte.com/~accessdu/index.php?option=com_content&view=article&id=83&Itemid=76 [June 2016]

[2] City of Duarte. Crime Statistics. http://www.accessduarte.com/~accessdu/index.php?option=com_content&view=article&id=83&Itemid=76 [June 2016]

This Page Intentionally Left Blank

This section identifies school facilities in the City of Duarte. The analysis in this section addresses potential impacts to school services associated with the build-out of the proposed Town Center Specific Plan. The analysis is based on information provided by the Duarte Unified School District (DUSD).

The Initial Study prepared for the proposed Town Center Specific Plan determined that impacts on school facilities would be less than significant. However, the certified General Plan EIR analyzed school facilities, so it has been analyzed in this Supplemental EIR.

Environmental Setting

The Duarte Unified School District (DUSD) encompasses approximately 9.44 square miles and provides public education for the City of Duarte, Bradbury, and County areas located in the San Gabriel Valley. The DUSD includes five elementary schools (K-6), one intermediate school (7-8), one high school (9-12), one alternative education campus, and one child development center. All five of the elementary schools include playgrounds, which also function as public open space/recreation areas through a shared agreement with the City of Duarte. DUSD school enrollment as of 2016 is summarized in Table 4.16-1 (School Enrollment).

Table 4.16-1
School Enrollment

School Facility Name	School Enrollment 2006	School Enrollment 2016
Elementary Schools		
Andres Duarte - 1433 Crestfield Drive	511	346
Beardsiee - 121 E. Kellwil Way	426	360
Maxwell - 733 Euclid Avenue	486	365
Royal Oaks - 2499 Royal Oaks Drive	559	500
Valley View - 237 Melcanyon Avenue	382	390
Intermediate Schools		
Northview - 1404 Highland Avenue	658	516
High School		
Duarte - 1565 E. Central Avenue	1,209	992
Other		
Mt. Olive Alternative Education - 1400 Mt. Olive Drive	127	63
Child Development, State Preschool - 1433 Crestfield Drive	90	92
Sources: General Plan EIR, 2006 and Brad Patterson, Chief Facilities Officer, Duarte Unified School District. Written Communication. June 9, 2016		

In the past, the DUSD has used temporary facilities to accommodate growth; however, as discussed in the General Plan EIR, the DUSD had experienced an annual decrease in enrollment for three years prior to certification of the General Plan EIR. Currently (2016), the DUSD notes that enrollment has decreased over the past 11 years.[1]

Thresholds of Significance

School facilities impacts resulting from the implementation of the proposed Specific Plan may be considered significant if they would result in the following:

- Substantial adverse physical impacts associated with the provision of new or physically altered school facilities, or result in the need for new or physically altered school facilities, the construction of which may cause significant environmental impacts in order to maintain acceptable service ratios, or other objectives for schools in the Duarte Unified School District (DUSD).

Environmental Impacts

Physical impacts to Duarte Unified School District facilities would remain less than significant.

According to the General Plan EIR, General Plan build-out would result in the addition of 726 dwelling units. Based on a student generation rate of 0.55 new students per household, General Plan build-out would result in 399 additional students. As discussed in the General Plan EIR, the DUSD would be able to accommodate new enrollment generated by General Plan build-out, and increased population would not cause a significant impact regarding construction of new school facilities, transportation of students, and the replacement of portable buildings intended for temporary use. In addition, residential and commercial/industrial development would be required to pay school facilities development fees to mitigate any impacts resulting from increases in demand for school-related services. The General Plan EIR determined that impacts to school facilities would be less than significant.

The proposed Specific Plan would result in 1,036 additional dwelling units, resulting in 570 new students. According to the DUSD Facilities Department, the DUSD has been experiencing a decline in enrollment over the past 11 years, and there is sufficient capacity to serve new students generated by future development within the Planning Area.[2] In addition, future residential and commercial development would be subject to school impact development fees to mitigate any impacts resulting from increases in demand for school-related services. Impacts resulting from the effects on schools are considered fully mitigated through payment of these development fees pursuant to the Leroy F. Green School Facilities Act. Therefore, pursuant to State law and the payment of school facilities development fees, impacts would remain less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance with Mitigation Incorporated

Not applicable.

Significant Unavoidable Impacts

All school impacts associated with implementation of the proposed Specific Plan would remain less than significant with payment of State-mandated fees. No significant unavoidable school impacts would result from the proposed Specific Plan.

References

1 Brad Patterson, Chief Facilities Officer, Duarte Unified School District. Written Communication. June 9, 2016

2 Brad Patterson, Chief Facilities Officer, Duarte Unified School District. Written Communication. June 9, 2016

This section identifies the existing parks and recreational facilities within the City of Duarte and the Town Center Specific Plan Area. This section provides an analysis of potential impacts on parks and recreation facilities that could result from the implementation of the Specific Plan.

The Initial Study prepared for the proposed Specific Plan determined that impacts related to parks and recreation would be less than significant. However, the certified General Plan EIR analyzed impacts to parks and recreation, so these impacts have been analyzed in this Supplemental EIR.

Environmental Setting

Open space and recreational facilities within the City of Duarte include City parks, school parks, privately owned open spaces, wilderness areas, undeveloped public utility and floodway easements, and bike trails.

According to the Land Use Element of the General Plan, the City of Duarte encompasses approximately 4,350 acres of land. Open space resources within the City total approximately 2,510 acres (57.7 percent of the City's total area). Wilderness areas comprise the largest land use within the City is (2,331 acres or approximately 53.6 percent of the City's total area), which includes 1,909 acres within the Angeles National Forest and 422 acres of City-owned wilderness. In addition, the privately owned 18.55-acre nine-hole Rancho Duarte Golf Course, which is designed Open Space in the Duarte General Plan, is used for recreational purposes. Utility and floodway easements, which are classified as Public/Quasi Public in the Duarte General Plan, comprise 95 acres of open space within the City. Additionally, the City has 9.96 acres of bike trails within its jurisdiction.

Duarte has a total of 55.21 acres of active parkland and 0.58 acres of passive parkland within its jurisdictional boundaries. Of this acreage, the City of Duarte owns 28.67 acres of active parkland and 0.58 acres of passive parkland, and leases 26.54 acres from the Duarte Unified School District (DUSD) for recreational purposes.

Recreational opportunities within Duarte include the following:

- Parks;
- Bike Trails;
- Fitness Center (aquatics, aerobics, exercise room, and racquetball/wallyball courts);
- Sports Facilities (tennis courts, sport fields, and skate park);
- Golf Course;
- Town Center;
- Teen Center; and
- Senior Center.

The Planning Area contains 0.19 acres of public open space, the existing Duarte Plaza. There is no additional land designated as open space in the Specific Plan.

The following discusses open space in the City and Planning Area.

City-Owned Parks

The City of Duarte owns 28.67 acres of active parkland and 0.58 acres of passive parkland, which is distributed throughout ten City parks. City-owned parks contain amenities such as children's play areas, multi-purpose fields, restrooms, tennis courts, basketball courts, volleyball courts, and picnic tables.

The only City-owned recreational facility located in the Planning Area is the Civic Center/Town Center Complex, which includes a senior center, fitness center with two pools, two racquetball/wallyball courts, an exercise room, and

locker and shower facilities. The community center is equipped with an auditorium, meeting room, arts and crafts room, and kitchen.

School Parks

The Duarte Unified School District (DUSD) has seven public schools (five elementary, one intermediate, and one high school), one preschool, and one alternative education facility that serve the residents of Duarte. The City leases six school parks from the DUSD, which comprise 26.54 acres of parkland for Duarte residents to use for recreational purposes. School parks leased by the City contain amenities such as picnic tables, barbecue pits, playground equipment, an amphitheater, a multi-purpose field, soccer fields, softball fields, a baseball field, tennis courts, a skate park, restrooms, and snack bars.

There are no school parks in the Planning Area; however, school parks are directly adjacent to parcels or streets located within the Planning Area.

Wilderness Area and Other Open Space

Wilderness

The City of Duarte owns a total of approximately 422 acres (approximately 9.7 percent of the City's total area) of wilderness areas, which includes 329 acres of wilderness land, 70 acres of vacant hillside land, and 23 acres of dedicated open space from the Attalla Ranch project. The 422 acres of wilderness land is designated as Open Space in the General Plan.

There are no areas designated as wilderness land in the Planning Area.

Utility and Floodway Easements

Utility and floodway easements comprise 95 acres (approximately 2.2 percent of the City's total area) of additional open space within the City of Duarte. These areas are classified as Public/Quasi Public in the General Plan and are considered open space. Utility and floodway control easements within the City provide open space areas and may not be built upon. The flood control channels include the Los Angeles Flood Control channel and the San Gabriel River and Van Tussel storm drain channels.

There are no utility or floodway easements within the Planning Area.

Bike Trails

The City of Duarte has 9.96 acres of bike trails. The Duarte Bike Trail extends 1.6 miles along Royal Oaks Drive. This trail is located along the San Gabriel River Channel flood control facilities. There are no bike trails located within the Planning Area. The City adopted a Citywide Bicycle Master Plan in 2016 that includes improvements to bicycle routes and infrastructure.

Equestrian Trails

The City of Duarte's residents have access to equestrian trails along the San Gabriel River Channel (located in Azusa) and along Coyote Creek drainage facilities.

Hiking Trails

Duarte has an agreement with Vulcan Materials Company to allow residents' access to the Fish Canyon Trail and the Fish Canyon Falls.

Golf Course

Duarte has a privately owned golf course within its jurisdictional boundaries that is available for recreational uses. The nine-hole Rancho Duarte Golf Course, located at 1000 Las Lomas Road, is approximately 18.55 acres. It is designated as Open Space in the General Plan.

National Forest

The largest land use within the City of Duarte is occupied by 1,909 acres (approximately 43.9 percent of the City's total area) of the Angeles National Forest along the west slope of the San Gabriel Mountains and the northern boundary of the City. The Open Space and Conservation Element of the General Plan designates the land as Open Space for the managed production of resources. The Angeles National Forest lands within the City consist of steep slopes and valleys. As a national forest, this land is protected from urban development.

Recreational Facilities

The City of Duarte Parks and Recreation Department is responsible for youth sports, adult sports, special events, recreation classes, senior, youth and adult excursions, cultural events, senior services and programs, the Fitness Center, teen services and programs, beautification awards, aquatics, and supervised parks. The Parks and Recreation Department is also responsible for maintenance of all City facilities. This includes repairs to buildings and park sites, custodial services, supervision of activities held in City facilities, and overseeing contractual maintenance agreements. Recreational facilities within the Planning Area include a fitness center, a teen center, and a senior center.

Fitness Center

The Duarte Fitness Center is located at 1600 Huntington Drive, adjacent to City Hall. The Fitness Center includes a 25-yard competition pool, training pool, aerobic area, exercise room, and two courts for either racquetball or wallyball.

Teen Center

The Duarte Teen Center, located at 1400 Buena Vista Street, provides activities for high school age students with valid school identification. The Teen Center facility provides a computer laboratory to work on homework, play games, and search the internet. Activities at the Teen Center include excursions, sports, game days and tournaments, health days, dances, Frisbee tournaments, karaoke nights, and barbeques.

Senior Center

The Duarte Senior Center in located at 1610 Huntington Drive and provides recreational opportunities for Duarte residents 55 years and older. The Duarte Senior Center provides fitness and wellness programs, educational classes, and workshops for seniors. Activities and the Senior Center include yoga, piano, aerobics, tai chi, exercise classes, meditation and acupressure, movies, crochet and knitting, ceramics, guitar, pinochle, and language courses. The Senior Center also provides transportation alternatives for individuals with disabilities and serves hot lunches for seniors. Counseling and social services including estate planning, tax preparation, driver safety courses, and health assistance (e.g., immunizations, screening, HMO symposium) are also provided.

General Plan

The General Plan includes the following policies and implementation measures pertaining to parks and recreational facilities.

P OS 1.1.1 Work with conservation groups to identify and conserve open space and protect lands accessible to public use.

IM Work with other cities and agencies to partner in preserving open space.

P OS 1.1.2 Continue to conserve open space through public-private funding sources and management strategies, including conservation easements.

IM Work with other cities and agencies to partner in preserving open space.

P OS 2.1.1 Continue to cooperate with Duarte Unified School District in providing open space amenities for Duarte residents and students.

IM Continue to update joint use agreements with the Duarte Unified School District.

P OS 2.1.2 Require new development to mitigate the burden it creates on existing parks through parkland dedication, recreational space development and/or mitigation fees.

IM Continue to enforce Quimby Act, impact fees and condition developments.

P OS 2.1.3 Provide for the future expansion of existing parks in a way that does not adversely affect adjacent areas.

IM Review multiple listings for parcels for sale adjacent to parks.

P OS 2.1.4 Coordinate circulation and recreation developments in Duarte with those planned for the Santa Fe Dam regional recreation area.

IM Review development proposal of Santa Fe Dam with Los Angeles County Department of Parks and Recreation.

P OS 2.1.5 Provide recreation programs for all age groups, utilizing first those facilities now existing and developing new facilities as the need arises.

IM Prepare and implement a parks master plan including new and expanded parks.

P OS 2.1.6 Establish neighborhood parks designed and located to conveniently serve the needs of various segments of the community.

IM Prepare and implement a parks master plan including new and expanded parks.

P OS 2.1.7 Protect Duarte's natural foothill areas by maintaining low overall residential densities and by utilizing their potential for recreational and open space purposes.

IM Implement the Land Use Policy which designates forest land as open space.

P OS 3.1.1 Multiple recreation uses for open space areas should be encouraged. For example, horseback trails entwined with pedestrian paths can be enjoyable for both parties. Trail markers can be used to point out interesting views and directions (e.g., the direction to the waterfall in Fish Canyon).

IM Prepare and implement a parks master plan including new and expanded parks.

P OS 3.1.2 Develop new city parks when and where this is possible to meet the future recreational needs of the community.

IM Prepare and implement a parks master plan including new and expanded parks.

P OS 3.1.3 Expand and improve recreational facilities at existing parks within the city.

IM Review multiple listings for parcels for sale adjacent to parks.

P OS 3.1.4 Promote the development of new neighborhood and recreation facilities, as appropriate, including parks of 4 acres or more to be used as satellite parks.

IM Prepare and implement a parks master plan including new and expanded parks.

Thresholds of Significance

Park and recreational facility impacts resulting from the implementation of the proposed Specific Plan may be considered significant if they would result in the following:

- Substantial adverse physical impacts associated with the provision of new or physically altered parks, or result in the need for new or physically altered parks, the construction of which may cause significant environmental impacts in order to maintain acceptable service ratios, response times, or other performance objectives for parks;
- Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or
- Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

Environmental Impacts

Impacts to adequate availability of parkland and recreational facilities would remain less than significant.

The National Recreation and Parks Association (NRPA) recommends 0.6 to 1.0 acre of developed open space ("parkland") per 1,000 residents for minimum needs of the community, and 5.0 acres of parkland per 1,000 residents to provide a middle level of service to the community. The City of Duarte is essentially built out, providing little potential to acquire and develop additional parkland. General Plan build-out would result in a population of 25,418 in 2020, requiring 25.42 acres of parkland to meet minimum needs of the community. The certified General Plan EIR indicated that there is adequate parkland (55.21 acres) to meet the minimum recommendation. However, in order to provide middle level of service, an addition 71.88 acres of parkland would be needed.

The City of Duarte adopted a Quimby Act ordinance to require the dedication of land and/or the payment of in-lieu fees for the purpose of providing parks and recreational facilities. As allowed under the Quimby Act, Duarte Municipal Code Section 18.20.041 requires all subdividers to dedicate land, pay in-lieu fees, or both as a condition of approving a subdivision map. Because (1) there is adequate parkland to meet minimum community needs, and (2) future developers would be required to dedicate land and/or pay in-lieu fees, the General Plan EIR determined that impacts to adequate availability of parkland and recreational facilities would be less than significant.

As discussed in Section 4.2 (Population and Housing), based on a 2016 population estimate of 22,177 and an anticipated increase in population of 3,150 at build-out of the proposed Specific Plan, the City of Duarte is projected to accommodate a population of 25,327 at Specific Plan build-out. This population total is within the population anticipated and analyzed in the General Plan EIR and, therefore, there would be adequate parkland to meet minimum needs of the community. In addition, future development is required to dedicate land and/or pay in-lieu fees for the purposes of providing park and recreational facilities pursuant to the Quimby Act. With regard to trails, there are no equestrian or hiking trails located within the Planning Area. However, future residents within the Planning Area would have access to equestrian and hiking trails located within the City in addition to proposed bike lanes along

Buena Vista Street, Highland Avenue, and Central Avenue as identified in Exhibit 3-7. Impacts would remain less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance with Mitigation Incorporated

Not applicable.

Significant Unavoidable Impacts

All parks and recreational facilities impacts associated with Specific Plan implementation would remain less than significant through compliance with General Plan policies and implementation measures, including the Quimby Act. Therefore, no significant unavoidable impacts on parks or recreational facilities would result from the proposed Specific Plan.

This section identifies potential solid waste impacts and evaluates whether the proposed Specific Plan would cause a substantial change in impacts as evaluated under the certified General Plan EIR.

Environmental Setting

Existing Solid Waste Collection and Disposal

The City of Duarte has a contract with Burrtec Waste Industries to provide residential and commercial trash and recycling collection. Residential refuse collection is automated and provided once a week. Burrtec Waste Industries provides all residential customers with containers, ranging in sizes of 40, 60, or 90 gallons. Disposal rates vary based on the size of barrel selected. Containers must be placed in alleys or parkways and removed at certain times, which vary by service area throughout the City. Commercial Refuse Bins vary in price depending on size and frequency of pick up. Burrtec Waste Industries also accepts construction and demolition materials, such as concrete, asphalt, rock, and brick (inert materials) for recycling.

Los Angeles County solid waste disposal facilities that accept solid waste generated in Duarte include the following:[1]

- Antelope Valley Recycling and Disposal
- Azusa Land Reclamation
- Chiquita Canyon Sanitary Landfill
- Commerce Refuse-to-Energy Facility
- Lancaster Landfill
- Savage Canyon Landfill
- Southeast Resource Recovery Facility

Table 4.18-1 (Landfills Summary) illustrates the daily permitted throughput, maximum capacity permitted and the remaining capacity at each facility that accepts solid waste from the City of Duarte.

Table 4.18-1
Landfills Summary

Facility	Permitted Throughput (tons/day)	Permitted Capacity (cubic yards)	Remaining Capacity (cubic yards)	Anticipated Closure Date
Antelope Valley Recycling and Disposal	3,564	N/A	20,400,000	1/1/2042
Azusa Land Reclamation	8,000	80,571,760	51,512,201	1/1/2045
Chiquita Canyon Sanitary Landfill	6,000	63,900,000	606,830	11/24/2019
Commerce Refuse-to-Energy Facility	1,000	1,000 tons/day	N/A	N/A
Lancaster Landfill	5,100	27,700,000	14,514,648	3/1/2044
Savage Canyon Landfill	3,350	19,337,450	9,510,833	12/31/2055
Southeast Resource Recovery Facility	2,240	2,240 tons/day	N/A*	N/A

Source: CalRecycle. Solid Waste Information System (SWIS) Facility/Site Listing.
http://www.calrecycle.ca.gov/SWFacilities/Directory/SearchList/List?COUNTY=Los+Angeles&LEA=19-AA [June 2016]

* *The Southeast Resource Recovery Facility converts solid waste to energy. The facility does not have a "remaining capacity", since the permitted volume of solid waste is converted to energy and does not remain at the facility. Therefore, the facility is only limited by its daily permitted capacity.*

Regulatory Framework

State Plans and Policies

California Integrated Waste Management Act

The Integrated Waste Management Act (AB 939) of 1989 established an integrated framework for program implementation, solid waste planning, and solid waste facility and landfill compliance. AB 939 established a waste management hierarchy as follows, in order of priority: (1) source reduction, (2) recycling and composting, and (3) environmentally safe transformation and land disposal.[2] AB 939 also mandated local jurisdictions to meet numerical diversion goals of 25 percent by 1995 and 50 percent by 2000. Since AB 939 was adopted, landfill capacity has increased, and while regional capacity problems exist, capacity is no longer considered a statewide crisis.[3]

Regional Plans and Policies

In compliance with AB 939, the County of Los Angeles prepared a countywide siting element in 1997 that describes how the County and the cities within the County plan to manage the disposal of their solid waste for a 15-year planning period. The existing Los Angeles County Countywide Siting Element (CSE) was approved by the majority of the population and the Board of Supervisors in January 1998. A revised CSE is being prepared to replace the existing CSE and will cover a planning period between 2010 through 2025. Due to the County's large population and size of its economy, local landfill capacities are rapidly being consumed, which has led to the need for additional long-term planning to ensure disposal capacities continue to exist for the future health and safety of County residents.[4]

Local Plans and Policies

In 1996, the California Integrated Management Board (CIWMB) approved the City of Duarte's Source and Reduction Recycling Element (SRRE). In 2003, the City became a member of the Los Angeles Area Integrated Waste Management Authority (LAAIWMA), which allowed the City to measure solid waste diversion jointly with 13 other members of the regional agency. LAAIWMA includes the following cities: Artesia, Beverly Hills, Duarte, Hermosa Beach, Hidden Hills, Los Angeles, Lynwood, Manhattan Beach, Rancho Palos Verdes, Redondo Beach, Rosemead, Sierra Madre, South Gate, and Torrance.

In 2010, the LAAIWMA disposed of approximately 8.8 million tons of solid waste; 6.3 million tons were disposed of at in-County Class III landfills, 539,000 tons at transformation (waste-to-energy) facilities, 55,000 tons at permitted inert waste landfills, and 1,918,000 tons at out-of-County Class III landfills.[5] In 2010, the total solid waste generated in the City was 24,306 tons, and by 2015, the total amount sent to County facilities had decreased to 2,420 tons.[6] [7]

In 1996, CIWMB approved the City's adoption of a Household Hazardous Waste Element and Non-Disposal Facility Element. In an effort to reduce improper disposal and reduce potential environmental contamination of household hazardous waste, the Sanitation Districts of Los Angeles County has established the Household Hazardous and Electronic Waste (E-Waste) Collection Program to provide County residents a legal and cost-free way to dispose of unwanted household chemicals that cannot be disposed of in the regular trash. LA Sanitation (LASAN) has established permanent collection sites throughout the County known as S.A.F.E. Centers (Solvents, Automotive, Flammables, and Electronics). The S.A.F.E. Centers operate on weekends, with the closest facility to Duarte located in the City of Glendale.

The City of Duarte has a program to encourage residents to recycle used motor oil and filters. City Hall provides residents with cost-free oil-recycling containers. The following City collection centers are for Duarte residents to recycle used oil and filters:

- AutoZone, 1346 East Huntington Drive;
- Advantage Ford, 1031 East Central Avenue; and

- Towne Garage, 1717 East Huntington Drive.

General Plan

The General Plan includes the following policies and implementation measures pertaining to solid waste disposal.

P Con 4.1.1 Work towards achieving waste-reduction and diversion goals.

IM Continue implementing policies and programs pursuant to AB 939.

P Con 4.1.2 Remove as much as possible from the waste stream, and, preferably, to reuse it and to continue to increase alternative ways to create diversion.

IM Support ongoing recycling programs.

P Con 4.1.3 Promote the city's recycling program as a viable alternative to trash disposal.

P Con 4.1.4 Consider increasing bulk community round-ups from twice a year to more frequent round-ups.

IM Work with solid waste hauler to provide more frequent bulk round-ups.

Thresholds of Significance

Solid waste impacts resulting from the implementation of the proposed Specific Plan may be considered significant if they would result in the following:

- Is not served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs; or
- Does not comply with Federal, State, and local statutes and regulations related to solid waste.

Environmental Impacts

Impacts due to increased solid waste generation would remain less than significant with incorporation of General Plan policies and implementation measures, and General Plan EIR mitigation.

The State of California has established a minimum 50 percent waste reduction rate for all cities. As noted in the General Plan EIR, the City has achieved a joint waste reduction rate of 61 percent as of 2004 as a member of the Los Angeles Area Integrated Waste Management Authority (LAAIWMA). The certified General Plan EIR estimated that implementation of the General Plan would generate approximately 1,296 tons of solid waste per year at build-out, increasing the volume of solid waste generated in the City that is diverted to existing landfills. Future developments resulting from implementation of the General Plan would undergo mandatory, standard review by the City to ensure that each project complies with Federal, State, and local statutes and regulations related to solid waste. The General Plan EIR determined that implementation of the above General Plan policies and Mitigation Measures SW-1 through SW-7 below would reduce solid waste impacts to less than significant levels. Solid waste impacts would remain less than significant.

The proposed Specific Plan would result in a net increase of residential, hotel, and commercial uses. The California Emissions Estimator Model (CalEEMod) calculates generation of solid waste generated by different land uses according to California Department of Resources Recycling and Recovery (CalRecycle) generation data. Based on CalEEMod calculations (see Appendix E), build-out of the proposed Specific Plan would generate an additional 877.74 tons of solid waste annually without consideration of the City's joint waste reduction rate of 61 percent. Accounting for the City's joint waste reduction rate of 61 percent under existing conditions and Specific Plan build-out, the proposed Specific Plan would result in an additional 342.32 tons of solid waste per year being sent to

landfills. As described in the General Plan EIR, future developments would undergo mandatory, standard review by the City to ensure that each project complies with Federal, State, and local statutes and regulations related to solid waste.

According to CalRecycle, annual and lifetime landfill capacity in Los Angeles County is sufficient to meet long-term demand.[8] Annual disposal in the County is limited to approximately 14.7 million tons. Landfill estimates between 2015 and 2025 are estimated at 7.1 million tons and 7.5 million tons, respectively. This is approximately half of the annual allowable disposal amount. By 2025, remaining capacity in landfills throughout the County is approximately 32 million tons; therefore, sufficient lifetime capacity exists to serve the uses resulting from the long-term development of the Planning Area. All uses within the Planning Area would be subject to applicable local and State regulations related to solid waste disposal and recycling, and no component of the proposed Specific Plan would conflict with implementation of such regulations. Impacts would remain less than significant.

Mitigation Measures

With regard to solid waste impacts due to additional waste generated by implementation of the Specific Plan, the following mitigation was required by the General Plan EIR and remains applicable to the proposed Specific Plan.

SW-1 Provide education and outreach to residents and businesses to contribute to the reduction, recycling, and disposal of solid wastes.

SW-2 Recycling bins shall be provided by project applicants at all construction sites. All recyclable materials currently being accepted at either landfills and/or recycling centers shall be directed for recycling at construction sites.

SW-3 On-site recycling bins shall be required for retail, business, office, and manufacturing and industrial facilities. Location of bins may require review by the City's Architectural Review Board.

SW-4 Encourage composting as an alternative to disposal for organic waste.

SW-5 Commercial and industrial developments shall be required to locate recycling/separation bins in proximity to waste bins for non-recyclables, elevators, loading docks, and primary internal and external access points.

SW-6 The location of recycling/separation bins shall not be in conflict with any applicable Federal, State, or local laws relating to fire, building, access, transportation, circulation, or safety.

SW-7 Recycling containers/bins at commercial and industrial facilities shall be located so that they do not block access to each other.

Level of Significance with Mitigation Incorporated

Impacts would remain less than significant with incorporation of General Plan Mitigation Measures SW-1 through SW-7.

Significant Unavoidable Impacts

All solid waste impacts associated with implementation of the proposed Specific Plan would remain less than significant through compliance with Federal, State, and local requirements, General Plan policies and implementation measures and General Plan EIR Mitigation Measures SW-1 through SW-7. No significant unavoidable solid waste impacts would result from the proposed Specific Plan.

References

1 County of Los Angeles Public Works, Detailed Solid Waste Disposal Activity Report by Jurisdiction Origin (January 2015-January 2016). https://dpw.lacounty.gov/epd/swims/OnlineServices/reports.aspx [June 2016]

2 CalRecycle. History of California Solid Waste Law, 1985-1989, http://www.calrecycle.ca.gov/laws/legislation/calhist/1985to1989.htm [June 2016]

3 CalRecycle. 21st Century Policy Project. Future Search Conference Issue: AB 939 in the New Millennium. http://www.calrecycle.ca.gov/Archive/21stCentury/events/futuremar99/issues1.htm [June 2016]

4 County of Los Angeles Department of Public Works. Countywide Integrated Waste Management Plan. November 2012. http://dpw.lacounty.gov/epd/cse/docs/cse/CSE%20ES.pdf [June 2016]

5 County of Los Angeles Department of Public Works. Countywide Integrated Waste Management Plan. November 2012. http://dpw.lacounty.gov/epd/cse/docs/cse/CSE%20ES.pdf [June 2016]

6 County of Los Angeles Public Works, Detailed Solid Waste Disposal Activity Report by Jurisdiction Origin (January 2010-January 2011). https://dpw.lacounty.gov/epd/swims/OnlineServices/reports.aspx [June 2016]

7 County of Los Angeles Public Works, Detailed Solid Waste Disposal Activity Report by Jurisdiction Origin (January 2015-January 2016). https://dpw.lacounty.gov/epd/swims/OnlineServices/reports.aspx [June 2016]

8 CalRecycle. Facility Information Toolbox. Identify Disposal Facility Capacity Shortfalls. http://www.calrecycle.ca.gov/FacIT/facility/disposalgap.aspx [October 2015]

This Page Intentionally Left Blank

This section addresses the potential electricity and natural gas consumption impacts associated with implementation of the Specific Plan. The analysis identifies the utility companies that provide electricity and natural gas to the City of Duarte and estimates electricity and natural gas demands of the proposed Specific Plan at build-out. This analysis is based on information from the California Public Utilities Commission (CPUC), Southern California Edison (SCE), and the Southern California Gas Company (SCGC).

Environmental Setting

Electricity

SCE maintains and operates the transmission and distribution infrastructure that provides electricity for the City of Duarte. Based in Rosemead, SCE has provided electrical service for approximately 120 years and services a population of approximately 14 million in 430 cities across a 50,000-square-mile area of Central, Coastal and Southern California.[1] In 2014, SCE commercial and residential customers accounted for approximately 75 percent of total electricity use within SCE'sss coverage area.[2] According to the California Energy Commission (CEC), in 2016 the SCE coverage area is projected to demand 104,253 gigawatt hours (GWh) (CEDU 2014 High Energy Demand) and 100,348 GWh (CEDU 2014 Low Energy Demand) and by 2025 is expected to demand 9119,741 GWh (CEDU 2014 High Energy Demand) and 108,660 GWh (CEDU 2014 Low Energy Demand).[3] A complete electricity and natural gas demand profile for SCE is provided in the California Energy Demand Updated Forecast, 2015-2025 (CEDU) which was an update from the forecasts prepared in the California Energy Demand 2014-2024 Final Forecast. The forecast was updated due to the incorporation of more recent economic and demographic projects and adjustments for the latest historical data available for consumption, peak demand, temperatures, and electricity rates.

Electricity can be generated from a combination of natural gas, hydroelectric, nuclear, or renewable sources (wind and solar). SCE facilities include hydroelectric, nuclear, and coal power plants as identified below:

- Big Creek Hydroelectric Facilities is located in Shaver Lake, California. This hydroelectric facility began operating in 1911, and consists of 24 hydroelectric generating units in nine powerhouses with a generating capacity of approximately 1,000 Megawatts, and six major reservoirs with a storage capacity of more than 560,000 acre feet.[4]
- Palo Verde Nuclear Generating Station, located in Wintersburg, Arizona, is owned by SCE (16 percent share), Arizona Public Service (29 percent share), El Paso Electric Co. (15 percent share), SRP (18 percent share), Public Service Co. of New Mexico (10 percent share), Southern California Public Power Authority (6 percent share), and the Los Angeles Department of Water and Power (6 percent share). This facility is fueled by nuclear power and has a generating capacity of 3,739 Megawatts.[5]

Natural Gas

The CPUC regulates natural gas utility service for approximately 10.8 million customers that receive natural gas from Pacific Gas and Electric (PG&E), Southern California Gas (SoCalGas or SCGC), San Diego Gas & Electric (SDG&E), Southwest Gas, and several smaller natural gas utilities. The vast majority of California's natural gas customers are residential and small commercial customers, referred to as "core" customers, who accounted for approximately 32 percent of the natural gas delivered by California utilities in 2012. Large consumers, like electric generators and industrial customers, referred to as "noncore" customers, accounted for approximately 68 percent of the natural gas delivered by California utilities in 2012. Most of the natural gas used in California comes from out-of-state natural gas basins. In 2012, California customers received 35 percent of their natural gas supply from basins located in the Southwest, 16 percent from Canada, 40 percent from the Rocky Mountains, and 9 percent from basins located within California.[6]

SCGC, Duarte's natural gas provider, is the nation's largest natural gas distribution utility, and serves approximately 21.6 million consumers through 5.9 million gas meters throughout 500 communities.[7] Headquartered in Los Angeles, SCGC is a subsidiary of Sempra Energy. SCGC's service area encompasses 20,000 square miles throughout most of Central and Southern California.

SCGS owns and operates numerous underground natural gas storage facilities located throughout Southern California. SCGC has a storage capacity of 136 billion cubic feet (Bcf) of natural gas, 83 Bcf of which is allocated for residential, small industrial, and commercial customers.[8]

In 2014, SCGC customers consumed a total of 5,049 million Therms of natural gas, with 3,048 million Therms consumed by commercial and residential customers.[9] SCGC projects the total natural gas demand to exhibit an annual decline of 0.13 percent for the forecast period of 2012 – 2030.[10] The decline is due to modest economic growth, CPUC-mandated energy efficiency and renewable electricity goals, decline in commercial and industrial demand, and continued increased use of non-utility pipeline systems by enhanced oil recovery (EOR) customers and savings linked to advanced metering modules. From 2012 – 2030, residential and non-residential demand is expected to decline from 234 Bcf to 229 Bcf, and from 111 Bcf to 108 Bcf, respectively.[11]

Regulatory Framework

The California Public Utilities Commission (CPUC) regulates privately owned electric, natural gas, telecommunications, water, railroad, rail transit, and passenger transportation companies. Assembly Bill 1890, enacted in 1996, deregulated the power generation industry, allowing customers to purchase electricity on the open market. Under deregulation, the production and distribution of power that was under the control of investor-owned utilities (e.g., SCE) was decoupled. Deregulation allowed other providers the ability to supply electricity to consumers. However, SCE continues to provide electricity for the City of Duarte.

Thresholds of Significance

Electricity and natural gas impacts resulting from the implementation of the proposed Specific Plan may be considered significant if they would result in the following:

- The project would create demands on electricity or natural gas supply and/or infrastructure which exceed the capacity of the utility serving the project area.

Environmental Impacts

Impacts related to electricity demand would remain less than significant.

The certified General Plan EIR estimated that General Plan implementation would result in increased electricity demand of 12,261 megawatt hours (MWh) per year, utilizing electricity consumption rates provided by the South Coast Air Quality Management District CEQA Air Quality Handbook.[12] The City is approximately 98 percent built out with existing electricity infrastructure to serve future development associated with implementation of the General Plan. Southern California Edison (SCE) would update existing facilities or add new facilities based on service requests providing adequate electricity supplies are available. In addition, all new construction within the City is subject to energy conservation standards set forth in Title 24, Part 6, Article 2 of the California Administrative Code. Therefore, the certified EIR determined that impacts would be less than significant.

The proposed Specific Plan would result in an additional 1,036 multifamily residential units, 62,230 square feet of office use, 176,194 square feet of restaurant use, 35,518 square feet of civic uses, and 331 hotel rooms, and a decrease of 6,764 square feet of retail use, 11,630 square feet of place of worship, and 38,527 square feet of nursing home use. Estimated increases in electricity demand are summarized in Table 4.19-1 (Projected Annual Electricity Demand Increase) according to the California Emissions Estimator Model (CalEEMod) (see Appendix E for output

data). According to CalEEMod projections, build-out of the proposed Specific Plan would result in an increase in electricity demand of approximately 15,207,333 kilowatt hours per year (kWh/year) (equivalent to 15,207 MWh/year, or 15 GWh/year).

Table 4.19-1
Projected Annual Electricity Demand Increase

	Annual Electricity Demand
Existing Land Uses	9,614,987 kWh/year
Specific Plan Build-out	24,822,320 kWh/year
Net Electricity Demand	15,207,333 kWh/year or 15,207 MWh/year or 15 GWh/year

As noted in the General Plan EIR, the City is 98 percent built out, with existing electricity infrastructure in place which would serve future developments. Should any existing lines require updating or any new infrastructure be installed, future project proponents would be required to pay SCE-assessed fees. In addition, SCE would not provide service to new developments if adequate electricity supplies were not available. Further, future development would be subject to energy conservation standards set forth in Title 24 of the California Administrative Code. Impacts would remain less than significant.

Impacts related to natural gas demand would remain less than significant.

The certified General Plan EIR estimated that General Plan implementation would result in increased natural gas demand of 4,719 thousand cubic feet (kcf) per month or 56,689 kcf per year, utilizing natural gas consumption rates provided by the South Coast Air Quality Management District CEQA Air Quality Handbook.[13] The Southern California Gas Company (SCGC) indicated that there were no known deficiencies within the City. The City is approximately 98 percent built out, with existing natural gas infrastructure to serve future development associated with implementation of the General Plan. The SCGC would update existing facilities or add new facilities based on service requests, providing adequate natural gas supplies are available to maintain adequate service levels. Therefore, the certified EIR determined that impacts would be less than significant.

The proposed Specific Plan would result in an additional 1,036 multifamily residential units, 62,230 square feet of office use, 176,194 square feet of restaurant use, 35,518 square feet of civic uses, and 331 hotel rooms, and a decrease of 6,764 square feet of retail use, 11,630 square feet of place of worship, and 38,527 square feet of nursing home use. Estimated increases in natural gas demand are summarized in Table 4.19-2 (Projected Annual Natural Gas Demand Increase) according to CalEEMod (see Appendix E for output data). According to CalEEMod projections, build-out of the proposed Specific Plan would result in an increase in natural gas demand of approximately 58,251,015 thousand British thermal units per year (kBTU/year), 582,510 Therms per year, or 56,775 kcf per year.

Table 4.19-2
Projected Annual Natural Gas Demand Increase

	Annual Natural Gas Demand
Existing Land Uses	10,567,142 kBTU/year
Specific Plan Build-out	68,818,157 kBTU/year
Net Natural Gas Demand	58,251,015 kBTU/year or 582,510 Therms/year or 56,775 kcf/year

As noted in the General Plan EIR, the City is 98 percent built out, with existing natural gas infrastructure in place which would serve future developments. Should any existing lines require updating or any new infrastructure be installed, future project proponents would be required to pay SCGC-assessed fees. In addition, SCGC would not provide service to new developments if adequate natural gas supplies were not available. Impacts would remain less than significant.

Mitigation Measures

No mitigation measures are required.

Level of Significance with Mitigation Incorporated

Not applicable.

Significant Unavoidable Impacts

All electricity and natural gas impacts associated with implementation of the proposed Specific Plan would remain less than significant. No significant unavoidable electricity and natural gas impacts would occur as a result of the proposed Specific Plan.

References

1 Southern California Edison Company. Southern California Edison (SCE) Factsheet 2016. http://newsroom.edison.com/internal_redirect/cms.ipressroom.com.s3.amazonaws.com/166/files/20153/Newsroom%20Fact%20Sheet%2004222015.pdf [June 2016]

2 Energy Consumption Data Management System. http://ecdms.energy.ca.gov/elecbyutil.aspx [June 2016]

3 State of California Energy Commission. California Energy Demand Update Forecast 2015- 2025. http://www.energy.ca.gov/2014publications/CEC-200-2014-009/CEC-200-2014-009-CMF.pdf [June 2016]

4 Southern California Edison. The Big Creek System. https://www.sce.com/NR/rdonlyres/3A43A44E-E788-4CAD-85EF-0AA8931C825A/0/FS_TheBigCreekSystem.pdf [June 2016]

5 SRP. Palo Verde Nuclear Generation Station. http://www.srpnet.com/about/stations/paloverde.aspx [June 2016]

6 California Public Utilities Commission. Natural Gas and California. http://www.cpuc.ca.gov/natural_gas/ [June 2016]

7 Southern California Gas Company. About SoCalGas. https://www.socalgas.com/about-us/company-profile [June 2016]

8 Southern California Gas Company. Natural Gas Storage. https://www.socalgas.com/for-your-business/energy-market-services/natural-gas-storage [June 2016]

9 Energy Consumption Data Management System. Gas Consumption by Planning Area. http://ecdms.energy.ca.gov/gasbyplan.aspx [June 2016]

10 California Gas and Electric Utilities. 2012 California Gas Report. https://www.socalgas.com/regulatory/documents/cgr/2012%20CGR_Final.pdf [June 2016]

11 California Gas and Electric Utilities. 2012 California Gas Report. https://www.socalgas.com/regulatory/documents/cgr/2012%20CGR_Final.pdf [June 2016]

12 South Coast Air Quality Management District. CEQA Air Quality Handbook. Table A9-11-A. April 1993.

13 South Coast Air Quality Management District. CEQA Air Quality Handbook. Table A9-11-A. April 1993.