4.25 Public Utilities (CEQA)

4.25.1 Water Use (CEQA)

4.25.1.1 Introduction

The water use analysis addresses potable and reclaimed water use. Conclusions regarding the significance of impacts provided in this section are strictly for the purposes of CEQA. Technical Report 15a, *Water Use Technical Report,* provides detailed information regarding the development of the water use projections for the No Action/No Project Alternative and Alternatives A, B, and C, including land use based water use factors and calculations, as well as additional information on regional and LAX water supply and transmission. Additional information, especially on Alternative D, is also provided in Technical Report S-10a, *Supplemental Water Use Technical Report.* Water Quality is addressed in Section 4.7, *Hydrology and Water Quality*. Potential effects of regional growth induced by the LAX Master Plan are addressed in Section 4.5, *Induced Socio-Economic Impacts (Growth Inducement).*

4.25.1.2 General Approach and Methodology

This analysis compares the water use projected for the No Action/No Project Alternative and four build alternatives to baseline water use conditions, characterized by existing water supply sources and treatment and distribution facilities. The analysis estimates on-airport water use under baseline conditions as well as water use in areas proposed to be acquired as part of the LAX Master Plan and other airport programs -- collectively referred to as the Master Plan boundaries, as defined in the Introduction to Chapter 4 of this Final EIS/EIR.

Direct and indirect growth in the vicinity of LAX and elsewhere in the region associated with the Master Plan would also result in increased consumption of water. Potential impacts are addressed in Section 4.5, *Induced Socio-Economic Impacts (Growth Inducement),* and in subsection 4.25.1.7, *Cumulative Impacts*, below.

The acreage and location of land required for the proposed Master Plan improvements are unique to each of the four build alternatives. Consequently, each alternative would result in a different footprint for LAX. In order for baseline conditions, the No Action/No Project Alternative, and the four build alternatives to be compared side by side, a single water use study area was used. This composite study area is referred to as the "Master Plan boundaries."

Total water use within the study area was calculated (as described below) for baseline conditions and for all alternatives. Under baseline conditions, land within the Aircraft Noise Mitigation Program (ANMP) acquisition areas is evaluated based on its existing use. Under the No Action/No Project Alternative, it is assumed to be vacant. For each of the build alternatives, it is assumed that all proposed acquisition has been completed and existing land uses demolished. Each alternative proposes a different configuration of land acquisition; thus, not all land within the Master Plan boundaries would be acquired by any one alternative. Land uses within areas not acquired would be unaffected by the Master Plan. The Alternative B off-site fuel farm sites are discussed separately from the Master Plan boundaries.

Several different sources, means, and factors were used for calculating potable water use. Water use factors are typically provided in terms of water use (in gallons per day or acre-feet per year) per unit (e.g., square foot of building space, hotel room, dwelling unit). Water use was projected by multiplying the factor by the appropriate number of units. The data regarding baseline water use in the region is generally reported for the 1996/1997 timeframe.

The potable water use factors for on-airport cargo, maintenance, and ancillary uses were developed based on water use data compiled by Psomas and Associates in 1996 in *Utilities Consumption and Generation at LAX Technical Addendum*.[884] Terminal-related uses, as opposed to other airport-related uses such as cargo or maintenance, include primarily food service, sanitary, and cleaning. Because terminal visitors engage in the same types of activities as retail visitors (e.g., food service, sanitary, and cleaning) and, consequently, use similar quantities of water on average per square foot of building area, factors for potable water use in the terminals were based on the factor for retail uses listed in the *City of*

[884] Psomas and Associates, Utilities Consumption and Generation at LAX Technical Addendum, October 31, 1996.

Los Angeles Administrative Draft Citywide Thresholds Technical Guide (CEQA Technical Guide).[885] The *CEQA Technical Guide* was also used to estimate water use for non-airport land uses, including planned and proposed uses within LAX Northside/Westchester Southside. The water use factors contained in the *CEQA Technical Guide* are based on facility type and square footage and represent average usage for each facility type.

The city's potable water factor for retail use is dependent upon square footage and, therefore, would not account for increased passenger activity in the Central Terminal Area (CTA) under the No Action/No Project Alternative because the square footage of building area would not increase. To account for this intensification of use, a second factor was applied based on the projected increase in passengers that would use the CTA under the No Action/No Project Alternative. This factor was 136 percent for 2015.[886] Water use for the proposed Central Utility Plant (CUP) was calculated based on the current water use of the existing CUP. A complete discussion of the potable water use factors used in this analysis is provided in Technical Report 15a, *Water Use Technical Report.*

The total water use for each of the four build alternatives and the No Action/No Project Alternative was projected.[887] To determine whether the increase in water use associated with the Master Plan alternatives would be significant, projected water demands were compared with the projected supply from local and regional suppliers.

For reclaimed water,[888] current and future reclaimed water use were estimated using a factor for reclaimed water use per acre of landscaping from the *CEQA Technical Guide*.[889] Landscaped acreages considered in this analysis were limited to areas of major landscaping as presented in Section 4.10, *Biotic Communities*. Pockets of landscaping, such as those around terminal areas, are not included in the values. Additionally, potential reclaimed water use for CUP cooling, toilet flushing, or other uses, such as watering down airplanes, is not quantified. Estimated future use was compared with future reclaimed water supply. Technical Report 15a, *Water Use Technical Report,* contains additional information regarding the reclaimed water analysis.

This water use analysis also considers fire flow requirements, water usage during construction, and the location, alignment, and depths of existing major transmission mains in order to identify any conflicts between the LAX Master Plan subsurface construction activities -- such as excavation and tunneling -- and the existing transmission mains.

4.25.1.3 Affected Environment/Environmental Baseline

Water Supply and Transmission

The City of Los Angeles Department of Water and Power (LADWP) is the water purveyor for most areas in the city of Los Angeles, including the entire Master Plan boundaries, with the exception of the oil refinery fuel farm site located south of the airport, which is served by the West Basin Municipal Water District, as discussed below.

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885 City of Los Angeles, Environmental Affairs Department, Administrative Draft Citywide Thresholds Technical Guide, December 1995. Although not required by CEQA, the Administrative Draft Citywide Thresholds Technical Guide was prepared by the City of Los Angeles as a precursor to the Draft L.A. CEQA Thresholds Guide, whose purpose is to provide standards for the preparation of EIRs within the city. (The Administrative Draft is referenced herein as it contains water consumption factors, while the Draft L.A. CEQA Thresholds Guide does not.) Although not formally adopted, the water use factors contained in this document were developed based upon City of Los Angeles Department of Public Works historical data and remain valid.

886 This factor was derived by dividing the total number of passengers by the baseline number of passengers as follows: 78.7 MAP (projected 2015 passengers) /58 MAP = 1.357 or 136 percent.

887 Subsequent to the calculation of water consumption for Alternative C, the alternative was modified to eliminate impacts to a historic resource. This modification reduced the amount of cargo square footage that would be constructed under this alternative, and similarly reduced the square footage of commercial and residential uses that would be acquired. The resultant differences in water consumption would not be substantial, and would not alter the conclusions of the analysis with regard to level of significance or need for mitigation.

888 Reclaimed water is wastewater that has been treated to the tertiary level. It meets the water quality standards specified by the California Department of Health Services (Title 22), but is not considered potable. Reclaimed water can be used for irrigation and industrial processes to reduce the demand for potable water.

889 As with potable water factors, the reclaimed water factors contained in the *CEQA Technical Guide* are based on City of Los Angeles Department of Public Works historical data and remain valid.

LADWP is responsible for supplying, treating, and distributing water within the city, serving residential, commercial, industrial, and agricultural users. The LADWP distribution system includes over 7,000 miles of distribution pipelines and 105 tanks and reservoirs, including more than 20 open reservoirs. LADWP obtains its water supplies from three major sources: (1) the Owens Valley and Mono Basin via the Los Angeles Aqueduct; (2) northern California and Colorado River imports purchased from the Metropolitan Water District of Southern California (MWD); and (3) local groundwater basins.[890] In addition to these sources, some wastewater within the LADWP service area is reclaimed for reuse as irrigation or industrial water, or for use in seawater intrusion barriers used to protect groundwater supplies.

MWD imports water from the Colorado River Aqueduct and the State Water Project in the Sacramento-San Joaquin Deltas and distributes it to member agencies. MWD serves no retail customers directly, but provides water to its member agencies throughout San Diego, Orange, and Los Angeles Counties. LADWP is one of these member agencies. Based on projected population and economic growth, MWD expects that water demands in its service area will rise from 3.6 million acre-feet per year (AF-yr) in 1996 to 5.0 million AF-yr in 2020.[891]

MWD's Integrated Water Resources Plan (IRP), which was approved by its Board in 1996 to prepare for this projected growth, proposes that the preferred resource mix for future MWD supply includes local production (groundwater pumping and surface water diversion),[892] water recycling, groundwater recovery, the Colorado River Aqueduct, the State Water Project, storage, and water transfers. MWD believes that implementation of the IRP will allow it to provide for wholesale water demands of its member agencies in 98 out of 100 years, with the remaining years requiring a shortage allocation plan.

LADWP is responsible for planning for locally-developed water supply sources to supplement the regional supplies that are ensured by the IRP. The need for such planning is recognized in the *City of Los Angeles General Plan Framework*,[893] which includes policies for addressing development of local water supplies. These plans are documented periodically in the *Los Angeles Urban Water Management Plan* (UWMP).[894] The UWMP also accounts for the portion of projected demands not expected to be met by MWD, and includes planning for supply from sources including the Los Angeles Aqueduct, local groundwater, conservation, and reclamation.

Requirements related to urban water management planning recognize the need to link water supply and land use planning as required by Section 10910 of the California Water Code. Under certain circumstances, a city or county is required to request, in conjunction with a development project, a water supply assessment containing specific information from the water service provider. LADWP, as a water service supplier, has incorporated recent provisions pertaining to water management planning into its water supply planning process. The water demand assessment for individual projects, in conformance with the LADWP UWMP, evaluates the quality and reliability of existing and projected water supplies, as well as alternative sources of water supply and how they would be secured if needed.

Los Angeles citywide water use was 635,300 acre-feet (AF) in the 1996-97 fiscal year[895] and 679,000 AF in the 2001-02 fiscal year.[896] Water use for 2015 is projected to be 756,000 AF.[897] In its UWMP, LADWP has designated a plan for supplying all of this demand. The UWMP projections take into account the water conservation programs that LADWP implements wherever possible. UWMP projections are based on regional growth projections prepared by the SCAG. SCAG projections include a growth factor for LAX. The growth associated with the No Action/No Project Alternative and Alternative D are generally consistent with SCAG-94 projections. The growth associated with Alternatives A, B, and C is higher than

890 Although groundwater in the Los Angeles region is used for drinking water, the groundwater at LAX is not used for municipal drinking water supply.

891 Metropolitan Water District of Southern California, Southern California's Integrated Water Resources Plan, 1996.

892 Local water suppliers are responsible for developing the local production portion of the preferred resource mix.

893 Envicom Corp., City of Los Angeles Citywide General Plan Framework, December 1996, prepared for the City of Los Angeles.

894 City of Los Angeles, Department of Water and Power, Urban Water Management Plan, July 1995.

895 City of Los Angeles, Department of Water and Power, UWMP Annual Update, February 1997.

896 City of Los Angeles, Department of Water and Power, UWMP Annual Update, November 2002.

897 City of Los Angeles, Department of Water and Power, Water Supply Fact Sheet, January 2003.

the growth factor used in these projections. Current City of Los Angeles planning indicates that supply will be sufficient to meet projected demands.[898]

LAX is served by a 36-inch trunk line in Sepulveda Boulevard that distributes water to a combination of 12-inch and 16-inch transmission lines running along the airport perimeter. LAX receives water via three connections from transmission lines from the 325-pressure zone. The northern portions of LAX are served by a 10-inch connection from a 16-inch transmission line in Westchester Parkway. The westerly portions of LAX are served by a 10-inch connection from a 12-inch transmission line in Pershing Drive near World Way West; the eastern areas of LAX by a 12-inch connection from a 16-inch transmission line on Sepulveda Boulevard just south of Century Boulevard. **Figure F4.25.1-1,** Water Distribution Lines Serving LAX, illustrates the water distribution lines serving LAX, as well as other LADWP lines in the vicinity.

The development and use of reclaimed water resources is central to LADWP's plan for meeting growing water demands through 2020, and has been examined in the LADWP's Integrated Plan for the Wastewater Program (IPWP). One of the purposes of the IPWP is to ensure that the city's goals for reclaimed water use are met. In the early 1990s, LADWP initiated an aggressive program to increase the use of reclaimed water. LADWP's goals for reclaimed water production range as high as 74,000 AF-yr for 2020. Reclaimed water in the LAX area is provided by the West Basin Municipal Water District's (WBMWD) West Basin Water Reclamation Plant (WBWRP). The WBWRP is a tertiary treatment plant and has a capacity of 43 million gallons per day (48,000 AF-yr). The capacity will be expanded to over 62 mgd (69,000 AF-yr) in 2005.[899]

Reclaimed water pipelines provide service to Scattergood Electric Generating Station; portions of El Segundo; areas north of LAX, including Loyola Marymount University; and the eastern portion of LAX. Four miles of distribution trunk line have been constructed to provide up to 700 AF-yr to the LAX and Westchester area. Up to 1,850 AF-yr will be delivered through future expansions. LAX uses reclaimed water from the WBWRP for landscape irrigation. During fiscal year 1998-99, 137 AF was delivered to Westchester and LAX as part of the Westside Water Recycling Project,[900] and during 2002, 131 AF was delivered to LAX as part of this project.[901]

Water conservation is also an important component of the IRP and the UWMP. The LADWP implements water conservation measures wherever possible. The city council and various city departments, including LADWP, are currently implementing Best Management Practices for water conservation, such as ordinances, incentives, water efficient fixture installation, and retrofitting. LADWP also has conservation education and infrastructure replacement programs, and provides technical assistance to industry for conservation implementation.

In June 1994, the LAWA Environmental Management Division (EMD) prepared a *Street Frontage and Landscape Plan for LAX*. EMD uses this plan to evaluate landscape proposals for LAX projects. The plan includes requirements pertaining to water conservation, including a requirement that all landscaped areas be provided with a fixed automatic method of irrigation, and that drip irrigation systems be provided with an adequate number of outlets within landscaped areas. In addition to these actions, during the drought cycle of 1987-1992, LAWA replaced all the faucets in the CTA with low-flow faucets. LAWA also installs low-flow toilets and urinals as remodeling takes place or new restroom facilities are built.

Baseline LAX Water Use

Site-specific water use data are not collected at LAX. To calculate baseline (1996) water use, usage-based factors were used, as described in subsection 4.25.1.2, *General Approach and Methodology*. Based on these factors, baseline potable water use at LAX (that is, for airport-related facilities) is approximately 953 AF-yr. Baseline potable water use within the water use study area, which includes LAX, the ANMP properties, and all areas proposed to be acquired under the various LAX Master Plan alternatives, is approximately 2,311 AF-yr. Baseline reclaimed water use is approximately 233 AF-yr.

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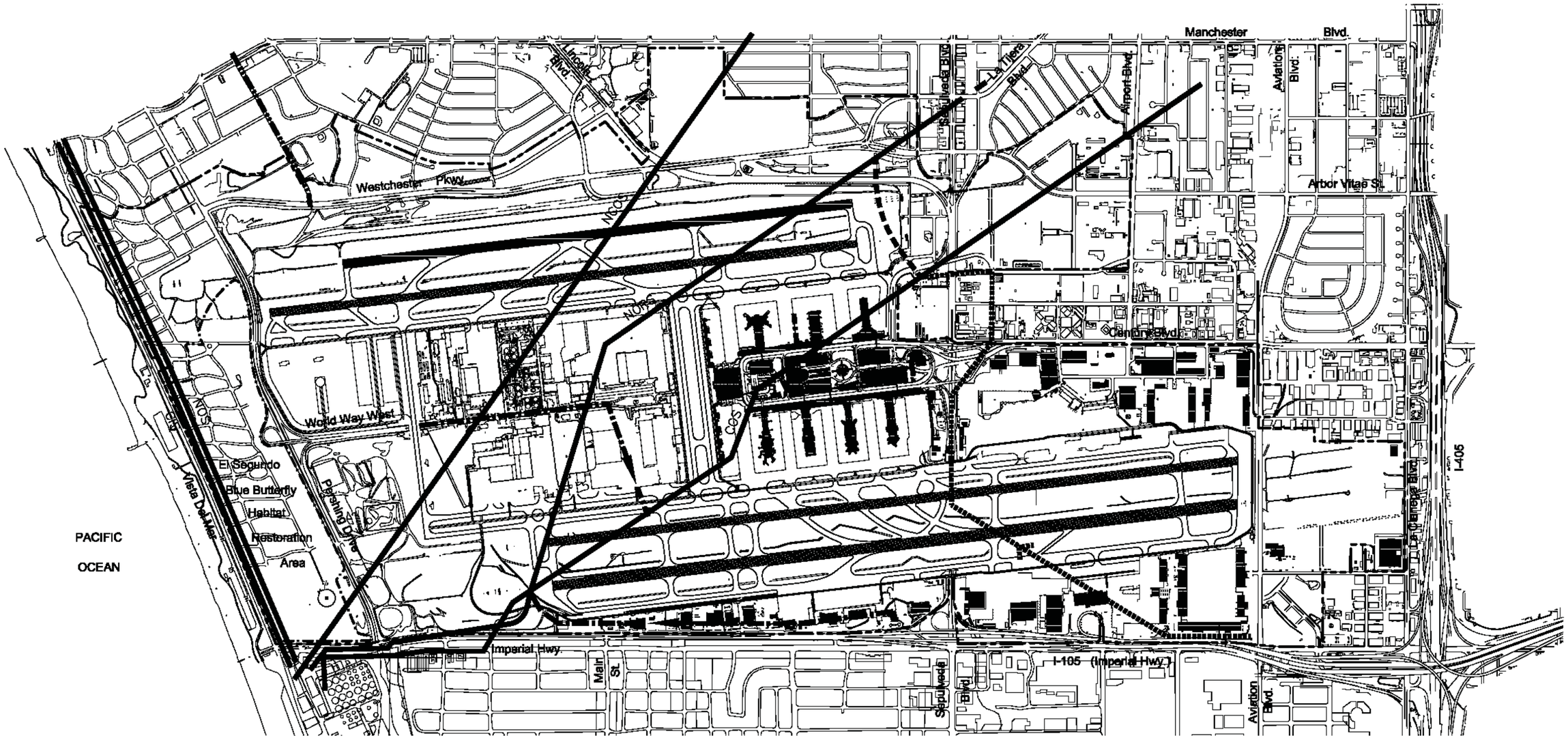
898 City of Los Angeles, Department of Water and Power, Integrated Plan for the Wastewater Program, Baseline Needs Technical Memorandum, April 2000.

899 City of Los Angeles, Department of Water and Power, Recycled Water Division.

900 City of Los Angeles, Department of Water and Power, UWMP Fiscal Year 1998-99 Annual Update, 1999.

901 City of Los Angeles, Department of Water and Power, Recycled Water Division.



Source: Camp Dresser & McKee Inc., 2000.

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LAX Master Plan Final EIS/EIR	**Location of Existing Sanitary Sewer Facilities**	Figure **F4.25.2-1**

Changes in conditions between 1996 and 2000 include modification of cargo, terminal, and ancillary facilities, and acquisition and demolition of 534 dwelling units within Manchester Square and Belford. These changes resulted in: 1) an increase in potable water use associated with airport-related activities by 12 AF-yr, an increase of 1 percent compared to the 1996 baseline; and 2) a decrease in potable water use within the Master Plan boundaries to 2,230 AF-yr in 2000, a 3.5 percent decrease compared to the 1996 baseline (refer to **Table F4.25.1-1,** Potable Water Use Comparison, in subsection 4.25.1.6 below).

Fire flow is the quantity of water available or required for fire protection in a given area. Fire flow requirements defined by the City of Los Angeles Fire Code, Section 57.09.06, require industrial or commercial development to have 6,000-9,000 gallons per minute (gpm) available from four to six fire hydrants flowing simultaneously. The existing fire flow at LAX is approximately 7,090 gpm from four hydrants.[902]

Off-Site Fuel Farm Sites

Two sites close to LAX are being considered for the construction of an off-site fuel farm under Alternative B: Scattergood Electric Generating Station and the oil refinery located south of the airport. Scattergood Electric Generating Station is located in the city of Los Angeles and is therefore served by LADWP. The proposed fuel farm site is currently occupied by four inactive fuel storage tanks, and the usage of the site does not require any water. The site has existing fire flow facilities and distribution lines from previous fuel storage uses.

The retail water purveyor to the oil refinery is the city of El Segundo, with the water supplied by the WBMWD. The refinery's water use is estimated to be 10 million gallons per day or about 12,000 AF-yr, or approximately 60 percent of the city's water use.[903] The refinery uses reclaimed water in a number of its processes. The proposed fuel farm site has existing fire flow facilities and distribution lines for its current fuel transfer uses.

4.25.1.4 Thresholds of Significance

4.25.1.4.1 CEQA Thresholds of Significance

A significant water use impact would occur if the direct and indirect changes in the environment that may be caused by the particular build alternative would potentially result in one or more of the following future conditions:

- An exceedance of regional water supply and distribution capabilities due to project-related water demand.
- Interference with major water distribution facilities due to construction of project features.

These thresholds are utilized because they address the two potential impacts to water supply and distribution associated with the LAX Master Plan build alternatives: the potential for the project to exceed regional water supply and distribution capabilities, and the potential for interference with existing water distribution facilities due to construction of proposed Master Plan improvements. The first threshold was developed based upon guidance provided in the *Draft L.A. CEQA Thresholds Guide*.[904] The second threshold was developed specifically to address potential impacts associated with the Master Plan alternatives relative to construction conflicts, which was not addressed in the *Draft L.A. CEQA Thresholds Guide*.

4.25.1.4.2 Federal Standards

The FAA *Airport Environmental Handbook* does not require that this environmental topic be addressed; therefore, no federal standards apply to the following analysis.

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902 Los Angeles World Airports, Construction and Maintenance Division.

903 SCAQMD, Revised Draft Environmental Impact Report Chevron Refinery - El Segundo, Reformulated Gasoline Projects, December 16, 1994.

904 City of Los Angeles, Draft L.A. CEQA Thresholds Guide, May 14, 1998.

4.25.1.5 Master Plan Commitments

As addressed in subsection 4.25.1.6, *Environmental Consequences*, implementation of any of the Master Plan build alternatives would have potential impacts related to water use and interference with existing water supply and distribution facilities. In recognition of these potential impacts, LAWA has included the following two water use commitments and one public utilities commitment in the Master Plan coded "W" for "water use" and "PU" for "public utilities."

- **W-1. Maximize Use of Reclaimed Water (Alternatives A, B, C, and D).**

  To the extent feasible, LAWA will maximize the use of reclaimed water in Master Plan-related facilities and landscaping. The intent of this commitment is to maximize the use of reclaimed water as an offset for potable water use and to minimize the potential for increased water use resulting from implementation of the LAX Master Plan. This commitment also will facilitate achievement of the City of Los Angeles' goal of increased beneficial use of its reclaimed water resources. This commitment will be implemented by various means, such as installation and use of reclaimed water distribution piping for landscape irrigation and use of appropriate construction material in the new Central Utility Plant (CUP) to allow for reclaimed water use for cooling (Alternatives A, B, and C).

- **W-2. Enhance Existing Water Conservation Program (Alternatives A, B, C, and D).**

  LAWA will enhance the existing *Street Frontage and Landscape Plan for LAX* to ensure the ongoing use of water conservation practices at LAX facilities. The intent of this program, to minimize the potential for increased water use due to implementation of the LAX Master Plan, is also in accordance with regional efforts to ensure adequate water supplies for the future. Features of the enhanced conservation program will include identification of current water conservation practices and an assessment of their effectiveness; identification of alternate future conservation practices; continuation of the practice of retrofitting and installing new low-flow toilets and other water-efficient fixtures in all LAX buildings, as remodeling takes place or new construction occurs; use of Best Management Practices for maintenance; use of water efficient vegetation for landscaping, where possible; and continuation of the use of fixed automatic irrigation for landscaping.

- **PU-1. Develop a Utility Relocation Program (Alternatives A, B, C, and D).**

  LAWA will develop and implement a utilities relocation program to minimize interference with existing utilities associated with LAX Master Plan facility construction. Prior to initiating construction of a Master Plan component, LAWA will prepare a construction evaluation to determine if the proposed construction will interfere with existing utility location or operation. LAWA will determine utility relocation needs and, for sites on LAX property, LAWA will develop a plan for relocating existing utilities as necessary before, during, and after construction of LAX Master Plan features. LAWA will implement the utility relocation program during construction of LAX Master Plan improvements.

4.25.1.6 Environmental Consequences

This section describes the potential environmental impacts of the No Action/No Project Alternative and the four build alternatives. For each alternative, the effects are discussed as they relate to overall water use, reclaimed water use, fire flows, the adequacy of existing distribution facilities, the potential for construction to interfere with existing subsurface water lines, and construction water usage. **Table F4.25.1-1**, Potable Water Use Comparison (AF-yr), identifies potable water use under each of the alternatives as well as under 1996 baseline and Year 2000 conditions.

Table F4.25.1-1

Potable Water Use Comparison (AF-yr)

	1996 Baseline	Year 2000	Alternatives 2015 NA/NP	A	B	C	D
LAX							
Airport Facilities	953	965	1,091	1,788	1,619	1,722	1,306
Belford	104	61	NA[1]	NA[2]	NA[2]	NA[2]	NA[1]
Continental City	NA	NA	513	NA	NA	NA	NA
LAX Northside[3]	NA	2	869	NA	NA	NA	869
Westchester Southside	NA	NA	NA	513	513	513	NA
Subtotal LAX[4]	**1,057**	**1,028**	**2,473**	**2,301**	**2,132**	**2,235**	**2,176**
Non-Project Uses Within Master Plan Boundaries[5]							
Manchester Square	362	309	NA[1]	275[6]	NA[7]	NA[7]	NA[7]
Land Within Acquisition Areas[8]	892	892	892	180	35	432	801
Subtotal Non-Project Uses[4]	**1,254**	**1,202**	**892**	**455**	**35**	**432**	**801**
TOTAL MASTER PLAN BOUNDARIES[4]	**2,311**	**2,230**	**3,365**	**2,755**	**2,167**	**2,667**	**2,977**

NA = Not Applicable.
NA/NP = No Action/No Project Alternative.

1 Under the No Action/No Project Alternative and Alternative D, existing uses within Belford and Manchester Square would be demolished. No redevelopment of Belford is assumed for either alternative for purposes of this analysis. Under the No Action/No Project Alternative, no redevelopment of Manchester Square is assumed.

2 Under Alternatives A, B, and C, existing uses within Belford would be demolished, and the area would be incorporated into the overall Master Plan development. Water use associated with proposed land uses in this area is incorporated within "Airport Facilities" above.

3 LAX Northside is currently subject to a trip cap (refer to Chapter 4, *Affected Environment, Consequences, and Mitigation Measures* (Analytical Framework Section)). Under Alternative D, this trip cap would be reduced, which would effectively reduce the total amount of development allowed in LAX Northside. Therefore, water use in this area may be overstated.

4 Information in table may not total due to rounding.

5 For purposes of this analysis, a single composite study area was established, referred to as the "Master Plan boundaries." However, for each alternative, a portion of the study area would not be incorporated into the Master Plan development.

6 Under Alternative A, Manchester Square is assumed to be redeveloped with commercial/light industrial uses independent of the Master Plan.

7 Under Alternatives B, C, and D, existing uses within Manchester Square would be demolished, and the area would be incorporated into the overall Master Plan development. Water use associated with proposed land uses in this area is incorporated within "Airport Facilities" above.

8 No land within the acquisition areas would be acquired under the No Action/No Project Alternative. Only a portion of the land within the acquisition areas would be acquired for each build alternative. The land within the areas that would not be acquired would not be affected by the Master Plan and would remain in its current use.

Source: Camp Dresser & McKee Inc., 2003.

4.25.1.6.1 No Action/No Project Alternative

Under the No Action/No Project Alternative, there would be limited improvements to LAX. These projects would increase the amount of cargo space at LAX over baseline conditions. In addition, under the No Action/No Project Alternative, passenger activity at LAX would increase as a result of projected growth. The demolition of existing land uses in Belford and Manchester Square included in the No Action/No Project Alternative would eliminate existing water consumption in those areas; however, the development of LAX Northside and Continental City would create new demand for water in currently undeveloped areas within the Master Plan boundaries.

The increase in square footage dedicated to cargo uses would proportionately increase water use at LAX. In addition, intensification of terminal use would increase terminal-related water use 36 percent by 2015 over baseline conditions. Water use at the fuel farm and the CUP would not change. Total water use for airport facilities would increase by 138 AF-yr over baseline conditions by 2015 (a 15 percent increase).

Table F4.25.1-1 shows water use projections under the No Action/No Project Alternative. Total water use within the Master Plan boundaries, including LAX Northside, Continental City, and land within the Master Plan boundaries that would not be acquired under this alternative, would increase 1,054 AF-yr over baseline conditions by 2015 (a 46 percent increase). The majority of this increase in water use is attributable to the development of LAX Northside and Continental City.

In conjunction with MWD, LADWP is planning to meet future water demand in Southern California. It is anticipated that the member agencies of MWD will implement the IRP as intended, ensuring an adequate water supply for Southern California through the Year 2015. The local sources that MWD has designated as part of its future preferred resource mix are now being developed by LADWP as part of its long-range planning efforts. Therefore, LADWP projects that there will be an adequate water supply to meet city demands through 2015.[905] The projections used by LADWP account for the water use associated with activity levels at LAX that are slightly higher than those assumed under the No Action/No Project Alternative. The growth projected for the No Action/No Project Alternative is thus being planned for by LADWP and adequate water supply to accommodate this growth is projected to be available. Moreover, it is anticipated that regional water distribution pipelines would be adequate to accommodate increases in water demand associated with the No Action/No Project Alternative.

Under the No Action/No Project Alternative, landscaped area at LAX would total 102 acres in 2015 (see Table F4.10-4, Matrix of Acreages for Designated Plant Communities, in Section 4.10, *Biotic Communities*). Landscape area would be irrigated with reclaimed water, in accordance with existing LAWA policies. Using reclaimed water for landscaping would reduce potable water demands under the No Action/No Project Alternative. **Table F4.25.1-2**, Landscape-Related Reclaimed Water Use Comparison (AF-yr), provides an estimate of reclaimed water use for landscaping under the No Action/No Project Alternative. With planned expansion of existing reclaimed water production and existing distribution capacity, ample supply and facilities would be available to accommodate the No Action/No Project Alternative increase in reclaimed water use. Increases in cargo square footage under the No Action/No Project Alternative would slightly increase water requirements for fire flow. Fire flow largely depends on the availability of adequate water pressure and supply. The fire flow requirements for the No Action/No Project Alternative could be easily accommodated by existing distribution facilities and water supplies. Water would be required during construction of LAX Northside and Continental City for dust suppression and the mixing of concrete and during demolition of the ANMP acquisition areas for dust suppression. Water usage for construction purposes would be temporary and would be considerably smaller than that required once facilities are operational. It is possible that reclaimed water could be used for dust suppression, reducing the quantity of potable water required.

Table F4.25.1-2

Landscape-Related Reclaimed Water Use Comparison (AF-yr)

Alternative	2015
No Action/No Project Alternative	301
Alternative A	383
Alternative B	362
Alternative C	354
Alternative D	301

Source: Camp Dresser & McKee Inc., 2003.

4.25.1.6.2 Alternative A - Added Runway North

Under Alternative A, the building area dedicated to terminal, cargo, and ancillary airport uses would increase and the building area for maintenance uses would decrease compared to baseline conditions. Alternative A would also include development of Westchester Southside. Existing uses in the acquisition

[905] City of Los Angeles, Department of Water and Power, Urban Water Management Plan, July 1995.

areas would be demolished. Uses within the ANMP properties -- Belford and Manchester Square -- will be demolished as part of a separate action being undertaken by LAWA. The land within the acquisition areas and Belford would be incorporated into the Master Plan. Manchester Square would be redeveloped independent of the Master Plan with commercial and industrial uses.

Table F4.25.1-1 shows that under Alternative A, water use for airport facilities would increase 835 AF-yr over baseline conditions (an 88 percent increase) by 2005. Westchester Southside water use would be 513 AF-yr by 2015. Total water use within the Master Plan boundaries under Alternative A would increase by 444 AF-yr over baseline conditions by 2015 (a 19 percent increase). The overall intensification of uses on the airport, and the redevelopment of Manchester Square with commercial uses (independent of the LAX Master Plan), would account for this 19 percent increase.

Water use for airport facilities under Alternative A would be 64 percent greater than use under the No Action/No Project Alternative by 2015. In 2015, total water use within the Master Plan boundaries for Alternative A would be less than that under the No Action/No Project Alternative.

In order to reduce water use under Alternative A, and support the regional efforts to ensure adequate water supplies for the future, LAWA would implement Master Plan Commitments W-1, Maximize Use of Reclaimed Water (Alternatives A, B, C, and D), and W-2, Enhance Existing Water Conservation Program (Alternatives A, B, C, and D). These commitments would maximize the use of reclaimed water in new facilities and landscaped areas, and would expand LAWA's existing water conservation program. These programs would be consistent with FAA policies that encourage the development of facilities that exemplify the highest standards of design, including sustainability through resource conservation. They would also be consistent with Executive Order 13123, Greening the Government Through Efficient Energy Management (64 FR 30851, June 8, 1999), which encourages federal agencies to reduce water consumption in their facilities.

As noted previously, LADWP projections for an adequate water supply to meet city demands through 2015[906] account for the water use associated with conditions similar to the No Action/No Project Alternative. Given that Alternative A would result in less water use within the Master Plan boundaries than would the No Action/No Project Alternative, sufficient water would be available to accommodate water demand associated with Alternative A.

Supporting this projection is a water availability assessment LADWP prepared for the LAX Master Plan in compliance with the requirements of Section 10910 of the California Water Code.[907] Related correspondence that summarizes future capacity indicates that LADWP "can provide sufficient domestic water to accommodate the development and growth as defined by the LAX Master Plan."[908] Because project-related water demand could be accommodated by the projected water supply, no significant adverse impacts to water supply would occur.

Under Alternative A, landscaped area at LAX would total 133 acres in 2015 (see Table F4.10-4, Matrix of Acreages for Designated Plant Communities, in Section 4.10, *Biotic Communities*). Landscape area would be irrigated with reclaimed water, in accordance with existing LAWA policies and Master Plan Commitment W-1. In addition, reclaimed water would be used in new facilities to the extent practicable in accordance with Master Plan Commitment W-1. As these facilities have not been designed, the amount of reclaimed water they would consume cannot be quantified at this time. **Table F4.25.1-2** shows reclaimed water use projections for the alternatives associated with landscape requirements. With planned expansion of existing reclaimed water production and existing distribution capacity, ample supply and facilities would be available to accommodate the increase in reclaimed water use associated with Alternative A. This conclusion is consistent with the water availability assessment prepared for the LAX Master Plan by LADWP.[909] Therefore, no significant impacts with respect to reclaimed water supply would occur.

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906 City of Los Angeles, Department of Water and Power, Urban Water Management Plan, July 1995.

907 Water Code Section 10910, et. seq.

908 Nuno, Luis, Distribution Engineering - Water, City of Los Angeles, Department of Water and Power, Letter to Mr. Jim Ritchie, Los Angeles World Airports: Water Availability Assessment for the LAX Master Plan's Draft Environmental Impact Report. April 21, 2000. A copy of this correspondence is provided in Appendix C, *Agency Consultation Letters*.

909 Nuno, Luis, Distribution Engineering - Water, City of Los Angeles, Department of Water and Power, Letter to Mr. Jim Ritchie, Los Angeles World Airports: Water Availability Assessment for the LAX Master Plan's Draft Environmental Impact Report.

Implementing Alternative A would alter the demands for fire flow pressure and its location at LAX. As indicated previously, fire flow largely depends on the availability of adequate water pressure and supply. With the implementation of the LAX Master Plan, new facilities would be constructed where none exist now; in some areas of the airport, higher fire flow demand uses, such as maintenance uses, would be located where lower fire flow demand uses are currently located. These changes may require additional water pressure. Fire flow requirements for new facilities would be determined in conjunction with LAFD and would meet or exceed fire flow requirements in effect at the time. The water availability assessment prepared for the LAX Master Plan by LADWP indicates that "public fire protection for this project could be met from existing and proposed water system facilities."[910] Because the project would be designed to provide the requisite water infrastructure, the altered demand for fire flow pressures would be a less than significant impact.

Alternative A would require new water distribution infrastructure, as well as relocating and renovating on-airport facilities. Reclaimed water infrastructure would also be provided as part of the design to provide reuse opportunities in landscaping and, potentially, the CUP cooling towers and terminal plumbing. The construction of this new infrastructure would be incorporated into the LAX Master Plan as part of Master Plan Commitment PU-1, Develop a Utility Relocation Program (Alternatives A, B, C, and D), and Master Plan Commitment W-1, Maximize Use of Reclaimed Water (Alternatives A, B, C, and D). It is anticipated that regional water distribution pipelines would be adequate to accommodate increases in water demand for this alternative. Because the project would be designed to provide the requisite water infrastructure, the need for new and relocated facilities on the airport would be a less than significant impact. Construction of subsurface structures as part of Alternative A may interfere with existing water supply and distribution facilities. Preliminary review of Alternative A indicates that relocation/adjustment of water system facilities may be required, potentially including a 24" recycled water line located northeast of LAX, a regulator station at Century Boulevard and Aviation Way, a 26" trunkline in Sepulveda Boulevard, a 16" main in Aviation Boulevard, and a 24" trunkline in Pershing Drive and within LAX property south of Westchester Parkway. It is possible that some connections would experience a brief, temporary disruption of service during utility relocation. Under Master Plan Commitment PU-1, a utility relocation program would be implemented during construction to minimize potential impacts on existing subsurface utilities. The utility relocation program would minimize service disruptions. Developing and implementing this utility relocation program would ensure that potential impacts on existing water supply and distribution facilities would be less than significant.

Water would be required during construction of Master Plan improvements and Westchester Southside for dust suppression, including dust suppression for construction-related demolition, and the mixing of concrete. Water usage for construction purposes would be temporary and would be considerably smaller than that required once facilities are operational. It is possible that reclaimed water could be used for dust suppression, reducing the quantity of potable water required. Construction water usage would be a less than significant impact.

4.25.1.6.3 Alternative B - Added Runway South

As with Alternative A, Alternative B would increase the building area dedicated to terminal, cargo, and ancillary airport uses, and decrease building area for maintenance uses compared to baseline conditions. Alternative B would also include development of Westchester Southside. Existing uses in the acquisition areas would be demolished. As with Alternative A, uses within the ANMP properties -- Belford and Manchester Square -- will be demolished as part of a separate action being undertaken by LAWA. The land within these areas would be incorporated into the Master Plan.

Table F4.25.1-1 shows that under Alternative B, water use for airport facilities would increase 666 AF-yr over baseline conditions by 2015 (a 70 percent increase). Westchester Southside water use would be 513 AF-yr by 2015. Because of the reduction and elimination of high water demand uses within the acquisition areas, water use in the other areas within the Master Plan boundaries would decrease substantially from baseline conditions, and would offset increases in water use. As a result, under

910 April 21, 2000. A copy of this correspondence is provided in Appendix C, *Agency Consultation Letters*.
Nuno, Luis, Distribution Engineering - Water, City of Los Angeles, Department of Water and Power, Letter to Mr. Jim Ritchie, Los Angeles World Airports: Water Availability Assessment for the LAX Master Plan's Draft Environmental Impact Report. April 21, 2000. A copy of this correspondence is provided in Appendix C, *Agency Consultation Letters*.

Alternative B, total water use within the Master Plan boundaries would decrease 144 AF-yr from baseline conditions by 2015 (a 6 percent decrease).

Water use for airport facilities would be 48 percent greater than use under the No Action/No Project Alternative by 2015. Total water use within the Master Plan boundaries under Alternative B would be less than under the No Action/No Project Alternative.

In addition to the decrease in water use from converting high water-consumption residential uses within the acquisition areas to airport uses, LAWA would implement Master Plan Commitments W-1 and W-2 to further reduce water use under Alternative B. These commitments would be consistent with federal policies pertaining to resource conservation.

As noted previously, LADWP projects that there will be an adequate water supply to meet city demands through 2015.[911] This is consistent with the findings of a water availability assessment prepared by LADWP for the LAX Master Plan, in compliance with the requirements of Section 10910 of the California Water Code, which indicates that sufficient domestic water will be available to accommodate the development and growth as defined by the LAX Master Plan.[912] Because project-related water demand could be accommodated by the projected water supply, no significant adverse impacts relative to water supply would occur.

Alternative B would require the removal and relocation of the existing fuel farm and related infrastructure. Relocating the fuel farm to an off-site location -- Scattergood Electric Generating Station or the oil refinery south of the airport -- would increase water demands at the new site. The water demand at the current fuel farm would be replaced by a similar demand at the new site.

The fuel farm requires water for both office-related uses and for fire flow. Both of the proposed fuel farm sites have the capacity to meet the additional fire flow needs of the relocated facility. The Scattergood Fuel Farm would have an on-site fire protection water storage tank and a system of pipelines and nozzles. The oil refinery fuel farm would tie into existing fire protection water delivery and storage facilities on the refinery. Office water supply needs would be minimal. Because the total water demands associated with the relocated fuel farm could be accommodated by the existing water distribution facilities at either site, the impact would be less than significant.

Under Alternative B, LAWA would implement Master Plan Commitment W-1 to maximize the use of reclaimed water in new facilities and within irrigated areas. Landscaped area at LAX under Alternative B would total 125 acres in 2015 (see Table F4.10-4, Matrix of Acreages for Designated Plant Communities, in Section 4.10, *Biotic* Communities). **Table F4.25.1-2** shows reclaimed water use projections for Alternative B landscape requirements. Similar to Alternative A, with planned expansion of existing reclaimed water production and existing distribution capacity, ample supply and facilities would be available to accommodate the increase in reclaimed water use associated with Alternative B. This is consistent with the water availability assessment prepared for the LAX Master Plan by LADWP.[913] Therefore, no significant impacts with respect to reclaimed water supply would occur.

The potential impacts associated with the new/relocated on-airport water infrastructure and increased fire flow demand would be similar to those described for Alternative A above. As with Alternative A, Alternative B would potentially require adjustment/relocation of utilities in or near Aviation Boulevard, Pershing Drive, Sepulveda Boulevard, Aviation Way, and within LAX property. Potential utility conflicts during construction would be minimized with the implementation of a utility relocation program under Master Plan Commitment PU-1. Implementing this commitment would ensure that potential construction-related impacts would be less than significant.

Alternative B would be designed to provide the requisite water infrastructure, including that necessary for fire flows. The water availability assessment prepared for the LAX Master Plan by LADWP indicates that

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911 City of Los Angeles, Department of Water and Power, Urban Water Management Plan, July 1995.

912 Nuno, Luis, Distribution Engineering - Water, City of Los Angeles, Department of Water and Power, Letter to Mr. Jim Ritchie, Los Angeles World Airports: Water Availability Assessment for the LAX Master Plan's Draft Environmental Impact Report. April 21, 2000. A copy of this correspondence is provided in Appendix C, *Agency Consultation Letters*.

913 Nuno, Luis, Distribution Engineering - Water, City of Los Angeles, Department of Water and Power, Letter to Mr. Jim Ritchie, Los Angeles World Airports: Water Availability Assessment for the LAX Master Plan's Draft Environmental Impact Report. April 21, 2000. A copy of this correspondence is provided in Appendix C, *Agency Consultation Letters*.

"public fire protection for this project could be met from existing and proposed water system facilities."[914] As a result, potential impacts relative to fire flows would be less than significant.

Water usage for construction purposes for Alternative B would be similar to that under Alternative A. Construction water usage would be a less than significant impact.

4.25.1.6.4 Alternative C - No Additional Runway

Under Alternative C, the building area dedicated to terminal, cargo, and ancillary airport uses would increase, and the building area for maintenance uses would decrease compared to baseline conditions. Alternative C would also include development of Westchester Southside. Existing uses in the acquisition areas would be demolished. As with Alternatives A and B, uses within the ANMP properties -- Belford and Manchester Square -- will be demolished as part of a separate action being undertaken by LAWA. The land within these areas would be incorporated into the Master Plan.

Table F4.25.1-1 shows that under Alternative C, water use from airport facilities would increase 769 AF-yr over baseline conditions by 2015 (an 81 percent increase). Westchester Southside water use would be 513 AF-yr by 2015. Because of the reduction and elimination of high water demand uses within the acquisition areas, as described previously, water use in the other areas within the Master Plan boundaries would decrease substantially from baseline conditions, and would partially offset increases in airport-related water use. Alternative C would result in higher water use within the acquisition areas as compared to Alternatives A and B, due to the lower total land acquisition required. Alternatives A and B would acquire more land and convert it into airport uses; Alternative C would maintain more of the existing land uses, with their higher water consumption. Total water use within the Master Plan boundaries would increase 356 AF-yr over baseline conditions by 2015 (a 15 percent increase).

Water use for airport facilities would be 58 percent greater than use under the No Action/No Project Alternative by 2015. However, similar to Alternatives A and B, Alternative C would result in less total water use within the Master Plan boundaries in 2015 than would the No Action/No Project Alternative. As with Alternatives A and B, LAWA would implement Master Plan Commitments W-1 and W-2 to reduce water use associated with Alternative C. These commitments would be consistent with federal policies pertaining to resource conservation.

As noted previously, LADWP projects that there will be an adequate water supply to meet city demands through 2015.[915] This is consistent with the findings of a water availability assessment prepared by LADWP for the LAX Master Plan, in compliance with the requirements of Section 10910 of the California Water Code, which indicates that sufficient domestic water will be available to accommodate the development and growth as defined by the LAX Master Plan.[916] Because project-related water demand could be accommodated by the projected water supply, no significant adverse impacts relative to water supply would occur.

Under Alternative C, LAWA would implement Master Plan Commitment W-1 to maximize the use of reclaimed water in new facilities and within irrigated areas. Landscaped area at LAX under Alternative C would total 121 acres in 2015 (see Table F4.10-4, Matrix of Acreages for Designated Plant Communities, in Section 4.10, *Biotic* Communities). **Table F4.25.1-2** shows reclaimed water use projections for the Alternative C landscape requirements. Similar to Alternatives A and B, with planned expansion of existing reclaimed water production and existing distribution capacity, ample supply and facilities would be available to accommodate the increase in reclaimed water use under Alternative C. This conclusion is consistent with the water availability assessment prepared for the LAX Master Plan by LADWP. Therefore, no significant impacts with respect to reclaimed water supply would occur.

It is anticipated that regional water distribution pipelines would be adequate to accommodate increases in water demand for this alternative. The potential impacts associated with the new/relocated on-airport water infrastructure and with increased fire flow demand would be similar to those described for

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914 Nuno, Luis, Distribution Engineering - Water, City of Los Angeles, Department of Water and Power, Letter to Mr. Jim Ritchie, Los Angeles World Airports: Water Availability Assessment for the LAX Master Plan's Draft Environmental Impact Report. April 21, 2000. A copy of this correspondence is provided in Appendix C, *Agency Consultation Letters*.

915 City of Los Angeles, Department of Water and Power, Urban Water Management Plan, July 1995.

916 Nuno, Luis, Distribution Engineering - Water, City of Los Angeles, Department of Water and Power, Letter to Mr. Jim Ritchie, Los Angeles World Airports: Water Availability Assessment for the LAX Master Plan's Draft Environmental Impact Report. April 21, 2000. A copy of this correspondence is provided in Appendix C, *Agency Consultation Letters*.

Alternatives A and B above. As with Alternatives A and B, adjustment/relocation of utilities in or near Aviation Boulevard, Pershing Drive, Sepulveda Boulevard, Aviation Way, and within LAX property would potentially be required. Potential utility conflicts during construction would be minimized with the implementation of a utility relocation program under Master Plan Commitment PU-1. Implementing this commitment would reduce potential construction-related impacts to a level that is less than significant.

Alternative C would be designed to provide the requisite water infrastructure, including that necessary for fire flows. The water availability assessment prepared for the LAX Master Plan by LADWP indicates that "public fire protection for this project could be met from existing and proposed water system facilities."[917] As a result, potential impacts relative to fire flows would be less than significant.

Water usage for construction purposes for Alternative C would be similar to that under Alternative A. Construction water usage would be a less than significant impact.

4.25.1.6.5 Alternative D - Enhanced Safety and Security Plan

Under Alternative D, the building area dedicated to terminal, cargo, and ancillary airport uses would increase, and the building area for maintenance uses would decrease slightly compared to baseline conditions. Alternative D would include development of LAX Northside. Existing uses in the acquisition areas would be demolished. As with Alternatives A, B, and C, uses within the ANMP properties -- Belford and Manchester Square -- will be demolished as part of a separate action being undertaken by LAWA. For purposes of this analysis, no redevelopment of the Belford property is assumed. The land within the acquisition areas and Manchester Square would be incorporated into the Master Plan.

Table F4.25.1-1 shows that, under Alternative D, water use from airport facilities would increase 353 AF-yr over baseline conditions by 2015 (a 37 percent increase). LAX Northside water use would be 869 AF-yr by 2015. Because of the reduction and elimination of water uses within the acquisition areas, as described previously, water use in the other areas within the LAX Master Plan boundaries would decrease from baseline conditions, and would partially offset increases in airport-related water use. However, Alternative D would result in higher water use within the acquisition areas, as compared to Alternatives A, B, and C, due to the lower total land acquisition required. Alternatives A, B, and C would acquire more land and convert it into airport uses; Alternative D would maintain substantially more of the existing land uses, with their higher water consumption. Total water use within the Master Plan boundaries would increase 666 AF-yr over baseline conditions by 2015 (a 29 percent increase).

Water use for airport facilities under Alternative D would be 20 percent greater than use under the No Action/No Project Alternative by 2015, similar to Alternatives A, B, and C, Alternative D would result in less total water use within the Master Plan boundaries in 2015 than would the No Action/No Project Alternative, although the difference would be smaller than with the other build alternatives. As with the other build alternatives, LAWA would implement Master Plan Commitments W-1, Maximize Use of Reclaimed Water (Alternatives A, B, C, and D), and W-2, Enhance Existing Water Conservation Program (Alternatives A, B, C, and D), to reduce water use associated with Alternative D. These commitments would be consistent with federal policies pertaining to resource conservation.

LADWP projects that there will be adequate water supply to meet city demands through 2015.[918] This is consistent with the findings of an updated water availability assessment prepared by LADWP for Alternative D in compliance with the requirements of Section 10910 of the California Water Code,[919] which indicates that "adequate water supplies will be available to meet the water demands of the project."[920] Because project-related water demand could be accommodated by the projected water supply, no significant adverse impacts relative to water supply would occur.

Under Alternative D, LAWA would implement Master Plan Commitment W-1 to maximize the use of reclaimed water in new facilities and within irrigated areas. Landscaped area at LAX under Alternative D

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917 Nuno, Luis, Distribution Engineering - Water, City of Los Angeles, Department of Water and Power, Letter to Mr. Jim Ritchie, Los Angeles World Airports: Water Availability Assessment for the LAX Master Plan's Draft Environmental Impact Report. April 21, 2000. A copy of this correspondence is provided in Appendix C, *Agency Consultation Letters*.

918 City of Los Angeles, Department of Water and Power, Urban Water Management Plan, July 1995.

919 Water Code Section 10910, et. seq.

920 City of Los Angeles, Department of Water and Power, Water Resources Business Unit, Water Supply Availability Assessment for the Los Angeles World Airport - LAX Master Plan Project - Alternative D, June 10, 2003. A copy of this correspondence is provided in Appendix S-A, *Agency Consultation Letters*.

would total approximately 102 acres in 2015 (see Table F4.10-4, Matrix of Acreages for Designated Plant Communities, in Section 4.10, *Biotic* Communities). **Table F4.25.1-2** shows reclaimed water use projections for Alternative D landscape requirements. With the planned expansion of existing reclaimed water production and existing distribution capacity, ample supply and facilities would be available to accommodate the demand for reclaimed water use associated with Alternative D. This is consistent with the water availability assessment prepared for the LAX Master Plan by LADWP. Therefore, no significant impacts with respect to reclaimed water supply would occur.

Similar to the other build alternatives, implementing Alternative D would alter the demands for fire flow pressure and its location at LAX. The fire flow requirements for Alternative D would be determined in conjunction with LAFD and would meet or exceed fire flow requirements in effect at the time. Fire flow requirements for new facilities would be evaluated during the design phase and incorporated into LAX Master Plan design and construction. The water availability assessment prepared for the other LAX Master Plan alternatives by LADWP indicates that "public fire protection for this project could be met from existing and proposed water system facilities."[921] Since the requirements of Alternative D would be the same or less than the other alternatives, the altered demand for fire flow pressures would be a less than significant impact. (The need for facility space and equipment to serve fire flow needs is analyzed in Section 4.26.1, *Fire Protection.*)

Alternative D would require new water distribution infrastructure, as well as relocating and renovating on-airport facilities. Reclaimed water infrastructure would also be provided as part of the design. The construction of this new infrastructure would be incorporated into the LAX Master Plan as part of Master Plan Commitment PU-1, Develop a Utility Relocation Program (Alternatives A, B, C, and D), and Master Plan Commitment W-1, Maximize Use of Reclaimed Water (Alternatives A, B, C, and D). It is anticipated that regional water distribution pipelines would be adequate to accommodate increases in water demand for this alternative. The need for new and relocated facilities on the airport would be a less than significant impact.

As with other alternatives, Alternative D would potentially require adjustment/relocation of utilities in or near surrounding roadways and within LAX property. Potential utility conflicts during construction would be minimized with the implementation of a utility relocation program under Master Plan Commitment PU-1. Implementing this commitment would ensure that potential construction-related impacts would be less than significant.

Water would be required during construction of Master Plan improvements and LAX Northside. Water usage for construction purposes would be temporary and would be considerably smaller than that required once facilities are operational. It is possible that reclaimed water could be used for dust suppression, reducing the quantity of potable water required. Construction water usage would be a less than significant impact.

4.25.1.7 Cumulative Impacts

As discussed in subsection 4.25.1.3, *Affected Environment/Environmental Baseline*, potable water is currently used at LAX to support passenger, cargo, and administrative activities. Water is also used for landscaping and fire flow purposes. Existing water supply and treatment and distribution facilities are considered adequate to meet future regional needs.

4.25.1.7.1 No Action/No Project Alternative

Under the No Action/No Project Alternative, additional passenger activity, cargo handling, and development of LAX Northside and Continental City would increase water use within the Master Plan boundaries. Ongoing acquisition of properties by LAWA within the Manchester Square and Belford areas would reduce water use in the immediate area. The majority of the increase in water use within the Master Plan boundaries would be attributable to the development of LAX Northside and Continental City.

The most sizeable related project in the immediate vicinity of LAX is the Playa Vista project, which, combined with development of LAX Northside, would result in a cumulative increase in water use in the

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921 Nuno, Luis, Distribution Engineering - Water, City of Los Angeles, Department of Water and Power, Letter to Mr. Jim Ritchie, Los Angeles World Airports: Water Availability Assessment for the LAX Master Plan's Draft Environmental Impact Report, April 21, 2000. A copy of this correspondence is provided in Appendix C, *Agency Consultation Letters*.

region. Other projects in the vicinity, relocated residents from Manchester Square and Belford, and overall forecast growth throughout the region would place additional demands on water treatment and distribution facilities.

As indicated previously, regional water supply planning programs would ensure an adequate water supply for cumulative growth within Southern California through the year 2015.

4.25.1.7.2 Alternatives A, B, and C

As previously discussed in subsection 4.25.1.6, *Environmental Consequences*, demand for potable water under Alternatives A and C would increase due to new development within the Master Plan boundaries, increases in passenger activity and employment, and increased aircraft operations. (Water use under Alternative B would decrease compared to baseline conditions.) To meet these needs, new and relocated water distribution infrastructure would be required. Regional water supply planning programs would ensure an adequate water supply to support the Master Plan improvements.

Alternatives A, B, and C would also have an indirect effect on water use due to project-related increases in population associated with direct employment. This population increase could range from approximately 38,000 to 87,000 within the five-county region, which would represent less than 1 to approximately 2 percent of forecasted population growth from 1996 to 2015. Within a ten-mile radius of LAX, population growth associated with new employment at LAX would represent approximately 3 to 5 percent of forecasted growth. This increase in population, in combination with relocation of residents from Manchester Square and Belford and within the acquisition areas, and overall forecast growth, would require increased water supply within the region. Uncertainty exists as to where residents would be relocated; however, relocated residents and businesses may be accommodated by planned or proposed new developments with the LADWP service area and the service area of other water purveyors in the region. This would cause indirect cumulative increases in potable water demand within the region.

In considering impacts associated with related project development in the airport vicinity, the proposed Playa Vista development would, in combination with Alternatives A, B, or C, directly increase cumulative water use in the region. Other developments within the region, including the development of Manchester Square under Alternative A (which would be developed independent of the LAX Master Plan) would also increase cumulative water use.

As indicated above, local and regional water supply planning efforts are preparing for future needs in the region and would account for increased water use caused by this growth. The most comprehensive regional water supply planning program is the Metropolitan Water District's (MWD) IRP. The IRP calls for increased usage of reclaimed water, in lieu of potable water, when possible. Water purveyors plan to increase reliance on groundwater and expand seasonal recharge programs. Purveyors will also attempt to optimize their use of imported water during the winter months, when it is most available and least expensive. The member agencies of MWD are implementing reclaimed water, groundwater and recharge programs currently, as recommended in the IRP. It is anticipated that the member agencies of MWD will further implement the IRP as intended in the future, ensuring an adequate water supply for Southern California through the year 2015. Therefore, impacts associated with cumulative increases in water use would be less than significant.

4.25.1.7.3 Alternative D - Enhanced Safety and Security Plan

Water use under Alternative D would increase due to new development within the Master Plan boundaries and increases in passenger activity and aircraft operations compared to baseline conditions. To meet these needs, LADWP has performed an evaluation of water availability and has indicated that water use associated with this alternative falls within the anticipated growth range of the UWMP.

Alternative D would not result in an increase in population associated with direct employment. However, other projects in the vicinity, relocation of residents from the ANMP properties, and overall forecast growth would contribute to increased water demand within the region. Uncertainty exists as to where residents would be relocated; however, relocated residents and businesses may be accommodated by planned or proposed new developments with the LADWP service area and the service area of other water purveyors in the region. This would cause indirect cumulative increases in potable water demand within the region.

As indicated above, local and regional water supply planning efforts are preparing for future needs in the region and would account for increased water use caused by this growth. Therefore, impacts associated with cumulative increases in water use would be less than significant.

4.25.1.8 Mitigation Measures

Alternatives A, B, C, and D would not have any significant impacts relative to project-related water use. Master Plan Commitments W-1 and W-2 would reduce water use associated with these alternatives. In addition, Master Plan Commitment PU-1 would minimize potential conflicts with subsurface utilities during construction. As a result, none of the build alternatives would have significant impacts to water supply or water facilities during construction and no mitigation would be required.