April 2009

FINAL ENVIRONMENTAL ASSESSMENT

SAN DIEGO INTERNATIONAL AIRPORT MASTER PLAN

NEAR TERM IMPROVEMENTS

Prepared by:

HNTB Corporation

For:

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This Environmental Assessment becomes a Federal document when evaluated, signed, and dated by the Responsible FAA Official.

FAA Official: _____

Date: April 16, 2009

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
WESTERN-PACIFIC REGION
HAWTHORNE, CALIFORNIA

FINDING OF NO SIGNIFICANT IMPACT

Airport Master Plan Near Term Improvements

San Diego International Airport
San Diego, San Diego County, California

For further information

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April 20, 2009

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
FINDING OF NO SIGNIFICANT IMPACT

San Diego International Airport
San Diego, San Diego County, California

Airport Master Plan Near Term Improvements

1. **Introduction.** This document is a Finding of No Significant Impact on the environment as a result of a development proposal by the San Diego County Regional Airport Authority (SDCRAA) owner and operator of San Diego International Airport (SAN). SDCRAA's proposed action consists of improvements to the airfield and aviation facilities all located entirely within the main portion of the SAN. The proposed physical improvements at the SAN are needed to allow the SDCRAA to effectively continue its mission of serving San Diego's commercial air transportation needs as forecasted through 2015.

   The Federal Aviation Administration (FAA) must comply with the National Environmental Policy Act of 1969 (NEPA) before taking the federal action of further processing of an application for Federal assistance in funding various eligible airport development and for approval of the Airport Layout Plan (ALP) that depicts the proposed airport development projects. Approval of the ALP is authorized by the Airport and Airway Improvement Act of 1982, as amended (Public Laws 97-248 and 100-223).

2. **Project Purpose and Need.** The purpose of the proposed Airport Master Plan Near Term Improvement projects are to accommodate existing and future passenger and aircraft operations at SAN. Without these improvements, passenger traffic through the existing terminal buildings will become severely congested during longer periods of each day. The Level of Service will also be reduced further beyond its existing degraded level. The need for the Proposed Action is to meet the demand for airside, terminal, air cargo and ground transportation facilities through 2015. Chapter 2 of the Final Environmental Assessment (EA) provides a detailed discussion on the purpose and need for the proposed project.

3. **Proposed Project.** The following is a listing of the various components of the proposed project:

   - Expand existing Terminal Two West with 10 new jet gates;
   - Construct new aircraft parking and replacement of Remain-Over-Night aircraft parking apron;
   - Construct new apron and aircraft taxilane;
   - Construct new second level road/curb and vehicle circulation serving Terminal Two;
   - Construct a new parking structure and vehicle circulation serving Terminal Two;
   - Relocate and reconfigure SAN Park Pacific Highway;
   - Construct a new access road from Sassafras Street/Pacific Highway intersection;
   - Construct new general aviation facilities including access, terminal/hangars, and apron to improve Airport safety for Airport customers/users;
   - Demolish the existing general aviation facilities to improve airport safety and circulation on airfield; and
   - Construct new apron hold areas and new taxiway east of Taxiway D.

4. **Reasonable Alternatives Considered:** As described in Chapter 3 of the Final EA, the alternative courses of action evaluated include: (1) West Terminal Alternative (with parking Structure) the Preferred Alternative, (2) West Terminal Alternative (without Parking Structure), (3) East Terminal Alternative (with Parking Structure), (4) East Terminal Alternative (without Parking Structure), (4) No Action Alternative.

5. **Assessment.** The potential environmental impacts and possible adverse effects were identified and evaluated in a Final EA prepared in April 2009. The Final EA examined the following environmental impact categories: Noise; Compatible Land Use; Socioeconomic Impacts; Environmental Justice, and Children's Environmental Health; Secondary Impacts; Air Quality; Water Quality; Department of Transportation Act Section 4(f) Land; Historic, Architectural, and Cultural Resources; Fish Wildlife & Plants; Wetlands; Floodplains; Wild and Scenic Rivers; Farmlands; Coastal Resources; Natural Resources and Energy Supply; Light Emissions and Visual; Hazardous Materials, Pollution Prevention and Solid Waste Impacts; Construction Impacts and Cumulative Impacts.

Section 5.1 of the Final EA states in Table 5-1.2, the proposed project will have 30 more people in the 65 dB CNEL noise impact contour. In a November 20, 2008, letter, SDCRAA indicates they, will consult with the adjacent jurisdictions to encourage the adoption of zoning that is compatible with airport operations. The proposed Airport Master Plan Near Term Improvements will be accomplished on existing airport property and will not require the relocation of persons or businesses.

Section 5.5 of the Final EA discloses that the proposed projects will not cause or contribute to a new violation of any air quality standard; will not increase the frequency or severity of any air quality standard nor will it delay timely attainment of any standard or any required interim emission reductions or other milestones in any area. Section 5.5.10 shows the Actions Taken by SDCRAA to Reduce Air Pollutant Emissions.

Section 5.8 of the Final EA discloses five historic-age resources in the APE that were determined to be eligible for listing in the NRHP, as well as a several buildings at the Teledyne Ryan complex. The FAA has determined that Proposed Action and the No Action Alternative will not affect any properties listed or eligible for listing on the NRHP. The California State Historic Preservation Officer concurred with the FAA's determination by letter dated March 16, 2009, (see Final EA Appendix A).

Section 5.9 of the Final EA discloses the potential impacts to federally listed threatened or endangered species. The FAA conducted informal consultation with the U.S. Fish and Wildlife Service (USFWS) for the proposed project. The FAA determined the proposed project may affect the California Least Tern (Least Tern), however, after consideration of the various mitigation measures FAA has further determined that the project's potential effect is not likely to be adverse. The USFWS concurred with the FAA's determination by e-mail letter dated April 10, 2009, (see Final EA Appendix A).

During informal Section 7 consultation with the USFWS, a series of nine conservation measures were identified to ensure avoidance of the California least tern, *Sterna antillarum browni* (tern), a federally listed endangered species. These conservation measures are identified in Section 5.9.5 of the Final EA. The FAA will require the SDCRAA to implement the following conservation measures, if they decide to pursue the proposed action, to avoid effects to Least Tern during construction within 1,200 feet (but not closer than 800 feet) of ovals 0-3S and/or 0-2S during the Least Tern nesting season (April 1 through September 15):

1. The Projects will be phased so that all project construction within 800 feet of Least Tern nesting Oval O-3-S will occur from September 15 to March 31 to avoid the nesting season. The Airport Master Plan Near Term Improvements do not occur within 800 feet of Least Tern nesting Oval O-3-S.

2. The Projects' staging area will be located on the north side of the runway at least 1,200 feet from Least Tern nesting Oval O-3-S. Construction vehicles will approach the staging area and construction area from the north side of the Airport runway and will not use roads that pass through the Least Tern nesting areas located on the south side of the runway. Any construction vehicles will be parked on paved areas on the north side of the runway during work hours.

3. Beginning April 1, the SDCRAA will hire a qualified tern biologist to monitor daily for the arrival of the Least Tern into San Diego Bay and to nesting sites at the Airport. (A qualified Tern Biologist can identify the Least Tern and can recognize their vocalization). The Biologist will immediately notify the FAA and USFWS (collectively, Agencies) upon their arrival. The biological monitor will

coordinate with other Least Tern monitors in San Diego Bay (e.g., Brian Collins (USFWS), Robert Patton and/or Elizabeth Copper). The SDCRAA will notify the Agencies via daily e-mails as to the presence or absence of the least tern in San Diego Bay and at nesting sites at the Airport. The notifications will be sent to Victor Globa (FAA: Victor.Globa@faa.gov) and Lauren White (USFWS: Lauren_White@fws.gov).

4. The SDCRAA will hire a qualified biological monitor with Least Tern experience to be on site on all days when construction activities are conducted within 1,200 feet of ovals 0-3S and/or 0-2S and the Least Tern is present to ensure that activities and personnel do not disrupt the Least Tern. The biological monitor will monitor the Least Tern during construction and will immediately notify the Resident Engineer of any construction activity that may lead to, or likely result in, the disruption of the Least Tern, its young, or its eggs. The biological monitor will immediately notify the Resident Engineer of all construction-related events that result in the Least Tern showing agitated or stressed behavior. The Resident Engineer will immediately modify the activity or incorporate protective measures to avoid disruption of the Least Tern so the potential to have to stop construction activities is reduced. Construction activities can be carried out that do not result in individual Least Tern or groups of Least Terns displaying agitated or stressed behavior and/or suddenly leaving their nest(s) and not resettling on the nest(s) for more than 5 minutes. The biological monitor may or may not remain on site during each entire construction day depending on whether or not, in his/her expert opinion and based upon direct observations, the construction activities to be conducted during the day may adversely affect the Least tern. If the biological monitor determines that adverse effects to the Least Tern have occurred, the Resident Engineer will be notified and all project construction activities will cease immediately, except those activities necessary to make the airport safe and operational. The biological monitor, in coordination with the Resident Engineer, will contact the Agencies immediately after construction has been stopped. Construction will not resume until approved by the Agencies. The biological monitor will submit daily field reports to the Agencies on the status of the nesting activity, any construction-related incidents that disrupted Least Tern nesting, and any action taken by the Resident Engineer to avoid further incidents, within 24 hours of each monitoring date. The biological monitoring will also submit a final summary report of monitoring to the Agencies by October 1.

5. Covered trash dumpsters or other suitable containers will be provided for construction personnel. All food items or containers that previously held food items will be immediately disposed of in these dumpsters or containers so as not to attract avian or mammalian predators of the Least Tern.

6. Construction personnel will not be permitted to feed cats, gulls, ravens, etc. as this may result in an increase in the numbers of these potential predators in the vicinity of Least Tern chicks and eggs.

7. Crane booms or similar equipment that have heights of 25 feet or greater will be lowered at the close of each construction day, if possible.

8. A pre-construction meeting will be held to make all contractor personnel, including all construction staff, aware of the Least Tern nesting issue and the specific conditions of construction. Project status meetings will be held regularly to remind all involved personnel of the measures required to protect the Least Tern as well as any modifications made to ensure their effectiveness. The USFWS will be notified of the date and time of the pre-construction and status meetings in order to attend should it so desire.

9. Nighttime construction will be limited to those activities that are necessary to maintain airfield operations during normal operational times. Should nighttime construction be required, the biological monitor will be onsite and perform the duties specified in measure 4.

Section 5.11 of the Final EA indicates the project is outside a 100-year floodplain. Section 5.13 of the Final EA indicates the Farmland Protection Policy Act does not apply to the proposed project.

The EA has been reviewed by the FAA and found to be adequate for the purpose of the proposed Federal action. The FAA has determined that the EA for the proposed project adequately describes the potential impacts of the proposed actions. No new issues surfaced as a result of the public hearing process.

6. **Public Participation.** Efforts were made to encourage public participation through the public hearing process as is documented in the Final EA. A notice announcing the SCRAA's intent to hold a public hearing was published on December 5, 2008 in the *San Diego Daily Transcript* and the *San Diego Union Tribune,* two local newspapers in San Diego. The public hearing was held on January 6, 2009, in the San Diego International Airport Commuter Terminal located in the city of San Diego. Five verbal comments were received at the public hearing. Written comments were received from the City of San Diego (Office of the Mayor and Second District), San Diego Association of Governments (SANDAG), State of California, Department of Transportation, North County Transit District, San Diego County Archaeological Society, Inc., Unified Port of San Diego, and Cynthia Conger, Prior Chair, Peninsula Community Planning. Responses to comments are provided in the Final EA.

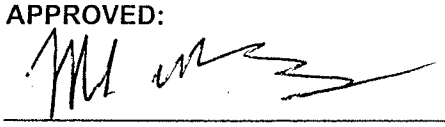
7. **Inter-Agency Coordination.** In accordance with 49 USC 47101(h), FAA has determined that no further coordination with the U.S. Department of Interior or the U.S. Environmental Protection Agency is necessary because the proposed project does not involve construction of a new airport, new runway or major runway extension that has a significant impact on natural resources including fish and wildlife; natural, scenic, and recreational assets; water and air quality; or another factor affecting the environment.

8. **Reasons for the Determination that the Proposed Project will have No Significant Impacts.** The attached Final EA examines each of the various environmental impact categories. The proposal for Airport Master Plan Near Term Improvements would not involve any impacts that would exceed the threshold of significance as defined in FAA Orders 1050.1E and 5050.4B. Based on the information contained in the Final EA, the FAA has determined the proposed action (West Terminal Alternative with parking structure), is most feasible and prudent alternative. FAA has decided to implement the proposed project as described in the attached Final EA.

9. **Finding of No Significant Impact**

I have carefully and thoroughly considered the facts contained in the attached EA. Based on that information I find that the proposed Federal action is consistent with existing national environmental policies and objectives as set forth in section 101(a) of the National Environmental Policy Act of 1969 (NEPA). I also find the proposed Federal Action, with the required mitigation referenced above will not significantly affect the quality of the human environment or otherwise include any condition requiring consultation pursuant to section 102 (2)(C) of NEPA. As a result, FAA will not prepare an EIS for this action.

APPROVED:



Mark A. McClardy
Manager, Airports Division, AWP-600

4/20/09
Date

DISAPPROVED:

Mark A. McClardy
Manager, Airports Division, AWP-600

Date

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Chapter One: Background and Proposed Action

This Environmental Assessment (EA) has been prepared by the San Diego County Regional Airport Authority (SDCRAA) (Sponsor) to fulfill Federal requirements for environmental review of airport development projects that are eligible for Federal approval and/or funding, as outlined in the Federal Aviation Administration's (FAA) Order 5050.4B "National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions," and FAA Order 1050.1E, "Environmental Impacts: Policies and Procedures."

All Federal actions undertaken by the FAA that have the potential for environmental impact must comply with the National Environmental Policy Act of 1969 (NEPA), the Airport and Airway Improvement Act of 1982, as amended, and other pertinent laws. Guidance for considering environmental impacts is found within FAA Order 5050.4B, FAA Order 1050.1E, and the Council on Environmental Quality's (CEQ) "Regulations for Implementing NEPA."

This EA describes the purpose and need for the Proposed Action, discusses the reasonable alternatives to the Proposed Action, and provides full disclosure of the potential environmental impacts associated with implementation of the Proposed Action at San Diego International Airport (SDIA).

This chapter includes the following sections:

- Background Information
- Aviation Forecast Update and Planning Horizon Used for Environmental Analysis
- Sponsor's Proposed Action
- Requested Federal Action
- Timeframe for Implementation

The document is divided into two volumes, the EA report (Volume One) and a volume of technical appendices. The first chapter of the EA report is the introduction and background chapter that provides an overview of the project and the Proposed Action. Chapter Two provides Purpose and Need for the Proposed Action. Chapter Three provides the alternatives considered in detail as well as those considered and dismissed. Chapter Four provides the affected environment, and Chapter Five describes the environmental consequences for each resource. Chapter Six provides the public involvement, and the list of preparers is provided in Chapter Seven.

Volume Two contains technical **Appendices A through H**.

1.1 Background Information

This section describes the location and existing facilities at San Diego International Airport (SDIA) and the creation and purpose of the SDCRAA.

1.1.1 Location and Existing Facilities

SDIA is located in the northwest portion of the downtown area within the City of San Diego. The existing Airport site is severely constrained by its location. The Airport is bounded by North Harbor Drive and San Diego Bay to the south, the Navy water channel and Liberty Station to the west, the Marine Corps Recruit Depot to the north, and Pacific Highway and Interstate 5 to the east. Land in the vicinity of the Airport is densely developed and has high developable value due to the Airport's proximity of less than two miles from Downtown San Diego. The regional location map for the SDIA is depicted in **Figure 1.1**.

From 1960 to 2000, the San Diego County population grew from approximately one million residents to approximately three million residents. Each of the three existing passenger terminals was constructed during this forty-year period while annual passenger totals at SDIA tripled from 1980 to 2005. In 2007, SDIA served 18.3 million annual passengers and handled 208,000 tons of cargo.

SDIA is one of the smallest major airport sites in the U.S., consisting of 661 acres. The Airport has a single, 9,401-foot-long 200-foot-wide east-west runway, making it the busiest single-runway commercial airport in the nation. No changes to the single runway configuration or an additional runway are included

in the Proposed Action. **Figure 1.2** illustrates the existing facilities at SDIA. The Airport is described as follows:

Airfield. The airfield consists of one runway (useable in both directions) and three primary taxiways. Runway 9-27 is 9,401 feet long and 200 feet wide. Taxiway B is south of, and parallel to, Runway 9-27 and runs the entire length of the runway. Taxiway C is north of, and parallel to, the eastern half of Runway 9-27. Taxiway D extends from the southeast portion of the airfield to the north-central portion of the airfield at an approximate 30 degree angle to Runway 9-27.

At the western edge of the Airport adjacent to Terminal 2 is the former Naval Training Center (NTC) Property. A 52-acre parcel was conveyed to the Port of San Diego in 2000 and transferred to the SDCRAA as part of the transfer of airport control. The passenger terminal and landside complex is located east of the former NTC property and bounded on the north by Runway 9-27 and on the south by North Harbor Drive.

Terminal. The Airport terminal complex is comprised of four buildings: the Commuter Terminal, Terminal 1, Terminal 2 East, and Terminal 2 West. Terminals 1 and 2 (Terminal 2 consists of Terminal 2 East and Terminal 2 West), which include 41 jet gates and other facilities, serve the passenger processing needs of commercial airline passengers. The Commuter Terminal has 10 parking positions for commuter aircraft and serves commuter traffic at the San Diego International Airport. The ground transportation system located south of the terminals provides access roads, vehicle curbfronts and surface parking.

The Commuter Terminal is located in the south central portion of the airfield and accommodates most turbo-prop and regional jet flights to and from the Airport. Primarily, all commuter flights between San Diego and Los Angeles International Airport (LAX) are operated by United Express and American Eagle from this facility.

Terminal 1 is the oldest terminal facility at the Airport. It is located at the east end of the primary terminal area. Terminal 1 has 19 narrow body jet gates. Southwest Airlines, United Airlines, Alaska Airlines, Frontier Airlines, and Midwest Airlines presently serve Terminal 1.

Terminal 2 East (which is part of Terminal 2) is immediately west of Terminal 1. Terminal 2 East has 13 jet gates including two international gates located between Terminal 2 East and Terminal 1. All international arrival flights operate at Terminal 2 East, as well as the domestic operations of Northwest Airlines and American Airlines.

Terminal 2 West (also part of Terminal 2) opened in 1998 and is the newest terminal facility at the Airport. Terminal 2 West has nine jet gates and is served by Delta Airlines, Hawaiian Airlines, jetBlue Airways, Continental Airlines, US Airways, Sun Country Airlines, and West Jet. A new baggage claim facility is housed in Terminal 2 West that provides baggage claim for Terminal 2 (both Terminal 2 West and Terminal 2 East).

Ground Transportation. All roadway access to the Airport terminal complex is via North Harbor Drive. There are three independent entrance roadways for the Commuter Terminal, Terminal 1 and Terminal 2. There are approximately 6,800 total linear feet of curb front serving the three terminals from a single-level airport roadway. There are approximately 4,055 airport-operated surface parking spaces adjacent to these terminals. Access to the North Area of SDIA is via Pacific Highway at Washington Street and Sassafras Street. Over 1,600 additional remote, long-term, parking spaces are available at the SAN Park Pacific Highway parking lot located in the North Area.

Airport Support. North of Runway 9-27, SDIA provides apron area for air cargo loading and one general aviation Fixed Base Operator (FBO). There are freight forwarding cargo facilities totaling approximately 70,000 square feet located on the south side of the Airport between Terminal 1 and the Commuter Terminal. These are the only enclosed cargo sorting facilities located at the Airport. FedEx, UPS and other cargo carriers maintain their own off-airport sort facilities. Apron area for FedEx, DHL and other cargo aircraft is located in the north airfield area. UPS operates an apron aircraft parking position adjacent to the Commuter Terminal apron.

The Airport has an air traffic control tower (operated by the Federal Aviation Administration), an airport rescue and fire fighting facility (ARFF) and a fuel farm located in the north airfield area.

The Airport has a total of 19 Remain-Over-Night (RON) aircraft parking positions. Ten positions are located adjacent to Taxiway C on the north airfield. The remaining nine positions are located adjacent to

the terminal areas on the south airfield.

1.1.2 San Diego County Regional Airport Authority

SDIA was dedicated as the San Diego region's municipal airport on August 28, 1928. On December 18, 1962, the San Diego Unified Port District (Port District) was created when the State Legislature approved Senate Bill 41, which was certified by the County Board of Supervisors. District purview included ownership and operation of the Airport. The Port District prepared SDIA's first Master Plan document in 2001. This Master Plan document was not adopted and the associated environmental analysis was not completed prior to the transfer of Airport ownership and operation to the SDCRAA. The SDCRAA was formed with two purposes: (1) to operate and plan SDIA and (2) to conduct an Airport Site Selection Program to identify a long-term regional airport solution. Assembly Bill 93 established the San Diego County Regional Airport Authority Act in 2002, which created the SDCRAA as a local entity of regional government to oversee the Airport operations. The bill also required SDCRAA to adopt a comprehensive Airport Land Use Plans for all of San Diego County airports and conduct an Airport Site Selection Program to identify a long-term regional airport solution. Governor Davis signed Senate Bill 1896 into law in August 2002, which amended Assembly Bill 93 regarding the selection and appointment of SDCRAA Board members. Finally, on January 1, 2003, the ownership and operation of SDIA was transferred to the SDCRAA from the Port District as required by the Airport Authority Act.

The transfer from the Port District shifted planning responsibilities, operation, and control of the Airport to the SDCRAA. The SDCRAA is governed by a twelve-member Board with three ex-officio members who do not vote representing the State Budget Office, CALTRANS, and the military. All Board members are appointed. Three of the Board members are paid and constitute the Executive Committee. Seven Board members are appointed by mayors of various communities within San Diego County. One Board member is appointed by the San Diego County Sheriff and another by the Governor of the State of California. The SDCRAA Board is responsible for all policy and planning decisions for SDIA. Other SDCRAA programs and responsibilities related to regional airport planning are described in Section 1.3, *Other Airport Authority Programs*.

On May 1, 2008, the SDCRAA adopted an Airport Master Plan (AMP) and certified the Final Environmental Impact Report (EIR) for the Proposed Action included in this EA. The EIR was prepared according to California Environmental Quality Act (CEQA) guidelines and the AMP was prepared in accordance with FAA Master Planning Advisory Circular 150/5070-6A. The AMP and EIR were initiated in 2005. Public involvement was included as an integral part of the development of both the AMP and EIR. In fact, the development of the EIR included two separate public circulations in order to address public and agency comments and included a combined public review period of over nine months.

1.2 Aviation Forecast Update and Planning Horizon Used for Environmental Analysis

A forecast provides the basis of the aircraft movements and passenger numbers that in turn assist in defining the types and timing of uses provided the Master Plan and specific facilities that may be required in the short, medium, and long term. To inform the Master Plan process SDCRAA prepared and published a new aviation activity forecast in June 2004 that was approved by the FAA in June 2005 (FAA Forecast Approval Letter, June 28, 2005). The FAA approval letter is provided in Appendix D, following Attachment Q on page D-220. The forecast analyzed future aviation activity and demand in the San Diego Region through 2030.

The SDIA forecast is based on regional growth and economic trends as well as recent events that impacted aviation activity, such as the terrorist attacks of September 11, 2001. The forecast was prepared by SH&E and included both a low and high growth scenario and was approved by the Federal Aviation Administration (FAA) for SDIA. The unconstrained high growth scenario corresponds with the Federal Aviation Administration's 2007 Terminal Area Forecast (TAF) for SDIA. Growth in passengers has exceeded the forecast growth in 2004, 2005, 2006, and 2007 the first full years after the forecast was completed. Growth in operations has more closely matched the high growth scenario than the low growth scenario over the same period. Because the trend at the SDIA is tracking more closely to the high growth scenario, the high growth scenario will be used for analysis in this EA.

The SDIA Master Plan considers improvements conceptually through 2030; implementation of specific improvements is developed only through 2015. Future phases of planning for SDIA will focus on specific improvements beyond 2015. As these improvements are developed and become described for environmental consideration, additional environmental review will be undertaken by the SDCRAA and FAA.

This EA considers the years 2015 and 2020 for environmental analysis. Since the EIR process used 2015 as a year of analysis, the FAA and the SDCRAA have determined that 2015 should be used in this EA. The year 2015 represents one of the first full implementation years for the Proposed Action. Additionally this EA analyzes potential environmental impacts 5 years beyond the implementation analysis year, specifically 2020.

Unconstrained versus Single-Runway-Constrained Forecasts

A summary of the SDIA Aviation Activity forecast is shown in **Table 1-1**. The SDCRAA prepared both constrained and unconstrained forecasts of aviation activity through 2030 that could be used for facilities planning and in evaluating airport improvements. The unconstrained forecast represents projections of how San Diego metropolitan area passenger demand, airline flights and other activity segments are likely to grow in the future, without consideration of the constraints on the growth that may be imposed by facility limitations at the SDIA. The constrained forecast reflects the limitations of the existing Airport facilities, specifically its single runway, and represents a projection of how aviation activity would grow if no additional runway capacity is provided.

Table 1-1
Forecast Annual Aircraft Operations

Year	Passenger	Cargo	General Aviation	Military	Total
2005 (a)	189,299	7,400	12,618	195	209,512
2006 (b)	188,830	6,592	13,657	412	209,491
2007(b)	198,244	6,682	16,644	1,042	222,612
2010 (c)	205,756	5,116	16,530	1,130	228,572
2015 (c)	234,776	6,936	18,439	1,130	261,281
2020 (c)	252,766	8,755	18,439	1,130	281,100
2025 (c)	260,196	10,135	18,439	1,130	289,900
2030 (c)	267,616	11,515	18,439	1,130	298,700

Notes:

(a) Operations for 2005 were extrapolated at the onset of this study (April 2005) and those numbers were used for analysis of 2005. Operations modeled for SDIA were as follows: Passenger 190,002; Cargo 7,206; General Aviation 13,586; and Military 571.

(b) Actual operational levels.

(c) Constrained High Scenario Forecast.

Source: SH& E Aviation Activity Forecast, June 2004 and Airport Master Plan, HNTB, May 2008.

The most constraining component of an airport defines the practical capacity[1] of the entire airport. An airport is a complex system made up of components through which passengers and aircraft flow in a sequential order. Aircraft arriving at the airport pass through the airspace, land on the runway, travel on the taxiways and proceed to the terminal gates to unload and reload passengers. Once loaded and ready for departure, the aircraft pass back through these same components in reverse order.

Passengers move through the system in a similar set of sequential steps. Departing passengers travel

[1] *Practical Capacity* is a term used here to refer to the number of hourly or annual aircraft operations (takeoffs and landings) that can be accommodated with no more than a given amount of delay, usually expressed in terms of maximum acceptable average delay (since delay is a dynamic variable, airport and airspace simulation modeling was used to develop delay averages, which recognize the at some aircraft will be delayed more than the specified levels and some less). Initial simulation modeling was performed in development of the constrained forecast and more extensive airspace and airfield modeling was performed for the Master Plan to fully analyze aircraft movement throughout the airspace, airfield and gate areas.

on local roadways and on-airport roads, arrive at the terminal from the curbfront, parking, or other shuttle facilities, are then processed in the terminal and proceed to the designated aircraft gate for boarding. Arriving passengers generally proceed through these steps in reverse order upon arrival at an airport. Exceptions for arriving passengers include domestic connecting passengers who board other flights and international arrivals who move through federal inspection facilities and baggage claim before they connect to other flights or use ground transportation.

Each component of the airport system (i.e., the airfield, terminal passenger facilities, and the curbfront) has an operational or passenger capacity that is a function of the physical characteristics of the component. When an airport system component is operating at "capacity," – meaning that it is processing a maximum level of hourly operations given its characteristics and procedures, increasing the capacity of other components does not increase the capacity of the system. For example, if a runway is operating at its throughput operational capacity and, by definition, is accepting the maximum number of hourly arriving and/or departing flights without regard for delay, increasing the number of gates will not improve the airport's ability to accept more arriving flights. The runway system would have to be expanded to increase the throughput operational rate.

The Airport Master Plan used the single-runway constrained forecast to develop airport requirements for airfield, terminal, and ground transportation facilities. While each of these facilities has unique characteristics, they operate collectively as a system for moving people and goods. The capacity of this Airport system is limited by its constraining component, the single runway. Capacity improvements made to the terminals and ground transportation components in this situation will increase the Level of Service experienced by the user without increasing the overall capacity of the SDIA.

The constrained high scenario forecast, which is used in this EA for conservative analysis purposes, indicates aircraft operations will increase by 2.3 percent annually over the next 10 years. **Table 1-2** provides a summary of corresponding Airport passenger activity forecast. Passengers are expected to increase by 2.8 percent per year over the next 10 years. Both expected aircraft and passenger growth over the next 10 years would exacerbate existing congestion problems. **Appendix D** provides follow-on derivative forecast development for the annual average day used for the environmental analysis contained in this Environmental Assessment, which is summarized in Section 1.2.1, *Derivative Forecast for Environmental Analysis*.

Table 1-2
Forecast Annual Passengers

Year	Passenger
2005 (actual, a)	17,372,521
2006 (actual)	17,481,942
2007 (actual)	18,326,761
2010 (b)	19,500,000
2015 (b)	22,800,000
2020 (b)	25,100,000
2025 (b)	26,600,000
2030 (b)	28,200,000

Notes:

(a) Annual passengers for 2005 were extrapolated at the onset of this study (April 2005) and those numbers were used for analysis of 2005. Passenger numbers extrapolated for 2005 were 17,689,972.

(b) Constrained High Scenario Forecast.

Source: SH& E Aviation Activity Forecast, June 2004 and Draft Airport Master Plan, HNTB, May 2008.

1.2.1 Derivative Forecast for Environmental Analysis

This section reviews the forecasts used in the Airport Master Plan and describes their application in this environmental analysis. The forecasts build upon the work prepared for the Airport Master Plan completed in 2005, and are intended to assist in evaluation of the impacts of the three terminal development alternatives: the Proposed Action (Preferred Alternative), the East Terminal Alternative, and the No Action Alternative. These alternatives are described in detail in Chapter 3, *Alternatives*. The

years of interest in this analysis are the base year/existing conditions (2005) and future years 2015 and 2020. The principle purpose of the forecasts developed for this Environmental Assessment is to provide input for the noise and air quality analysis.

The annual activity forecasts are discussed first. A description of the preparation of the gated flight schedules, including the assumptions and methodology follows. These are provided for both the Proposed Action alternatives and the No Action Alternative. Lastly a description of the gate requirements and other derivative forecast results are provided.

Summary of Annual Forecasts

The annual forecasts were based on *San Diego International Airport Aviation Activity Forecasts* prepared by SH&E. The Aviation Activity Forecast was published in June 2004 and used 2002 as a base year. It included a low and a high forecast and also provided runway-constrained scenarios for each case. The runway-constrained forecasts assumed no new runways would be built at the SDIA, while the unconstrained forecast assumed that new runways would be built as passenger demand warranted. The report included forecasts for domestic and international passengers, air cargo tonnage, aircraft operations by major category, and fleet mix. Peak hour passenger projections were not included. Passengers are defined as travelers riding in an aircraft that are not part of the aircraft crew. The passenger forecast was prepared using a statistical forecasting model, based on regional income and air carrier fares, very similar to the previous draft Master Plan forecasting model, but with more recent data.

Members of SDCRAA staff, the FAA, and the Airport Master Plan consulting team reviewed the assumptions and approach for reasonableness. The FAA officially approved the forecast on June 28, 2005. Then the forecast results were compared with the most recent available information on Airport activity. The forecast approach was deemed to be reasonable, and comparison of the high and low forecast levels with activity to date is presented in **Table 1-3**.[2]

Table 1-3 provides actual activity for 2005 and an estimate of 2005 activity extrapolated from the first three months of data in 2005. The extrapolated data was used for the base year/existing conditions analysis.[3] Under the high scenario, the constrained forecast parallels the unconstrained forecast until 2015. Under the low scenario, the constrained forecast parallels the unconstrained forecast until 2022.

As shown in Table 1-3, actual passenger enplanements exceed the 2005 high forecast by 5.7 percent and the low forecast by 10.0 percent. The increase above forecast levels is entirely attributable to domestic activity. International enplanements declined significantly in 2004 with the loss of London and Canadian service. In contrast to passenger enplanements, aircraft operations are more closely tracking the high forecast, differing by only 1.8 percent in 2005. Passenger enplanements are the total number of people boarding an aircraft except for on-duty crew. Passenger deplanements are the total number of people disembarking an aircraft except for on-duty crew. Total passengers are the sum of passenger enplanements and deplanements.

Although the passenger activity exceeded the high forecast by 5.7 percent in 2005, high jet fuel prices dampened the growth in activity in 2006 and actual passenger activity exceeded the forecast by only 2.7 percent. The differences between actual and forecast activity are still within the range of variability normally expected from year to year. In fact, the FAA's TAF for SDIA, published in March 2007, project 2015 passenger enplanements to be about the same as the Airport Master Plan high forecast. However, by 2025 the TAF projects that enplanements would be approximately 12 percent higher than the Master Plan Forecast. This divergence in enplanements forecast is due to the unconstrained forecasting assumption of the TAF. The FAA's TAF project 2015 aircraft operations differ from the Airport Master Plan forecast by slightly less than 10 percent, despite the fact that the FAA's control tower reports that it handles through the SDIA airspace (called overflights) that do not use SDIA for takeoffs and landings, therefore these numbers include some overflights and overstate the difference. By the year 2025 the divergence in operational levels between the Airport Master Plan high forecast and the TAF is more pronounced and is more than 20 percent lower than the TAF. This difference is again likely due in part to the unconstrained nature of the TAF. It is noted that for the Federal Aviation Administration to consider

[2] Details of the review can be found in the Airport Master Plan report.
[3] The analysis described in this section was performed in late spring and early summer of 2005.

Table 1-3

Comparison of Actual and Forecast Aviation Activity

Activity Category	2002 Baseline	2004	2005 (a)	2006(a)	2007(a)	2010	2020	2030
Actual Activity (b)								
Passenger Enplanements								
Domestic	7,321,641	8,124,791	8,561,714	8,633,671	9,040,280			
International	150,003	75,896	130,980	125,998	1,326,686			
Total	**7,471,644**	**8,200,687**	**8,692,694**	**8,759,669**	**9,172,966**			
Operations								
Passenger	174,370	178,538	190,002	188,830	198,244			
Cargo	4,634	4,960	7,206	6,592	6,682			
General Aviation	15,044	13,734	13,586	13,657	16,644			
Military	1,253	1,241	571	412	1,042			
Total	**195,301**	**198,473**	**211,365**	**209,491**	**222,612**			
High Forecast – Unconstrained (c)								
Passenger Enplanements								
Domestic	7,321,641	7,738,224	8,060,303	8,331,806	8,603,310	9,417,820	12,295,248	15,382,283
International	150,003	141,000	160,000	196,400	232,800	342,000	670,000	954,000
Total	**7,471,644**	**7,879,224**	**8,220,303**	**8,528,206**	**8,836,110**	**9,759,820**	**12,965,248**	**16,336,283**
Difference (e)	0.00%	4.10%	5.75%	2.71%	3.81%			
Operations								
Passenger	174,370	182,226	186,155	190,083	194,011	205,796	263,756	326,970
Cargo (d)	4,634	4,755	4,815	4,875	4,935	5,116	8,755	11,515
General Aviation (d)	15,044	15,416	15,601	15,787	15,973	16,530	20,348	25,049
Military	1,253	1,130	1,130	1,130	1,130	1,130	1,130	1,130
Total	**195,301**	**203,526**	**207,701**	**211,875**	**228,572**	**228,572**	**293,989**	**364,664**
Difference (e)	0.0%	-2.5%	1.8%	-1.1%	2.6%			
Low Forecast - Unconstrained (c)								
Passenger Enplanements								
Domestic	7,321,641	7,647,308	7,755,243	7,904,701	8,054,159	8,502,533	10,544,669	12,922,281
International	150,003	139,000	144,000	178,800	213,600	318,000	502,000	636,000
Total	**7,471,644**	**7,786,308**	**7,899,243**	**8,083,501**	**8,267,759**	**8,820,533**	**11,046,669**	**13,558,281**
Difference (e)	0.0%	5.3%	10.0%	8.36%	10.95%			

Table 1-3

Comparison of Actual and Forecast Aviation Activity

Activity Category	2002 Baseline	2004	2005 (a)	2006(a)	2007(a)	2010	2020	2030
Low Forecast - Unconstrained (c) (continued)								
Operations								
Passenger	174,370	177,270	178,720	180,170	181,620	185,971	225,444	272,890
Cargo (d)	4,634	4,655	4,666	4,676	4,687	4,718	6,716	9,016
General Aviation (d)	15,044	15,071	15,084	15,097	15,110	15,150	17,239	19,616
Military	1,253	1,130	1,130	1,130	1,130	1,130	1,130	1,130
Total	**195,301**	**198,126**	**199,599**	**201,073**	**206,969**	**206,969**	**250,529**	**302,652**
Difference (e)	0.0%	0.2%	5.9%	4.2%				

Notes:

(a) Numbers in Tables 1-5 and 1-9 were based on estimates extrapolated from data through March 2005, which differ slightly from the complete calendar year data in this table.

(b) San Diego International Airport, Air Traffic Reports.

(c) SH&E, San Diego International Airport, Aviation Activity Forecasts.

(d) Values for 2004, 2005, and 2006 are interpolated.

(e) Percentage by which actual numbers exceed or trail forecast numbers.

forecasts to be consistent with their TAF the forecast must differ by less than 10 percent in the 5-year forecast and 15 percent in the 10-year period, or the forecast activity levels will not affect the timing or scale of an airport project.[4] With these criteria in mind, the Federal Aviation Administration-approved forecast is still viable. To date, however, it is clear that actual activity has more closely matched the high forecast than the low forecast.

In addition to passengers, the high forecast also predicts growth in air cargo operations and volumes of cargo (measured in cargo tons). All cargo operations are forecast to grow in 2010 to 5,116 operations carrying 190,118 tons of cargo and in 2030 to 11,515 operations carrying 526,930 tons of cargo. Additional cargo facilities would be required at the SDIA to load, sort and distribute this cargo from the aircraft to ground vehicles.

The demand for general aviation facilities at the SDIA is anticipated to grow modestly as general aviation operations are forecast to increase 1% annually from 13,586 general aviation operations in 2005 to approximately 16,530 general aviation operations in 2010 and 18,439 general aviation operations in 2015. General aviation operations are expected to level out beyond 2015 at SDIA in the constrained condition.

Table 1-4 shows the high unconstrained and runway-constrained forecasts in more detail. Values for 2015 and 2025 were interpolated where necessary. Consistent with the Airport Master Plan, the high constrained forecast was used for the environmental analysis.

Approach to Preparation of Gated Flight Schedules

Gated flight schedules were prepared from the annual forecasts as a means of generating derivative forecasts, including gate requirements, for use in the Airport Master Plan. A gated flight schedule is a schedule of aircraft operations that takes into the consideration availability of gates specific to each airline carrier's needs. Since the intent of the Airport Master Plan was to provide adequate facilities to accommodate traffic during peak periods, those gated flight schedules were designed to represent peak month activity. The environmental analysis is intended to be representative of the entire year, therefore, the gated flight schedules for the environmental analysis are for an average annual day rather than an average weekday in the peak month.

Seven gated flight schedules were used for the EA environmental analysis. They included:

- Base year/existing conditions (2005)
- Proposed Action (Preferred Alternative) for 2015
- Proposed Action (Preferred Alternative) for 2020
- East Terminal Alternative for 2015
- East Terminal Alternative for 2020
- No Action Alternative for 2015
- No Action Alternative for 2020

These schedules were prepared using the runway-constrained forecast. In a gated flight schedule, forecasts are made on a flight-by-flight basis for an average annual day. The purpose of the gated flight schedule is to provide the necessary detail from which to prepare hourly activity forecasts that reflect the impacts of the Airport throughout the day.

The approach used to prepare the flight schedules was the same as that used in the Airport Master Plan and involved several steps. First, the annual aircraft operations projections from the forecasts (see Table 1-4) were converted into operations for the average annual day. The operations were then distributed among markets by airline and aircraft type. The final step was to assign arrival and departure times to each of the flights identified in the market analysis.

Average Annual Day Aircraft Operation Forecasts

Table 1-5 shows the average annual day forecasts for the high constrained scenario from 2010 through

[4] Revision to Guidance on Review and Approval of Aviation Forecasts, Federal Aviation Administration, December 23, 2004.

Table 1-4

Annual Forecasts of Activity – Aviation Activity High Forecast

Activity Category	Actual	Forecast					
	2002 Baseline	2005	2010	2015	2020	2025	2030
Unconstrained Forecast							
Passenger Enplanements							
Domestic	7,321,641	8,060,303	9,417,820	10,846,004	12,295,248	13,750,391	15,382,283
International	150,003	160,000	342,000	557,000	670,000	800,000	954,000
Total	**7,471,644**	**8,220,303**	**9,759,820**	**11,403,004**	**12,965,248**	**14,550,391**	**16,336,283**
Operations							
Passenger	174,370	186,155	205,796	234,776	263,756	295,363	326,970
Cargo (a)	4,634	4,815	5,116	6,936	8,755	10,135	11,515
General Aviation (a)	15,044	15,601	16,530	18,439	20,348	22,699	25,049
Military	1,253	1,130	1,130	1,130	1,130	1,130	1,130
Total	**195,301**	**207,701**	**228,572**	**261,281**	**293,989**	**329,327**	**364,664**
Constrained Forecast							
Passenger Enplanements							
Domestic (b)	7,321,641	8,060,303	9,417,820	10,846,004	11,874,500	12,520,250	13,166,000
International (c)	150,003	160,000	342,000	557,000	670,000	800,000	954,000
Total (d)	**7,471,644**	**8,220,303**	**9,759,820**	**11,403,004**	**12,544,500**	**13,320,250**	**14,120,000**
Operations							
Passenger (d)	174,370	186,155	205,796	234,776	252,776	260,196	267,616
Cargo (c)	4,634	4,815	5,116	6,936	8,755	10,135	11,515
General Aviation (e)	15,044	15,601	16,530	18,439	18,439	18,439	18,439
Military (c)	1,253	1,130	1,130	1,130	1,130	1,130	1,130
Total	**195,301**	**207,701**	**228,572**	**261,281**	**281,100**	**289,900**	**298,700**

Notes:
(a) 2005, 2015, and 2025 interpolated.
(b) Total enplanements less international enplanements.
(c) Assumed to be the same as in unconstrained case.
(d) Activity through 2015 assumed to be the same as unconstrained case, 2020 and 2030 from SH&E Forecast, 2025 interpolated.
(e) No growth after 2015, in accordance with SH&E forecast.

Sources: As noted, SH&E, San Diego International Airport Aviation Activity Forecasts, June 2004, and HNTB analysis.

Table 1-5

Estimated Average Weekday Peak Month Operations – Aviation Activity High Constrained Forecast

Activity Category	2005		2010		2015		2020		2025		2030	
	Annual (a)	Average Annual Day (c)	Annual (b)	Average Annual Day (c)	Annual (b)	Average Annual Day (c)	Annual (b)	Average Annual Day (c)	Annual (b)	Average Annual Day (c)	Annual (b)	Average Annual Day (c)
Operations												
Domestic Passenger (b)	189,299	519	205,796	564	234,776	643	252,776	693	260,196	713	267,616	733
Cargo (c)	7,400	20	5,116	14	6,936	19	8,755	24	10,135	28	11,515	32
General Aviation (d)	12,618	35	16,530	45	18,439	51	18,439	51	18,439	51	18,439	51
Military (e)	195	1	1,130	3	1,130	3	1,130	3	1,130	3	1,130	3
Total	**209,512**	**574**	**228,572**	**626**	**261,281**	**716**	**286,100**	**771**	**289,900**	**795**	**298,700**	**819**
Departures (d)												
Domestic Passenger	94,650	259	102,898	282	117,388	322	126,388	346	130,098	357	133,808	367
Cargo	3,700	10	2,558	7	3,468	10	4,378	12	5,068	14	5,758	16
General Aviation	6,309	17	8,265	23	9,220	25	9,220	26	9,220	26	9,220	26
Military	98	0	565	1	565	1	565	1	565	1	565	1
Total	**104,756**	**287**	**114,286**	**313**	**130,641**	**358**	**140,551**	**385**	**144,951**	**398**	**149,351**	**410**

Notes:
(a) Table 1-1.
(b) Table 1-4.
(c) Annual divided by 365 days.
(d) Operations divided by 2.

Sources: As noted, Federal Aviation Administration Air Traffic Activity Database System, San Diego International Airport, Air Traffic Report, and HNTB analysis.

2030. As shown in the Table 1-5, 574 average annual day operations were estimated for 2005, 626 average annual day operations are projected for 2010, 716 average annual day operations are projected for 2015, and 819 operations are projected in 2030. The average annual day is a day that represents all of the total annual operations and those operations are then divided by 365. The average annual day allows representation of all aircraft types that fly into SDIA.

Air Service Assumptions

The average annual day operations estimates were allocated by market, airline, and aircraft type before conversion to gated flight schedules. Existing flights by market were obtained from an electronic version of the Official Airline Guide schedules. The flight time distributions for non-scheduled operations were obtained from Airport radar data. Origins and destinations for non-scheduled markets were estimated based on available information on carrier markets and aircraft ranges.

Attachment A of Appendix D presents the 2015 and 2020 estimates of scheduled passenger aircraft departures by market, airline, and aircraft type. There were several steps involved:

1) *Establish overall totals for aircraft departures and seat departures.* The total for departures came directly from Table 1-5. The total for scheduled seat departures was obtained by dividing the passenger projections by the load factor projections.

2) *Apportion seat departures by market.* Scheduled seat departures in each market were projected to grow at the forecast passenger growth rate for that market segment (<500 miles, 500-2000 miles, 2000+ miles) and then adjusted for the forecast of load factor, and the ratio of constrained to unconstrained passengers.

3) *Identify new domestic non-stop markets.* Candidate markets for new non-stop service were determined by identifying the current thresholds of origin and destination traffic that justified non-stop service to the SDIA markets. These thresholds vary, depending on the type of market. For example, nearby markets tend to have lower origin and destination thresholds than more distant markets because service can be offered with smaller aircraft and because there is less competition from connecting hubs between the two markets. The origin and destination threshold for non-stop service was assumed to be the average of the largest origin and destination market without non-stop service and the smallest origin and destination market with non-stop service in each market segment. Origin and destination traffic in each market was assumed to grow at the same rate as the passenger forecast for that segment. If future year originations in a market exceeded the origin and destination threshold for that market's segment, it was assumed that that market would obtain non-stop service.

4) *Adjust seat departures in existing non-stop markets*. Seat departures to new non-stop markets were balanced by a corresponding reduction in seat departures to existing airline hubs in the same market segment, based on the assumption that new non-stop passengers would be drawn from ranks of existing connecting passengers.

5) *Identify international markets.* International markets were taken directly from the forecast analysis prepared by SH&E. The SH&E forecast, approved by the FAA in June 2005, is available at San Diego County Regional Airport Authority offices and online at http://www.san.org/airport_authority/airport_master_plan/forecast_summary.asp.

6) *Allocate individual market seat departures to airlines.* Airlines were assumed to serve each market based on existing service trends, existing airline service strategies, and the assumptions contained in the SH&E forecast report. Critical assumptions were:

   - Increased market share by low fare carriers such as Southwest and JetBlue.
   - No major change in hubbing strategy among legacy carriers.
   - No major airline liquidations or consolidation.

7) *Allocate individual airline seat departures by market to aircraft.* This step was taken in conjunction with Step 6. Aircraft were assumed to serve each market based on the fleet and fleet acquisition plans for each airline, and the unconstrained fleet mix.

Average annual day air cargo, general aviation and military operations were obtained from Table 1-5. The future fleet mix for these categories was taken from the SH&E forecast report. The current distribution of cargo routes was assumed to continue into the future.

Gated Flight Schedules

The base year gated flight schedule was prepared using Official Airline Guide schedules for May 2005,[5] adjusted slightly to match the average annual day operation totals calculated in Table 1-5. Gate assignments by flight were based on the flight information provided on the SDIA's official website.

Gated flight schedules were developed using the existing flight schedule and the average annual day service projections in Attachment A in Appendix D as controls. These schedules include operations performed by all segments of aviation – passenger, cargo, general aviation, and military flights. The schedules provide the following detail for each flight: 1) type of operation – arrival or departure, 2) time of operation, 3) airline (except general aviation flights), 4) equipment, 5) origin for arrivals, and destination for departures, 6) gate, 7) passenger deplanements and terminations for aircraft arrivals, and 8) passenger enplanements and originations for aircraft departures.

The gated flight schedules were prepared using the following steps:

1) *Identify arrival and departure times for existing flights.* The May 2005 Official Airline Guide schedule was used to identify these times. Where necessary, the equipment for existing flights was changed to reflect the fleet mix projection in Attachment A in Appendix D.

2) *Identify arrival and departure times for new flights.* Times for new flights were based on the flight times for the same market to Los Angeles International Airport where available. Otherwise, flight times for new flights were based on judgment, taking into account the following factors:

   - When scheduling multiple frequencies with the same city pair market for any individual airline, an attempt was made to distribute the flights in a balanced manner over the course of the day.
   - Flights were scheduled to avoid take-offs and landings during nighttime (2300-0600) at destination markets (i.e. no arrivals from the East Coast before 9-10 AM and no departures for the East Coast after 3-4 PM, unless a "red-eye" flight).
   - When scheduling flights in a new market, departures and arrivals were timed similarly as those found in comparable markets (i.e., a new transcontinental market had flights timed similarly to an existing transcontinental market).

3) *Determine Aircraft Turnarounds*. Aircraft turnarounds (determination of which arriving flight becomes (is paired with) which departing flight) were based on current practice and are as follows:

   - Regional aircraft turnarounds were scheduled for no less than 25 minutes.
   - Wide-body aircraft turnarounds were scheduled for no less than one hour.
   - Narrow-body turnarounds for most airlines were scheduled for no less than 45 minutes.
   - Turnarounds for Southwest Airlines were scheduled for no less than 20 minutes.

4) *Determine load factors by market.* Average load factors for the average annual day were assumed to be the same as the annual load factors in the SH&E forecast. Average load factors were assumed to be the same for all markets in each segment.

5) *Determine load factors by flight*. The distribution of load factors by time of day was based on judgment, with an effort made to increase load factors during the morning and afternoon peaks at the place of origin.

[5] In order to maintain consistency with previous gating schedules no modifications were made due to newer editions of the Official Airline Guide.

6) *Determine passenger originations and terminations by flight*. Ratio of originations to enplanements by carrier based on existing airline origin and destination ratios at the SDIA, and adjusted to match SH&E projection of 96 percent.

7) *Assign Gates***.** Airline gate assignments for the Proposed Action (Preferred Alternative) were the same as in the Airport Master Plan (see Appendix D in Master Plan). **Table 1-6** in this report shows the summary gate requirements for the Proposed Action (Preferred Alternative) which assumes preferential use. The gate requirements for the East Terminal Alternative are the same as for the Proposed Action (Preferred Alternative), the difference being that expansion is assumed to occur to the east of the existing terminal complex rather than to the west. The following guidelines were used to assign gates under the East Terminal Alternative:

- provide each domestic airline with its own gates where possible;
- locate alliance partners at adjacent gates;
- keep major airlines at existing gates where possible;
- reserve the Commuter Terminal for flights to Los Angeles International Airport;
- use a fifteen minute buffer between a departing flight and the next arriving flight at a gate;
- assume common use for international arrival gates; and
- balance utilization across gates.

Table 1-6

Summary of Gate Requirements (a)

Aircraft	2015(b)	
	Common Use	**Preferential Use (c)**
Widebody	4	5
Large Narrowbody (757)	5	5
Other Narrowbody	28	34
Regional	4	7
International	4	3
Total	**45**	**54**

Notes:

(a) Airport Master Plan, Table 5-3. Estimates do not include any spare gates.

(b) Gate requirements past 2015 are not being evaluated in this Environmental Assessment.

(c) Preferential use gate requirements for 2015 were prepared in more detail than the other cases and designed to use existing terminal facilities to the extent possible. The buffer times for international gates were relaxed slightly to avoid reconstruction in the international arrivals area. Hence, the international gate requirements for the preferential use scenario are lower than for the common use scenario.

Sources: As noted and HNTB analysis.

No Action Alternative

The environmental evaluation process requires the examination of a "No Action" alternative against which to compare the impacts of the Proposed Action alternatives. The No Action Alternative is intended to represent the most likely way in which the SDIA would accommodate the projected demand absent the construction of any projects that have not yet received the required environmental approvals. In this instance, it would mean that the Airport would not be able to add any contact gates or expand any of the associated terminal and roadway facilities.

The estimate of common use gate requirements, as shown in Table 1-6, indicates that the projected 2015 passenger aircraft traffic could be theoretically accommodated with the existing number of gates, provided that commuter aircraft operations continue to use the commuter terminal. Common use of gates implies that airlines share gates as schedules demand. The 2015 and 2020 flight schedules were gated

using the existing terminal layout. No changes in flight schedules were required through 2015; however, airlines would be required to share gates much more than they do currently and passenger hold rooms would not be expanded. Using this methodology, it was also determined that forecast flight operations could be accommodated through 2020.

The gating exercise demonstrates the projected 2015 and 2020 flight schedules with the existing gates, under common gate use assumptions. The gating exercise does not account for additional delays resulting from the high congestion, lack of flexibility, operational complexity resulting from extensive gate sharing, and extremely poor passenger service levels resulting from the crowded terminal area and congested roadways.

Other comparable airports were examined to address the potential impact of these issues. Airports were considered comparable if they were large origin and destination airports located on the West Coast with limited international activity. These airports included Ontario, John Wayne, Portland, Oregon, Sacramento, Oakland, San Jose, and Burbank.

Airlines vary in their rates of gate utilization and airports vary in their mix of airlines. Consequently, to render the comparison more meaningful, airlines were broken out into four major categories, Short and Medium Haul, Long Haul, Southwest, and International. Commuter airlines that do not use contact gates were excluded from the analysis. **Table 1-7** shows the existing breakout for the SDIA.

Table 1-8 shows gate utilization by airline category for the comparison airports and for the SDIA, both currently and under the 2015 and 2020 No Action Alternative. Note that airports that are terminally constrained (John Wayne and Burbank) or are embarking on major terminal expansion projects (Oakland) have much higher gate utilization rates than the other airports in the sample. Under the 2020 No Action Alternative, SDIA's terminal utilization rates would be well above the average for the comparison airports, but still marginally below the maximum utilization rate in each airline category, except international. The projected international utilization rate (4.21) is slightly above Oakland's international utilization rate (3.55). Compared to domestic rates, however, the international utilization rate is still modest.

The utilization rates in Table 1-8 suggest that through 2020 under the No Action Alternative, SDIA would be able to accommodate forecast growth through 2020. Based on the experience of other congested airports such as Oakland, Burbank, and John Wayne, airlines would still be accommodating the projected activity, however. Therefore, the No Action Alternative gated flight schedule represents a plausible No Action Alternative through 2020.

The gated flight schedule for the base year is presented in Attachment B of Appendix D. The Proposed Action (Preferred Alternative) gated flight schedules for 2015 and 2020 are presented in Attachment D and E of Appendix D. The East Terminal Alternative gated flight schedules for 2015 and 2020 are presented in Attachment I and J of Appendix D. The No Action Alternative gated flight schedules for 2015 and 2020 are presented in Attachment N and O of Appendix D.

1.2.2 Results

The flight-by-flight average annual day forecasts in the gated flight schedules were aggregated to generate forecasts of hourly aircraft operations and hourly passenger and origin and destination flows.

Tables 1-9 through 1-14 show the projected hourly distributions of passengers and scheduled passenger aircraft operations for the base year, and the 2015 and 2020 high constrained forecast. As shown in Tables 1-9 through 1-11, the hourly distributions for the base year, 2010, and 2015 are the same for all three alternatives that were analyzed. Tables 1-12 through 1-20 include the Proposed Action, East Terminal (Alternative Project), and the No Action alternatives for the years 2020 due to the fact that the hourly distributions for the alternatives in each of these years is not identical. Peak hour arrivals and departures are projected to decline slightly from 2005 to 2015, and are more pronounced in 2020. The tendency for airlines to spread operations to off-peak periods as delays increase is somewhat offset by the increase in the percentage of long-haul flights, which because of time zone differences are more limited in the hours in which they can operate.

Table 1-7

2005 Baseline San Diego International Airport Gate Use

Airline	Number of Gates	Number of Average Annual Day Departures (a)	Average Utilization Rate
Short and Medium Haul Airlines			
Alaska	2.00	12	6.00
America West	2.00	18	9.00
Frontier	0.71	5	7.00
Subtotal	**4.71**	**35.0**	**7.42**
Long Haul Airlines			
American	8.00	21	2.63
Aloha	0.50	3	6.00
jetBlue	0.43	3	7.00
Continental	2.00	9	4.50
Independence Air	0.14	1	7.00
Delta/Skywest/Comair	3.24	14	4.32
Hawaiian	0.33	1	3.00
Northwest	2.50	6	2.40
Sun Country	0.14	1	7.00
United/Skywest	5.00	21	4.20
US Airways	1.00	6	6.00
Subtotal	**23.29**	**86.0**	**3.69**
Southwest Airlines			
Southwest	10	84	8.40
International Gates			
Common Use	2	5	2.50
Unused Gate			
Unused	1	0	0.00
Commuter Positions			
American Eagle	5	28	5.60
United/Skywest	5	21	4.20
Subtotal	**10**	**49**	**4.90**
TOTAL MAINLINE	**41**	**210**	**5.12**

Note:
(a) Average annual day in 2005.

Source: HNTB analysis.

Table 1-8

Gate Utilization at Comparable Airports

Airport	Short and Medium Haul Airlines	Long Haul Airlines	Southwest	International
Ontario	4.06	4.56	6.79	2.51
John Wayne	9.81	6.72	10.48	n/a
Portland, Oregon	5.23	3.95	8.44	2.37
Sacramento	4.80	4.21	9.13	2.79
Oakland	6.24	6.42	11.40	3.55
San Jose	6.07	4.55	9.94	2.97
Burbank	7.09	4.14	8.32	n/a
Average	6.19	4.94	9.21	2.84
Average Unconstrained (a)	5.04	4.32	8.58	2.66
Maximum	9.81	6.72	11.40	3.55
San Diego (2005)	7.42	3.69	8.40	2.50
San Diego (2015 No Action)	7.15	6.02	10.70	3.00
San Diego (2020 No Action)	7.33	6.62	11.30	3.00

Note: (a) Average of Ontario, Portland Oregon, Sacramento and San Jose.

Sources: Table 1-7, Official Airline Guide and HNTB analysis.

Table 1-9

Estimated Hourly Distribution of Passengers and Operations – 2005 Base Year: Average Annual Day

Hour	Passenger Originations	Passenger Terminations	TOTAL Origin and Destination	Passenger Enplanements	Passenger Deplanements	TOTAL Passengers	Aircraft Departures	Aircraft Arrivals	TOTAL Aircraft Operations
0000-0059	-	-	-	-	-	-	-	-	-
0100-0159	-	-	-	-	-	-	-	-	-
0200-0259	-	-	-	-	-	-	-	-	-
0300-0359	-	-	-	-	-	-	-	-	-
0400-0459	-	-	-	-	-	-	-	-	-
0500-0559	-	-	-	-	-	-	-	-	-
0600-0659	2,547	7	2,554	2,547	8	2,555	27	1	28
0700-0759	2,369	524	2,893	2,424	551	2,975	20	8	28
0800-0859	1,793	1,176	2,969	1,928	1,262	3,190	16	14	30
0900-0959	1,838	1,550	3,388	1,942	1,687	3,629	21	17	38
1000-1059	1,187	2,098	3,285	1,307	2,242	3,549	15	20	35
1100-1159	1,676	1,520	3,196	1,791	1,619	3,410	19	17	36
1200-1259	1,670	1,508	3,178	1,780	1,629	3,409	19	16	35
1300-1359	1,319	1,189	2,508	1,412	1,268	2,680	16	15	31
1400-1459	1,217	1,299	2,516	1,309	1,372	2,681	15	18	33
1500-1559	1,185	837	2,022	1,248	904	2,152	15	12	27
1600-1659	863	963	1,826	950	1,025	1,975	13	15	28
1700-1759	1,156	1,391	2,547	1,229	1,515	2,744	14	17	31
1800-1859	1,348	774	2,122	1,431	824	2,255	14	10	24
1900-1959	501	2,171	2,672	535	2,336	2,871	8	22	30
2000-2059	896	2,155	3,051	940	2,239	3,179	12	18	30
2100-2159	749	1,227	1,976	802	1,227	2,029	9	13	22
2200-2259	385	1,975	2,360	403	1,975	2,378	4	19	23
2300-2359	212	555	767	253	555	808	2	7	9
Total	**22,911**	**22,919**	**45,830**	**24,231**	**24,238**	**48,469**	**259**	**259**	**518**
Peak Hour	**2,547**	**2,171**	**3,388**	**2,547**	**2,336**	**3,629**	**27**	**22**	**38**
Peak Hour Percent	11.1%	9.5%	7.4%	10.5%	9.6%	7.5%	10.4%	8.5%	7.3%

Source: Table D.2 and HNTB analysis.

Table 1-10

Forecast Hourly Distribution of Passengers and Operations – 2015 Forecast: Average Annual Day

Hour	Passenger Originations	Passenger Terminations	TOTAL Origin and Destination	Passenger Enplanements	Passenger Deplanements	TOTAL Passengers	Aircraft Departures	Aircraft Arrivals	TOTAL Aircraft Operations
0000-0059	-	88	88	-	92	92	-	1	1
0100-0159	-	-	-	-	-	-	-	-	-
0200-0259	-	-	-	-	-	-	-	-	-
0300-0359	-	-	-	-	-	-	-	-	-
0400-0459	-	-	-	-	-	-	-	-	-
0500-0559	-	-	-	-	-	-	-	-	-
0600-0659	2,099	144	2,244	2,099	154	2,253	23	2	25
0700-0759	1,760	721	2,481	1,768	775	2,543	17	10	27
0800-0859	2,317	1,856	4,172	2,399	1,977	4,376	22	21	43
0900-0959	2,563	1,778	4,342	2,710	1,879	4,589	27	19	46
1000-1059	1,746	2,547	4,293	1,836	2,705	4,541	19	24	43
1100-1159	1,950	2,759	4,710	2,078	2,888	4,966	22	27	49
1200-1259	2,173	2,464	4,638	2,280	2,619	4,898	26	25	51
1300-1359	2,448	1,856	4,304	2,581	1,931	4,512	26	23	49
1400-1459	1,979	1,228	3,208	2,081	1,291	3,372	22	15	37
1500-1559	1,455	1,460	2,915	1,519	1,522	3,041	15	15	30
1600-1659	1,616	953	2,568	1,674	1,011	2,685	15	13	28
1700-1759	1,646	1,517	3,162	1,742	1,619	3,360	17	19	36
1800-1859	1,193	1,026	2,219	1,288	1,066	2,354	13	12	25
1900-1959	1,305	2,131	3,436	1,369	2,255	3,624	14	22	36
2000-2059	1,123	2,226	3,349	1,170	2,332	3,502	14	21	35
2100-2159	1,342	2,397	3,739	1,417	2,397	3,814	17	23	40
2200-2259	909	2,119	3,028	939	2,119	3,057	10	23	33
2300-2359	263	611	874	291	611	902	3	7	10
Total	**29,889**	**29,880**	**59,769**	**31,241**	**31,241**	**62,482**	**322**	**322**	**644**
Peak Hour	**2,563**	**2,759**	**4,710**	**2,710**	**2,888**	**4,966**	**27**	**27**	**51**
Peak Hour Percent	8.6%	9.2%	7.9%	8.7%	9.2%	7.9%	8.4%	8.4%	7.9%

Source: Table D.4 and HNTB analysis.

Table 1-11

Forecast Hourly Distribution of Passengers and Operations – 2015 All Alternatives Forecast: Average Annual Day

Hour	Passenger Originations	Passenger Terminations	TOTAL Origin and Destination	Passenger Enplanements	Passenger Deplanements	TOTAL Passengers	Aircraft Departures	Aircraft Arrivals	TOTAL Aircraft Operations
0000-0059	-	88	88	-	92	92	-	1	1
0100-0159	-	-	-	-	-	-	-	-	-
0200-0259	-	-	-	-	-	-	-	-	-
0300-0359	-	-	-	-	-	-	-	-	-
0400-0459	-	-	-	-	-	-	-	-	-
0500-0559	-	-	-	-	-	-	-	-	-
0600-0659	2,099	144	2,244	2,099	154	2,253	23	2	25
0700-0759	1,760	721	2,481	1,768	775	2,543	17	10	27
0800-0859	2,317	1,856	4,172	2,399	1,977	4,376	22	21	43
0900-0959	2,563	1,778	4,342	2,710	1,879	4,589	27	19	46
1000-1059	1,746	2,547	4,293	1,836	2,705	4,541	19	24	43
1100-1159	1,950	2,759	4,710	2,078	2,888	4,966	22	27	49
1200-1259	2,173	2,464	4,638	2,280	2,619	4,898	26	25	51
1300-1359	2,448	1,856	4,304	2,581	1,931	4,512	26	23	49
1400-1459	1,979	1,228	3,208	2,081	1,291	3,372	22	15	37
1500-1559	1,455	1,460	2,915	1,519	1,522	3,041	15	15	30
1600-1659	1,616	953	2,568	1,674	1,011	2,685	15	13	28
1700-1759	1,646	1,517	3,162	1,742	1,619	3,360	17	19	36
1800-1859	1,193	1,026	2,219	1,288	1,066	2,354	13	12	25
1900-1959	1,305	2,131	3,436	1,369	2,255	3,624	14	22	36
2000-2059	1,123	2,226	3,349	1,170	2,332	3,502	14	21	35
2100-2159	1,342	2,397	3,739	1,417	2,397	3,814	17	23	40
2200-2259	909	2,119	3,028	939	2,119	3,057	10	23	33
2300-2359	263	611	874	291	611	902	3	7	10
Total	**29,889**	**29,880**	**59,769**	**31,241**	**31,241**	**62,482**	**322**	**322**	**644**
Peak Hour	**2,563**	**2,759**	**4,710**	**2,710**	**2,888**	**4,966**	**27**	**27**	**51**
Peak Hour Percent	8.6%	9.2%	7.9%	8.7%	9.2%	7.9%	8.4%	8.4%	7.9%

Source: Table D.4 and HNTB analysis. Numbers may not exactly add to annual total due to rounding.

Table 1-12

Forecast Hourly Distribution of Passengers and Operations - 2020 No Action Forecast: Average Annual Day

Hour	Passenger Originations	Passenger Terminations	TOTAL Origin and Destination	Passenger Enplanements	Passenger Deplanements	TOTAL Passengers	Aircraft Departures	Aircraft Arrivals	TOTAL Aircraft Operations
0000-0059	-	88	88	-	88	88	-	1	1
0100-0159	-	-	-	-	-	-	-	-	-
0200-0259	-	-	-	-	-	-	-	-	-
0300-0359	-	-	-	-	-	-	-	-	-
0400-0459	-	-	-	-	-	-	-	-	-
0500-0559	-	-	-	-	-	-	-	-	-
0600-0659	2,657	148	2,804	2,657	157	2,814	27	2	29
0700-0759	2,530	748	3,278	2,533	812	3,345	24	10	34
0800-0859	2,368	1,895	4,264	2,506	2,029	4,535	22	21	43
0900-0959	2,484	2,003	4,487	2,625	2,097	4,722	27	21	48
1000-1059	1,814	2,796	4,609	1,914	2,982	4,897	20	26	46
1100-1159	2,047	2,788	4,836	2,196	2,929	5,125	23	27	50
1200-1259	2,164	2,704	4,868	2,274	2,883	5,157	25	27	52
1300-1359	2,898	2,104	5,003	3,058	2,184	5,242	29	24	53
1400-1459	2,097	1,363	3,461	2,204	1,431	3,635	23	15	38
1500-1559	1,397	1,688	3,085	1,451	1,756	3,207	15	16	31
1600-1659	1,580	1,248	2,828	1,640	1,322	2,962	16	16	32
1700-1759	2,335	1,811	4,146	2,453	1,945	4,398	22	22	44
1800-1859	1,385	1,147	2,532	1,505	1,195	2,700	14	14	28
1900-1959	1,444	2,276	3,720	1,514	2,410	3,924	15	22	37
2000-2059	1,253	2,739	3,992	1,299	2,849	4,148	15	26	41
2100-2159	1,356	2,507	3,863	1,440	2,507	3,948	16	24	40
2200-2259	1,022	2,402	3,424	1,058	2,404	3,462	10	25	35
2300-2359	278	653	932	308	653	962	3	7	10
Total	33,110	33,110	66,220	34,634	34,634	69,269	346	346	692
Peak Hour	2,898	2,796	5,003	3,058	2,982	5,242	29	27	53
Peak Hour Percent	8.8%	8.4%	7.6%	8.8%	8.6%	7.6%	8.4%	7.8%	7.7%

Source: HNTB analysis. Numbers may not exactly add to annual total due to rounding.

Table 1-13

Forecast Hourly Distribution of Passengers and Operations - 2020 East Terminal Alternative Forecast: Average Annual Day

Hour	Passenger Originations	Passenger Terminations	TOTAL Origin and Destination	Passenger Enplanements	Passenger Deplanements	TOTAL Passengers	Aircraft Departures	Aircraft Arrivals	Aircraft Operations
0000-0059	-	88	88	-	88	88	-	1	1
0100-0159	-	-	-	-	-	-	-	-	-
0200-0259	-	-	-	-	-	-	-	-	-
0300-0359	-	-	-	-	-	-	-	-	-
0400-0459	-	-	-	-	-	-	-	-	-
0500-0559	-	-	-	-	-	-	-	-	-
0600-0659	2,657	148	2,804	2,657	157	2,814	27	2	29
0700-0759	2,416	748	3,164	2,419	812	3,231	23	10	33
0800-0859	2,370	1,895	4,266	2,506	2,029	4,535	22	21	43
0900-0959	2,484	2,003	4,487	2,625	2,097	4,722	27	21	48
1000-1059	1,814	2,796	4,609	1,914	2,982	4,897	20	26	46
1100-1159	2,047	2,900	4,947	2,196	3,043	5,239	23	28	51
1200-1259	2,277	2,704	4,981	2,388	2,883	5,271	26	27	53
1300-1359	2,898	2,104	5,003	3,058	2,184	5,242	29	24	53
1400-1459	2,097	1,363	3,461	2,204	1,431	3,635	23	15	38
1500-1559	1,397	1,688	3,085	1,451	1,756	3,207	15	16	31
1600-1659	1,580	1,248	2,828	1,640	1,322	2,962	16	16	32
1700-1759	2,335	1,811	4,146	2,453	1,945	4,398	22	22	44
1800-1859	1,385	1,147	2,532	1,505	1,195	2,700	14	14	28
1900-1959	1,444	2,276	3,720	1,514	2,410	3,924	15	22	37
2000-2059	1,253	2,628	3,881	1,299	2,735	4,034	15	25	40
2100-2159	1,356	2,507	3,863	1,440	2,507	3,948	16	24	40
2200-2259	1,022	2,402	3,424	1,058	2,404	3,462	10	25	35
2300-2359	278	653	932	308	653	962	3	7	10
Total	33,110	33,110	66,220	34,634	34,634	69,269	346	346	692
Peak Hour	2,898	2,900	5,003	3,058	3,043	5,271	29	28	53
Peak Hour Percent	8.8%	8.8%	7.6%	8.8%	8.8%	7.6%	8.4%	8.1%	7.7%

Source: HNTB analysis. Numbers may not exactly add to annual total due to rounding.

Table 1-14

Forecast Hourly Distribution of Passengers and Operations - 2020 West Terminal (Preferred Alternative) Forecast: Average Annual Day

Hour	Passenger Originations	Passenger Terminations	TOTAL O&D	Passenger Enplanements	Passenger Deplanements	TOTAL Passengers	Aircraft Departures	Aircraft Arrivals	Aircraft Operations
0000-0059	-	88	88	-	88	88	-	1	1
0100-0159	-	-	-	-	-	-	-	-	-
0200-0259	-	-	-	-	-	-	-	-	-
0300-0359	-	-	-	-	-	-	-	-	-
0400-0459	-	-	-	-	-	-	-	-	-
0500-0559	-	-	-	-	-	-	-	-	-
0600-0659	2,657	148	2,804	2,657	157	2,814	27	2	29
0700-0759	2,416	748	3,164	2,419	812	3,231	23	10	33
0800-0859	2,370	1,895	4,266	2,506	2,029	4,535	22	21	43
0900-0959	2,484	2,003	4,487	2,625	2,097	4,722	27	21	48
1000-1059	1,814	2,796	4,609	1,914	2,982	4,897	20	26	46
1100-1159	2,047	2,900	4,947	2,196	3,043	5,239	23	28	51
1200-1259	2,277	2,704	4,981	2,388	2,883	5,271	26	27	53
1300-1359	2,898	2,104	5,003	3,058	2,184	5,242	29	24	53
1400-1459	2,097	1,363	3,461	2,204	1,431	3,635	23	15	38
1500-1559	1,397	1,688	3,085	1,451	1,756	3,207	15	16	31
1600-1659	1,580	1,248	2,828	1,640	1,322	2,962	16	16	32
1700-1759	2,335	1,811	4,146	2,453	1,945	4,398	22	22	44
1800-1859	1,385	1,147	2,532	1,505	1,195	2,700	14	14	28
1900-1959	1,444	2,276	3,720	1,514	2,410	3,924	15	22	37
2000-2059	1,253	2,628	3,881	1,299	2,735	4,034	15	25	40
2100-2159	1,356	2,507	3,863	1,440	2,507	3,948	16	24	40
2200-2259	1,022	2,402	3,424	1,058	2,404	3,462	10	25	35
2300-2359	278	653	932	308	653	962	3	7	10
Total	33,110	33,110	66,220	34,634	34,634	69,269	346	346	692
Peak Hour	2,898	2,900	5,003	3,058	3,043	5,271	29	28	53
Peak Hour Percent	8.8%	8.8%	7.6%	8.8%	8.8%	7.6%	8.4%	8.1%	7.7%

Source: Appendix C and HNTB analysis.

1.3 Other Airport Authority Programs

The following sections provide a brief summary of other on-going programs being contemplated by the SDCRAA. These programs have been considered separately by the Airport Authority. The Airport Master Plan is intended to identify and set forth a measured, incremental improvement program for existing SDIA that addresses the immediate needs of the Airport, in concert with the Airport Land Use Compatibility Plan for SDIA.

1.3.1 Airport Master Plan Process

Using the newly updated forecast as described in Section 1.2, *Aviation Forecast Update*, SDCRAA commenced an update to the Airport's Draft Master Plan technical report. The Airport Master Plan which was adopted on May 1, 2008 as described in Section 1.1.2, *San Diego County Regional Airport Authority*, was developed to address requirements for accommodating near term natural growth through 2015 and to consider conceptual improvements through 2030.

The goal of the Airport Master Plan was to provide a financially and environmentally responsible guideline for future Airport development that will accommodate forecast aviation demand and remain adaptable to either a short-term or long-term future for the existing Airport site based on the results of the Airport Site Selection Program (ASSP). The ASSP is described in Section 1.3.4, *Airport Site Selection Program*.

1.3.2 Airport Master Plan Environmental Impact Report

The Airport Master Plan Environmental Impact Report (May 2008) was developed in accordance with the California Environmental Quality Act. Public Resources Code §§ 21000 et. seq. and the Guidelines for Implementation of the California Environmental Quality Act (California Code Regulations Title 14., §§ 15000-15387). The EIR included both program and project level analyses. The document evaluated, at a program level, the potential short-term and long-term, direct, indirect and cumulative environmental impacts associated with the airport uses designated by the Proposed Airport Land Use Plan in the Airport Master Plan. In addition, the EIR provided a project level analysis for specific improvements that are proposed for construction and operation in the Airport Master Plan to meet aviation demand through 2015 at the SDIA.

As previously described in Section 1.1.2, *San Diego County Regional Airport Authority*, the Final EIR was certified by the SDCRAA on May 1, 2008. The Draft EIR, released for public review in October 2007, included 125 days of public review. The Draft EIR received 24 comments from federal, state, and local agencies and 41 comments from the general public. During the review period, nine community meetings were held to inform the public and solicit comments.

Comments received from agencies and the responses published in the May Final EIR are included in **Appendix A**, *Public and Agency Involvement.*

1.3.3 Airport Transit Plan

The Airport Authority led a multi-agency committee that developed a draft Airport Transit Plan for San Diego International Airport, developed to identify opportunities to improve transit access to SDIA. The Authority supports improvements to Airport transit service and is developing policies and programs to encourage and increase transit use by airport users comprised of passengers and employees. The main goal of the Airport Transit Plan and the Airport Authority is to increase the airport passenger transit ridership from the existing 1.2 percent to the national average of 5 percent over the next three to five years. The Airport Transit Plan analyzes and evaluates existing and proposed airport transit service, addresses transit market share expectations, presents preliminary design and costs estimates, as well as addressing policy direction and adoption, and an implementation plan for recommended transit improvements.

The Airport Transit Plan was prepared with extensive coordination and participation of the

Transit/Roadway Committee. This Committee was initiated in 2005 and includes various transit and transportation agencies (including an FAA representative) that have provided extensive input in the preparation of the Airport Transit Plan.

The Transit/Roadway Committee consists of the following agencies:

- San Diego County Regional Airport Authority
- SANDAG/Metropolitan Transit System (MTS)
- North County Transit District
- Caltrans
- City of San Diego/Centre City Development Corporation
- Port of San Diego
- Federal Aviation Administration
- California Coastal Commission

The purpose of the Committee is to provide transportation agency coordination and data exchange, assist in the preparation of a Transit Demand /Access Study, provide Airport Board participation and policy direction, and present the Airport Transit Plan for adoption by the various transportation agencies boards. This Committee helped to develop the near-term, mid-term, and long-term transit improvement recommendations.

1.3.4 Airport Site Selection Program

The Airport Site Selection Program was conducted by the San Diego County Regional Airport Authority as part of the state law requirement to conduct a comprehensive study of all potential airport sites and solutions to meet the region's air transportation needs through the year 2030. As part of the Airport Site Selection Program, the San Diego County Regional Airport Authority was required to have a county-wide advisory ballot measure with an airport recommendation.

As described before, San Diego International Airport is the busiest single-runway commercial airport in the nation and the aviation activity forecast for the San Diego region identifies substantial growth in the future from 2015 through 2030 and the future. San Diego International Airport is, however, severely constrained in its current location, limiting the ability to expand and improve the existing airport to accommodate the projected growth. From 2003 to November 7, 2006, the San Diego County Regional Airport Authority conducted a comprehensive study of relocating the region's primary commercial airport or enhancing San Diego International Airport's capacity with a connecting inter-tie across San Diego Bay to transport passengers and cargo to the airfield and runways on Naval Air Station North Island.

Potential sites for relocating San Diego International Airport have been under continuous study since 2001, beginning with the Air Transportation Action Program, a joint prospect of the San Diego Association of Governments and the Port District. Oversight of the Air Transportation Action Program was provided by the Joint Airport Advisory Committee, which was comprised of the San Diego Association of Governments' Transportation Subcommittee and the Board of Airport Commissioner's Airport Ad Hoc Committee. Upon formation of the San Diego County Regional Airport Authority in January 2003, the responsibility for the identification and evaluation of potential sites shifted from the Joint Airport Advisory Committee to the Authority's Board, within the context of what was initiated as the Air Transportation Action Program and is now known as the Airport Site Selection Program.

Through the course of evaluating 30 possible sites and applying "screening criteria" to narrow the range of potential options, nine sites were identified as candidates for further analysis. The San Diego County Regional Airport Authority selected five of these sites to undergo a comprehensive detailed alternative analysis for the purpose of developing a recommendation for a new airport location. In accordance with the same state law that created the San Diego County Regional

Airport Authority, the recommendation was presented to the people of San Diego County as a ballot measure for a county-wide vote in November 2006.

The advisory ballot measure was identified as San Diego County Measure A, in the November 7, 2006 election, and was worded as follows:

"To provide for San Diego's long-term transportation needs, shall the Airport Authority and government officials work to obtain approximately 3,000 of 23,000 acres at MCAS Miramar by 2020 for a commercial airport, provided necessary traffic and freeway improvements are made, military readiness is maintained without expense to the military for modifying or relocating operations, no local taxes are used on the airport, overall noise impacts are reduced, and necessary Lindbergh Field improvements are completed?"

The final decision was made by the voters of San Diego County and the measure did not pass in a final result of 61.83% No and 38.17% Yes (County of San Diego, Election Results 2006).

It is important to note that although the Airport Site Selection Program process was conducted concurrent with the San Diego International Airport Master Plan process, the two processes were separate and not interdependent. The Airport Site Selection Program evaluated the potential of relocating San Diego International Airport to a site that could be developed and operated in a manner that meets the County's projected long-term commercial aviation needs through 2030 and beyond. The Airport Master Plan is intended to identify and set forth a measured, incremental improvement program for existing San Diego International Airport that addresses the immediate needs of the airport, irrespective of the outcome of the Airport Site Selection Program process. Conversely, the completion of the Airport Site Selection Program was not dependent on the assumptions or outcome of the Airport Master Plan. Once the Airport Site Selection Program process was completed, including the vote on the November 2006 ballot measure recommendation, and if a formal decision was made by the Authority to advance a long-term airport solution toward implementation, then the various federal, state, and local permit and approval processes would need to be completed. This would include the necessary environmental reviews required under the California Environmental Quality Act and the National Environmental Policy Act. If the voters had determined to create a new airport and indicated the proposed location, the final selection and implementation of any new airport would have been subject to a separate review process as required by the California Environmental Quality Act. Neither this Environmental Assessment nor the Airport Master Plan are intended to cover or include a new airport. Because the specific information is not known about a new airport at this time, it would be speculative to attempt to analyze the environmental impacts of a new airport in this document.

1.3.5 Airport Land Use Compatibility Plan for San Diego International Airport

SDCRAA, in its capacity as the Airport Land Use Commission for San Diego County, was mandated by state legislation to prepare and adopt a new San Diego County Airport Land Use Compatibility Plan addressing each public-use and military airport in the county. Airport Land Use Compatibility Plans are concerned with land use compatibility around airports in terms of noise, overflight, safety and airspace protection. They are not plans for airport development and they do not require any changes to existing land uses. State law requires future land use development near airports to be consistent with compatibility criteria included in an Airport Land Use Compatibility Plan (ALUCP).

The ALUCP for SDIA consists of the following components: provision of airport information, updated noise contours, updated Airport Influence Area boundaries, revised compatibility policies and criteria, new compatibility zone maps, procedural policies, and land use information. The 2004 ALUCP for SDIA designates as "conditionally compatible" new residences and other noise sensitive uses located within 60 – 65 decibel Community Noise Equivalent Level (CNEL) noise contours, provided that sound attenuation, navigation easements, and notice of airport operations is required. The Draft San Diego County ALUCP specific to SDIA, and its related Draft

Environmental Impact Report, was released to the public for review in October 2005.

The SDCRAA Board directed the formation of the Airport Land Use Compatibility Plan Technical Advisory Group to assist in the preparation of the Final ALUCPs for the airports within San Diego County. The ALUCP Technical Advisory Group consisted of subcommittees which met to discuss specific groups of airports to maintain productivity. (For example, one subcommittee discusses "urban" airports and another subcommittee discusses "military" airports). These subcommittees have increased productivity through working together on similar airports with similar issues and resolving them collectively.

The SDIA Land Use Compatibility Plan is anticipated to be adopted by the SDCRAA by 2009.

1.3.6 Former Naval Training Center Landfill Remediation Project Environmental Impact Report

The SDCRAA released the Final Environmental Impact Report for the Former NTC Landfill Remediation in November 2007. The proposed remediation would be conducted in a 12-month period concluding in mid 2009 and would result in the following:

- Removal and stockpiling of approximately 136,000 cubic yards of soil overburden
- Removal of approximately 112,000 cubic yards of municipal solid waste for transport to and disposal in area solid waste landfill facilities
- Removal of approximately 25,000 cubic yards of burn ash material for transport to and disposal in appropriate regulated landfills
- Removal of approximately and appropriate disposal of 38,000 additional cubic yards of soil to a depth of one (1) foot below the limits of landfill materials described above
- Import of a maximum of 100,000 cubic yards of clean fill soil to backfill the excavated area

The Final EIR identified one potential significant impact to air quality. Specifically, during the duration of the remediation project, total emissions of NO_x would exceed the threshold of significance contained in the City of San Diego significance criteria and in guidance from the San Diego County Air Pollution Control District.

Although the threshold for NOx total emissions will be exceeded, the project itself will be of limited duration. Remediation activities are expected to be completed within nine months. In addition, a Community Health and Safety Plan and a Human Health Risk Assessment have been incorporated into the project. Given the provisions of the Community Health and Safety Plan, the Human Health Risk Assessment has concluded that there would be no significant impacts to human health resulting from the landfill remediation project.

1.3.7 Utility Line Relocations

The Authority is relocating two buried utility lines that traverse the former NTC landfill site: (1) a high-pressure gas line and (2) a 12-kilovolt (kV) electrical transmission line. The proposed relocations have independent utility from, and are not dependent on, the proposed landfill remediation project addressed in this Environmental Assessment. The specific new alignments/easements for the utility line relocations have been finalized. The utility line relocations will occur prior to excavation of the former NTC landfill site for safety.

1.3.8 McCain Road/North Harbor Drive Intersection

The three-way intersection of McCain Road and North Harbor Drive is currently controlled by a stop sign on McCain Road. A landscaped median prevents left turns to/from McCain Road from/to North Harbor Drive. Installation of traffic signals, with an associated opening in the median, was included in the development approvals for Liberty Station, directly west of the Airport. Although the McCain Road/ North Harbor Drive intersection improvements have been approved under California Environmental Quality Act and the Coastal Act, the proposed

intersection improvements are under plan review by the City of San Diego.

1.3.9 Former Teledyne Ryan Remediation and Clean Closure

The former Teledyne Ryan facilities are located on approximately 47.5 acres of State tidelands controlled by the Port of San Diego. This property was leased by the Port of San Diego to Teledyne Ryan, and subsequently to Allegehny Industries which operated a large aviation manufacturing facility. The aviation manufacturing facility used hazardous materials and generated wastes that resulted in contamination of building foundations, soils, and groundwater. Allegehny Industries has been identified by state and local agencies as the responsible party for the remediation of the property. As a result of a legal settlement agreement, the Port of San Diego, Allegehny Industries and the SDCRAA are working cooperatively to address the remediation and disposition of contaminated materials. The Port of San Diego is conducting the environmental review of the remediation and disposition activities as the lead agency in accordance with the California Environmental Quality Act.

In October 2005, the SDCRAA entered into a 63-year lease with the Port of San Diego to secure the property for airport uses. Until the remediation and disposition activities of the former Teledyne Ryan facilities is completed, future development for airport uses is limited and the following issues must be addressed:

- **Site Contamination.** The Teledyne Ryan property has considerable surface and below ground contamination issues. The existing facilities and utilities on the site are deteriorating. Existing buildings and foundations have recorded asbestos-containing materials, lead-based paints, hazardous materials, and mold. Below ground issues include soil and groundwater contamination, sink-holes, and deteriorating drainage utilities connecting the onsite drains to outfalls in San Diego Bay.
- **Clean Up and Abatement Order.** The Teledyne Ryan property is subject to a Clean Up and Abatement Order issued by the California Regional Water Quality Control Board in 2004 to the facility operator Allegehny Industries instructing the soil and groundwater remediation of the project site. The property has been the subject of litigation involving Allegehny, the Port of San Diego, and the Airport Authority.
- **Multiple agency jurisdiction and coordination.** Coordination with multiple agencies to address the remediation of the site will be required including the Port of San Diego, the California Regional Water Quality Control Board, the San Diego Air Pollution Control District, the City of San Diego and the California Coastal Commission. The remediation is anticipated to take over 3-4 years to complete. Although not included in the Clean Up and Abatement Order, the Port of San Diego is required to address the disposition of the former Teledyne Ryan facilities concurrent with the remediation of the project site and in close coordination with the responsible parties and agencies involved.
- **Program level analysis of future land uses.** The proposed Airport Land Use Plan identifies future airport uses on the former Teledyne Ryan property as Airfield, Ground Transportation and Airport Support. These airport uses include land use assumptions to determine at a program level the environmental effects including land use and traffic/circulation. Once the remediation is completed, the Airport Authority will develop specific project improvements consistent with the Airport Land Use Plan and conduct an environmental analysis at a project level for any airport facilities proposed to be constructed and operated.

1.4 Sponsor's Proposed Action (Preferred Alternative)

SDCRAA has identified specific physical improvements at the SDIA to allow the Airport to effectively continue its mission of serving San Diego's commercial air transportation needs as forecasted through 2015. The project elements are described as follows and are depicted on **Figure 1.3**.

- **Expand existing Terminal 2 West with 10 new jet gates.** Construct an addition to the existing Terminal 2 West that would include approximately 430,100 square feet of new space, 10 additional aircraft gates, and approximately 2,250 lineal feet of new and reconfigured vehicle curb front on two levels and approximately 1,800 feet of lineal curb front dedicated to commercial vehicles in a transit plaza. The new and reconfigured terminal space would be expanded on three floors for passenger processing facilities including airline ticketing, security screening, departure holdrooms, restrooms, concessions, public circulation, and outbound baggage areas. Most likely three additional baggage claim devices would be provided within the existing baggage claim area. The Terminal 2 West facility was originally constructed to accommodate two additional carousels within the existing space. This would improve service for arriving passengers and their baggage from both Terminal 2 West and Terminal 2 East. The additional aircraft gates would reduce existing crowding in Terminal 1 and accommodate passenger volumes forecast through 2015, and would reduce severe crowding in all terminals expected from the growth in airport-wide traffic and flights. The proposed terminal expansion would also include an extension of the existing Terminal 2 West vehicle curb front used for pickup and drop-off of arriving and departing passengers. This project feature also includes a reconfiguration of the existing Terminal 2 curb front to improve automobile flow and passenger convenience. The new curb front system for Terminal 2 would vertically segregate arriving and departing vehicle traffic between the existing ground level and a new second level proposed as part of a new parking structure (described below). See Figure 1.3 Project Element Orange #1.

- **Construct new aircraft parking and replacement Remain-Over-Night aircraft parking apron.** This new aircraft parking apron would be constructed to accommodate up to 10 jet aircraft adjacent to the new Terminal 2 West taxilane. Overnight aircraft would be moved to gates in the morning to resume flight routing. See Figure 1.3 Project Element Orange #2.

- **Construct new apron and aircraft taxilane.** This new aircraft apron pavement would be built adjacent to and west of the proposed aircraft gates at Terminal 2 West. It would be used as an aircraft taxilane for aircraft to taxi between the runway and the new proposed gates. This project element would facilitate efficient aircraft movement on the west end of the terminal area. See Figure 1.3 Project Element Orange #3.

- **Construct new second level road/curb and vehicle circulation serving Terminal 2.** A new second level curbside would be constructed with a new parking structure and connected via pedestrian walkways to Terminal 2 to accommodate forecasted growth of passengers expected by 2015. The second level curbside would serve as a private vehicle departure curb with airline check-in facilities and elevated pedestrian walkways connecting to the upper level Terminal 2 lobby. Access to the second level curbside would be provided from the Terminal 2 entrance roadway and the Terminal 2 exit roadways would be reconfigured to accommodate the second level curbside/roadway exit. Access to McCain Road would also be provided from the Terminal 2 roadways and would serve the taxi and shuttle staging area and SAN Park NTC. See Figure 1.3 Project Element Orange #4.

- **Construct new parking structure and vehicle circulation serving Terminal 2.** A new multi-level parking structure accommodating a departure curb on the second level would be built adjacent to Terminal 2 to accommodate forecasted growth of passengers expected by 2015. This structure would be five levels adding 3,700 new parking spaces, a departure curb, and a commercial vehicle curb accommodating shuttles, buses, taxis and shared-ride vans. Elevated pedestrian walkways would be reconstructed to connect the second level Departure Curb with the upper level Terminal 2 lobby. The new parking structure would be centralized within an expanded roadway loop. Vehicles approaching the terminal area would be directed to parking or passenger pick-up and drop-off well in advance of driver decision points in the roadway. New access roadways would eliminate the need for vehicles to utilize the terminal curbside roadway to enter structured or surface parking

areas. Removing these circulating vehicles from the terminal roadway would reduce congestion during peak periods. See Figure 1.3 Project Element Orange #5.

- **Relocate and reconfigure SAN Park Pacific Highway.** The existing SAN Park Pacific Highway parking facility, approximately 1,670 public parking spaces, would be relocated and reconfigured with 500 additional spaces to the north of the existing parking facility to accommodate construction of new airfield and general aviation facilities. The site would be bound by Pacific Highway to the east and a new access road to the south and west. Access/egress to the parking facility would be provided from the new access road. The parking spaces currently utilized by the Port of San Diego, approximately 210 parking spaces, would remain in the existing location along Pacific Highway. See Figure 1.3 Project Element Green #1.
- **Construct a new access road from Sassafras Street/Pacific Highway intersection.** A new access road would be constructed to provide access to SAN Park Pacific Highway and new general aviation facilities. The access road would utilize the existing Sassafras Street/Pacific Highway intersection and existing traffic signal. Underground utilities required for airport facilities including water, electric, sanitary sewer, and storm drains, would be constructed in conjunction with the access road and connect with existing utilities located along the Pacific Highway corridor. See Figure 1.3 Project Element Green # 2.
- **Construct new general aviation facilities including access, terminal/hangars and apron to improve airport safety for airport customers/users.** New general aviation facilities would be constructed on 12.4 acres to accommodate forecast general aviation operations through 2015. General aviation uses must be relocated to allow for the construction of airfield/taxiway improvements and apron hold pads. New general aviation terminal/hangars and apron would be located immediately north of the taxiway improvements and provide access to the airfield for general aviation aircraft. Landside access for vehicles and parking would be provided from the new access road through the Sassafras Street/Pacific Highway intersection. See Figure 1.3 Project Element Green #3.
- **Demolish the existing general aviation facilities to improve airport safety and circulation on airfield.** The existing general aviation facilities would be demolished to accommodate airfield/taxiway improvements. The removal of subsurface structures and site remediation, including removal of existing underground storage tanks, would be conducted. See Figure 1.3 Project Element Green #4.
- **Construct new apron hold pads and new taxiway east of Taxiway D.** A new 195-foot wide aircraft apron and hold pads would be constructed north of Taxiway C and east of Taxiway D to allow aircraft to hold for extended periods while awaiting departure, but also allowing aircraft movement to continue unimpeded on adjacent taxiways. A new parallel taxiway north of the new apron and east of Taxiway D would also be constructed. This taxiway would facilitate efficient and safe aircraft movement by allowing aircraft to bypass those on the apron and also provide airfield access to the new general aviation facilities. See Figure 1.3 Project Element Green #5.

1.5 Timeframe of the Proposed Action

Subject to the completion of the environmental review process, the proposed projects described in Section 1.4, *Sponsor's Proposed Action (Preferred Alternative)*, are projected to be completely implemented by 2015. Construction of individual projects are projected to begin in 2009 and continue through 2013, see Appendix E for a detailed schedule of construction. Note the original construction schedule, which is provided in Appendix E, was estimated to begin in 2008, all projects in the schedule are now expected to begin in 2009.

Chapter Two: Purpose and Need

Federal Aviation Administration (FAA) Order 5050.4B requires that the Environmental Assessment (EA) address the purpose of a proposed action and identify why the action is needed. The Purpose and Need should be defined considering the sponsor's goals and objectives and the statutory objectives of the proposed Federal action. The identification of the Proposed Action's Purpose and Need is the primary foundation for the identification of reasonable alternatives to the action and the evaluation of the environmental consequences of the action.

This chapter identifies the Purpose and Need for the Proposed Action. Additionally, this chapter identifies the requested Federal actions and timeframe for implementation of the Proposed Action.

2.1 Purpose and Need

Following the FAA approval of the aviation forecast in June of 2005, the SDCRAA initiated the preparation of an Airport Master Plan that includes several Airport projects necessary to accommodate existing and future operations at SDIA. The project is intended to provide project-level approvals for those elements that are to be constructed through 2012.

As discussed in Section 1.4, *Sponsor's Proposed Action (Preferred Alternative)*, the Proposed Action includes the expansion of existing Terminal 2 West, along with other projects that include the construction or reconstruction of several airside facilities, demolition and construction of several general aviation facilities, taxiways, along with infrastructure to support the improved circulation and accommodation of passenger vehicles. As set forth in Chapter 3, *Alternatives*, three alternatives and a No Action alternative have been retained for evaluation and consideration as part of this EA.

In order to implement the proposed projects in the Airport Master Plan, the environmental impacts of the Proposed Action must be considered in accordance with National Environmental Policy Act (NEPA) standards. This Environmental Assessment is being prepared to implement specific near-term (year 2015) Airport Master Plan improvements to meet near-term needs. Implementation of the recommendations is needed because forecast growth cannot be reasonably accommodated within the existing Airport facilities without a reduced Level of Service. The SDIA Master Plan, adopted May 2008, Section7.2.3, *Existing Level of Service*, provides detailed information on existing and forecast Level of Services.

Without these improvements, passenger traffic through the existing terminal buildings will become severely congested during longer periods of each day and Level of Service will be reduced further beyond its existing degraded level. The specific need for the Proposed Action is to meet airside, terminal, air cargo and ground transportation deficiencies through 2015. Detailed descriptions for each of the four areas of deficiency are provided in the sections that follow. **Figure 2.1** illustrates the Proposed Action.

Increased passengers and operations forecast for the SDIA will result in excessive congestion at the Airport, which already is experiencing crowding, and low Levels of Service in some locations of the terminals, curbside, aircraft and vehicle parking, cargo facilities, and airfield maneuvering areas. SDIA operates a single runway, which is potentially capable of handling as much as 300,000 annual aircraft operations. However, the single runway airfield will result in excessive delays when annual operations reach approximately 260,000. The forecast of aviation activity at the SDIA projects both high and low scenarios. Under the high growth scenario, the 260,000 annual operations benchmark would be reached in 2015. Under the low growth scenario, the 260,000 annual operations benchmark would be reached in 2022. In 2005, 2006, and 2007 there were 211,365, 209,491, and 222,612 operations at SDIA tracking 1.7, -1.8, and 2.6 percent above the high growth forecast scenario respectively. Additionally, since 2003 the enplanements at the SDIA have been generally tracking at or above the constrained high growth forecast approved by the FAA in June 2005. Due to this trend, the high growth forecast was used for the purposes of this analysis.

2.2 Purpose of the Proposed Action

The San Diego Country Regional Airport Authority (Sponsor) has identified specific physical improvements at the SDIA to allow the Airport to effectively continue its mission of serving San Diego's commercial air transportation needs as forecasted through 2015.

In keeping with the goals and objectives of the Airport Master Plan and focusing on near-term development, the purpose of the Proposed Action is as follows:

1) To accommodate air service demand (forecast growth through 2015) while improving Levels of Services, Airport safety and security, and enhancing Airport access.
2) To utilize the current Airport property and facilities efficiently and to ensure that new Airport facilities further improves operations at SDIA.
3) To relieve congestion at the Airport both on the airfield and in the terminal area through the provision of sufficient facilities and infrastructure.

2.3 Need for the Proposed Action

The following sections identify the need for the proposed action, specifically for airfield, terminal, ground, and airport support.

2.3.1 Provide Adequate Airfield Facilities

The following text describes the airfield needs required to accommodate aviation operations through 2015.

Additional Aircraft Gates

An aircraft gate is a position for an aircraft to park while passengers, baggage, and belly cargo are loaded or unloaded. Each gate is a parking position for a single aircraft. Today, SDIA has 41 gates capable of handling varying sizes of commercial jet aircraft spread among three terminals. The SDIA also has a separate commuter terminal where smaller turbo-prop and regional jet aircraft are parked and passengers are ground loaded. There are nine parking positions for small aircraft located at the Commuter Terminal.

A comprehensive analysis was conducted as part of the master plan process[1] to determine if the existing number of aircraft gates at SDIA could accommodate the forecast passenger volumes for 2015. The analysis included review of the forecast of aviation activity, analysis of the existing facilities and their operational characteristics, and the assembly of a gated design day schedule[2]. The gated design day schedule is meant to present a plausible future scenario for flight activity at SDIA based on the accepted forecast of aviation activity. The analysis resulted in a facility requirement of 51 jet gates and three commuter aircraft parking positions in 2015. This is an increase of ten additional jet aircraft contact gates relative to the Airport's existing facilities, while the nine existing commuter gates will accommodate demand for commuter flights in 2015.

The facility requirement for ten additional jet contact gates is based on the forecast of aviation demand and the assessment of the existing facilities and their operational characteristics. Failure to provide the required facility improvements will result in the continued degradation of levels of service at SDIA with congested terminals, which would negatively impact passenger convenience, passenger comfort, flight delay and its associated cost, safety, and overall Airport efficiency.

Additional Remain-Over-Night Aircraft Parking Positions

The SDIA has a high demand for Remain-Over-Night aircraft parking. The location of the Airport in the southwestern quadrant of the United States contributes to its role as a "spoke" airport. As a spoke airport, airlines do not utilize SDIA as a hub for connecting through-passengers to other final destinations. Spoke airports generally have high demand for Remain-Over-Night (RON) parking. Typically the first round of flights each day is from spoke airports to the hubs, while the last round of flights is outbound

[1] SDIA Airport Master Plan, Chapter 5, Gate Requirements, adopted May 2008.
[2] The design day is an average weekday of the peak month.

from hubs to spoke airports. The last aircraft arriving at night and leaving first the next morning are parked overnight at a terminal passenger gate. If the number of overnight aircraft exceeds the number of available gates, these additional aircraft must be parked at RON positions. RON positions are apron parking positions for aircraft that are not adjacent to the terminal building. SDIA has a high demand for RON parking and the airport accommodates a total of 18 RON parking in the following apron areas:

- The north ramp apron area accommodates ten Remain-Over-Night positions including nine 757 sized positions and one 747 sized position.
- There are five Remain-Over-Night positions south of Runway 9-27 that do not obstruct aircraft gates and three positions that do obstruct aircraft gates at Terminal 2 East and Terminal 2 West.

The gated design day schedule used to determine the aircraft gate facility requirement also determined a requirement for three additional RON positions by 2015. In addition to the three additional RON positions, the Proposed Action will disrupt five[3] of the existing positions. A total of eight new RON positions will be required by 2015.

Further, ten of the existing RON positions are located on the north ramp, north of Runway 9-27. Aircraft parked on the north ramp must cross Runway 9-27 to reach the terminal area, which results in two concerns. The first concern is safety. In order to maximize safety, runway crossings should be minimized to the greatest practical degree. Runway crossings are always coordinated with air traffic control but the safest alternative is to eliminate these crossings where possible to minimize the risk for runway incursions. Secondly, runways crossings can cause delays because arriving and departing aircraft must be coordinated with the aircraft crossing the runway. When there is constant demand, arrivals and/or departures must hold so that RON aircraft can safely cross the runway to reach the terminal area.

In order to minimize the need for runway crossings by RON aircraft, the RON positions should be located on the same side of the runway as the terminal area. Thus, a goal of the Proposed Action is to locate as many RON positions as possible south of the runway to minimize runway crossings.

The Proposed Action provides a total of ten RON positions at the west end of the airfield, south of the runway. These ten RON positions include

- Three new positions
- Five replacement positions, and
- Two relocated positions

There Proposed Action will result in a total of 21 RON positions at the Airport in 2015.

Airfield Operational Improvements

The SDIA is the busiest single runway airport in the United States, and as operations continue to increase, the airfield will become increasingly congested. The Airport Master Plan identifies a number of taxiway and hold apron improvements that are needed to ensure that airfield delays are not increased to intolerable levels as traffic volumes increase through 2015. The recommended airfield improvements may also reduce the need for some taxiing aircraft to cross the runway, resulting in improvements in both safety and efficiency.

There are three key airfield operational improvements associated with the Proposed Action:

- An aircraft hold pad would be constructed at the Runway 27 end adjacent to, and north of Taxiway C. This hold pad would provide a safe location for aircraft awaiting departure clearance on Runway 27 to hold without obstructing taxiway access to Runway 27.
- A new taxiway would be constructed north of the proposed hold pad. This taxiway will provide a circulation route for aircraft accessing the Runway 27 end or the hold pad area. This taxiway would also provide access to the relocated general aviation area (see Section 2.3.4, *Airport Support Needs*).

[3] Existing RON positions to be disrupted include two positions at the west end of Taxiway B, one position behind Gates 40 and 41, and two positions behind Gates 31 and 32.

- A parallel taxilane should be striped adjacent to Taxiway B and Terminal 2 West. This improvement would allow aircraft to pass near the proposed entrance to the expanded apron west of Terminal 2 West.

These improvements would provide an increased margin of safety on the airfield by replacing an out-dated, non-standard taxiway, providing a full size hold pad, and enhancing aircraft circulation. The improvements in airfield safety and clearance would also provide an increased margin of efficiency reducing the probability that significant delays would be encountered within the planning horizon for SDIA.

2.3.2 Provide an Adequate Terminal Area

The Airport Master Plan used the single-runway constrained forecast to develop Airport requirements for terminal, as well as airfield and ground transportation facilities. While each of these facilities has unique characteristics, they operate collectively as a system for moving people and goods. The capacity of this Airport system is limited by its constraining component, the single runway. Capacity improvements made to the terminal (and ground transportation) components in this situation would increase the Level of Service experienced by the user without increasing the overall capacity of the SDIA. It is noted that when the first phase of Terminal 2 West was opened in January 1998, the facility did not experience a spike in airport operations or passenger volumes. Indeed the total enplanements growth rate for SDIA from 1997 to 1998 was 3.26 percent while the growth rate from 1998 to 1999 was 3.18 percent. From 1999 to 2000 the growth rate in enplanements was 3.91 percent and then the impact of September 11, 2001 hampered growth for several years. It is expected that the terminal improvements needed to accommodate growth through 2015 would have a similar impact on enplanements as those experienced in 1998 when Terminal 2 West was opened.

Section 2.3.1, *Need for Additional Aircraft Gates*, noted that the gated design day schedule for the SDIA in 2015 shows a need for ten additional jet gates. The additional jet gates would be provided by expanding Terminal 2 West, which would feature additional passenger processing facilities to safely and efficiently accommodate the passengers that would utilize the additional gates. The expanded terminal facilities would be constructed to accommodate newer security screening processes including passenger screening and baggage screening.

The Level of Service generally used to develop the facility requirements in the Airport Master Plan is Level of Service B. Level of Service B is described as providing a high Level of Service condition of stable flow with very few delays and high level of comfort. The analysis in the Airport Master Plan shows that the existing terminal facilities are deficient in terms of providing Level of Service B in both the existing year and 2015. An additional area of approximately 165,500 square feet was needed to provide this Level of Service in the existing year. For 2015, an additional 581,000 square feet of terminal facilities are needed to provide Level of Service B. The terminal facility requirements are broken down by the following areas:

- Airline Functions – Airline functions include those areas directly related to airline operations and passenger processing, such as ticketing, departure lounges, baggage services, and airline administrative office space.
- Concessions – Concessions include those areas providing food, beverages, gifts, publications, and other items for purchase.
- Federal Inspection Services – The facilities provided for the federal inspection of arriving international passengers include: Customs and Immigration Services, baggage claim, Customs and Border Patrol, and the United States Department of Agriculture.
- Secure Public Area – Secured public areas include the security checkpoints, secure circulation, and public restrooms.
- Non-Secure Public Area – Non-secured public areas include circulation in the ticketing lobby and baggage claim lobby as well as general circulation such as entrance lobbies, fire stairs, vestibules, escalators, and elevators.
- Non-Public Area – Non-public areas include private office space for the SDCRAA, the Transportation Security Administration, other tenant offices, and building support spaces such as mechanical rooms, loading docks, maintenance, and storage.

Table 2-1 shows the size of existing terminal facilities areas and the terminal facility requirements developed in the Airport Master Plan for the existing year (2004/2005) and 2015.

Though the facility requirements analysis shows that the existing Terminal 1 and Terminal 2 East facilities are deficient for providing Level of Service B to passengers, the proposed Airport Master Plan only contemplates constructing sufficient facilities to serve the ten new jet gates.

2.3.3 Provide for Improved Ground Transportation

The following text describes ground transportation improvements needed to accommodate aviation activity through 2015.

Alleviate Curbside Congestion

The terminal curbside is the area where passengers are dropped off and picked up in front of the terminal. The Airport Master Plan analyzed terminal curbside requirements based on the existing conditions and the forecast increase in passenger activity at SDIA. Curbside requirements were estimated separately for each of the two terminals as well as by curbside function (departing, arriving, and Transit Plaza). The Airport Master Plan estimated deficiencies associated with the terminal curbside based on existing passenger distributions among terminals. The existing terminal passenger distribution would result in a private vehicle curbside deficiency of approximately 300 feet at Terminal 1, shown in **Table 2-2**.

The Proposed Action provides ten new jet gates and associated passenger processing facilities at Terminal 2 West and shifts some passenger demand from Terminal 1 to Terminal 2. Curbside requirements for the Proposed Action, assuming 10 new gates at Terminal 2 West, are shown in Table 2-2. The existing curbside at Terminal 2 West consists of a single level roadway accommodating an arrivals and departures curb and a Transit Plaza. Under the Proposed Action, the existing Terminal 2 curbside configuration would result in a deficiency of approximately 95 feet of private vehicle and 745 feet of Transit Plaza curb. As a result, the expanded terminal facilities at Terminal 2 West, including additional aircraft gates, would require expansion of the Terminal 2 curbside.

The Proposed Action accommodates the additional curbside requirement by providing an additional 1,050 linear feet of curb frontage for departing passengers on a second level roadway and 1,200 linear feet for arriving passengers on the ground level. Note that the existing curbside would be utilized as an arrivals curbside after construction of the second level roadway. A new transit plaza would also be provided on the ground level. See Figure 2.1 Project Element Orange #1.

On-Airport Road Improvements

The expanded passenger terminal reconfigured curbside areas for passenger drop-off and pick-up, as well as the improved and expanded public parking areas, described in the following sections, necessitate changes to the on-Airport roadway system to safely and efficiently allow vehicle access between these areas and the public roadways. The entrance from North Harbor Drive to the Terminal 2 West facilities is not contemplated for expansion, as its capacity is sufficient for the anticipated future volume of traffic in 2015. However, with the construction of a second-level departure curb in front of Terminal 2, additional access ramps would be constructed to provide entrances and exits from the departure curb and public parking areas in front of Terminal 2. Access to the second level curbside would be provided from the Terminal 2 entrance roadway and the Terminal 2 exit roadways would be reconfigured to accommodate the second level curbside/roadway exit. See Figure 2.1, Project Element Green.

In addition, Airport uses in the North Area will require an access road from the intersection of Pacific Highway and Sassafras Street to provide ground vehicle access to SAN Park Pacific Highway and any relocated general aviation facilities.

Increase Public Parking Areas

Automobile parking is provided at the Airport for both passengers and Airport employees. Automobile parking allows passengers and employees to conveniently access the Airport while passenger parking is also a key source of revenue to the SDCRAA. The demand for public parking at the SDIA is unmet at the Airport today. The Airport Master Plan facility requirements provided in **Table 2-3** show that a total of 4,085 parking spaces are available at the terminal area today while demand exceeds 6,000 spaces.

Table 2-1

Terminal Requirements[a]

Description	Existing Facilities (2004/2005)		Existing Facility Requirements (2004/2005)		2015 Facility Requirements	
	Linear Feet	Square Feet	Linear Feet	Square Feet	Linear Feet	Square Feet
Airline Functions						
Ticket Counter Area		6,586		9,704		11,284
Ticket Counter Length	765		884		1,026	
Ticket Counter Queuing		9,426		17,689		20,517
Airline Ticket Office		28,495		28,495		33,062
Baggage Claim Area		51,040		44,384		60,002
Baggage Claim Frontage	1,177		1,402		1579	
Baggage Claim Devices	9 (1)		11(1)		12(1)	
Baggage Service Office		4,597		4,597		6,221
Outbound Baggage		50,010		50,010		58,004
EDS-In-Line Screening Area						29,002
Inbound Baggage		27,278		27,278		36,885
Airline Operations		61,035		61,035		91,224
Departures Lounges (Holdrooms)		102,788		89,700		122,650
Clubrooms		10,957		10,957		15,964
Concessions						
Concessions (Includes Storage)		68,914		91,646		136,836
Federal Inspection Services						
FIS (CIS, Claim, CBP, USDA)		7,000		10,000		41,600
Secure Public Area						
Passenger Screening Checkpoint	18(2)		18(2)		20(2)	
Passenger Screening Area		10,203		23,465		24,700
Concourse Circulation		90,825		117,000		159,000
Restrooms						19,905
Other						11,403
Non-Secure Public Area						
Circulation - Ticketing		16,526		26,534		30,776
Circulation - Baggage Claim		7,380		11,680		15,790
Circulation - General		52,940		114,558		171,045
Restrooms						13,270
USO		6,520		6,520		6,520
Other						11,403
Non-Public Area						
TSA		4,676		4,676		5,422
San Diego County Regional Airport Authority		7,163		7,163		10,263
Circulation						45,156
Mechanical/Electric/ Maintenance/Storage		58,000		90,851		143,236
Other						79,038
Total		**682,359**		**847,960**		**1,410, 180**

Notes:
(a) Terminal Requirements taken from the San Diego International Airport Master Plan (May 2008) which considered the IATA Airport Development Reference Manual, 8th Edition, April 1995.
(1) Number of Claim Devices
(2) Number of Screening Checkpoints

Source: HNTB analysis.

Table 2-2

Terminal Curbside – Inventory and Requirements[a]

Terminal	Curb	Lanes	Existing Curb Frontage (feet)	2004		2015 Existing Terminal Distribution		2015 Implementation Plan Terminal Distribution	
				Curb Req'mt (feet)	Surplus/ Deficit (feet)	Curb Req'mt (feet)	Surplus/ Deficit (feet)	Curb Req'mt. (feet)	Surplus / Deficit (feet)
Terminal 1	Enplaning - East	4	405	480	-75	555	-150	455	-50
	Deplaning	4	405	555	-150	755	-350	555	-150
	Enplaning - West	4	405	185	220	210	195	185	220
	Sub-Total Public		***1,215***	***1,220***	***-5***	***1,520***	***-305***	***1,195***	***20***
	Transit Plaza - For Hire		650	385	265	420	230	385	265
	Transit Plaza - Taxi		750	600	150	625	125	575	175
	Transit Plaza - Courtesy		510	600	-90	840	-330	520	-10
	Sub-Total Transit Plaza		***1,910***	***1,585***	***325***	***1,885***	***25***	***1,480***	***430***
	Sub-Total Terminal 1		**3,125**	**2,805**	**320**	**3,405**	**-280**	**2,675**	**450**
Terminal 2	Deplaning - East	3	340	185	155	235	105	285	55
	Enplaning - East	2	140	160	-20	185	-45	235	-95
	Deplaning - West	4	500	330	170	405	95	580	-80
	Enplaning - West	4	380	280	100	305	75	355	25
	Sub-Total Public		***1,360***	***955***	***405***	***1,130***	***230***	***1,455***	***-95***
	Transit Plaza - For Hire		375	315	60	350	25	420	-45
	Transit Plaza - Taxi		585	550	35	575	10	625	-40
	Transit Plaza - Courtesy		500	480	20	680	-180	1160	-660
	Sub-Total Transit Plaza		***1,460***	***1,345***	***115***	***1,605***	***-145***	***2,205***	***-745***
	Sub-Total Terminal 2		**2,820**	**2,300**	**520**	**2,735**	**85**	**3,660**	**-840**
Commuter Terminal	Enplaning	3	340	460	-120	525	-185	395	-55
	Deplaning	3	345	485	-140	575	-230	420	-75
	Sub-Total Commuter		**685**	**945**	**-260**	**1,100**	**-415**	**815**	**-130**
All Terminals	Enplaning		1,670	1,565	105	1,780	-110	1,625	45
	Deplaning		1,590	1,555	35	1,970	-380	1,840	-250
	Transit Plaza		3,370	2,930	440	3,490	-120	3,685	-315
	Total		**6,630**	**6,050**	***580***	**7,240**	**-610**	**7,150**	**-520**

Source: HNTB analysis, 2004.

(a) Curbside Requirements taken from the San Diego International Airport Master Plan (May 2008). An estimate of curbside requirements was developed using information on vehicle mode splits and vehicle dwell times.

Table 2-3

Public Parking – Stall Requirements

		Terminal					Remote [1]			Total		
Year	MAP	Reqmt. Short-Term	Reqmt. Long-Term	Total	Supply	Surplus (Deficit)	Reqmt.	Supply [2]	Surplus (Deficit)	Reqmt.	Supply [2]	Surplus (Deficit)
2004	16.5	1,270	4,742	6,012	4,085	(1,927)	5,613	9,357	3,744	11,625	13,442	1,817
2015	22.8	1,705	6,706	8,411	4,085	(4,326)	7,938	9,357	1,419	16,348	13,442	(2,906)

[1] Includes all lots, both Authority-operated and privately operated, requiring shuttle bus transport to terminals.
[2] Includes facilities currently planned or under construction.

Source: HNTB estimates, 2006.

As the forecast passenger volumes continue to grow, the demand will continue to outstrip the supply of public on-Airport parking. As discussed in the Airport Master Plan facility requirements, the demand for on-Airport public parking will exceed supply by 4,326 parking stalls in 2015. The Proposed Action addresses the public parking deficiency at Terminal 2 by including a new five-level, 5,000-space parking structure over the existing Terminal 2 West Surface parking lot, providing a net increase of 4,300 additional parking spaces in the terminal area.

The parking area directly south of the existing terminals is relatively small and constrained by Harbor Drive to the south, Airport facilities to the east and north, and the Airport property line to the west. Thus, the only available mechanism for providing the required parking in the immediate vicinity of the terminals is through construction of a parking structure.

Relocate and Reconfigure SAN Park Pacific Highway

The SDCRAA also operates three on-Airport long-term parking lots served by shuttles: one is located on the west side of the terminal area and is known as SAN Park Naval Training Center, one is located east of the commuter terminal along Harbor Drive and is known as SAN Park Harbor Drive, and the final remote parking lot is located in the North Area of the Airport and is known as SAN Park Pacific Highway.

While these parking facilities help meet some of the demand for Airport parking, numerous private parking lots are located in the vicinity of SDIA and take advantage of the limited availability of on-Airport parking. Further, the Proposed Action would utilize the former Naval Training Center property for the construction of the expanded Airport terminal and aircraft apron areas. This would result in the reconfiguration of the existing SAN Park Naval Training Center, further limiting the available on-Airport remote parking.

The Proposed Action would expand SAN Park Pacific Highway by 500 parking stalls to accommodate the displaced parking currently available at SAN Park Naval Training Center. Along with an expansion of SAN Park Pacific Highway, the parking facility would be reconfigured to allow for other improvements in the North Area. Notably, the current SAN Park Pacific Highway facility is directly accessible from the intersection of Pacific Highway and Sassafras Street. A new access road to other facilities within the North Area would be constructed from this intersection. To accommodate the proposed access road, SAN Park Pacific Highway would be reconfigured and its entrance would be relocated so that it is accessible from the proposed North Area access road. See Figure 2.1 Project Element Green #1.

2.3.4 Provide Improved Airport Support Facilities

The following text describes Airport support improvements needed to accommodate aviation activities through 2015.

General Aviation Improvements

The current general aviation facilities occupy 11.4 acres located at the west end of Runway 9-27 adjacent to Taxiway C and Pacific Highway. The proximity of the general aviation facilities to Taxiway C and the Runway 27 end presents a safety concern. Aircraft taxiing on Taxiway C turn onto Runway 27 in the immediate vicinity of the general aviation facilities apron. These aircraft direct high velocity jet blast on to the general aviation apron where general aviation aircraft are loaded and unloaded as well as serviced.

In addition, the general aviation facilities have been expanded in a piece-meal fashion over the years and occupy a haphazardly organized area. The arrangement of apron, terminal, hangar, and parking facilities

is inefficient relative to the acreage the facilities occupy. Relocating the general aviation facilities would allow the Authority to improve the safety of aircraft operations.

The existing general aviation facilities occupy 11.4 acres including aircraft apron, terminals, hangars, and vehicle parking. The demand for general aviation facilities at the SDIA is anticipated to grow modestly as general aviation operations are forecast to increase 1% annually from 13,586 operations in 2005 to approximately 18,000 operations in 2015.

Overall Airport efficiency and safety would be improved by the relocation and expansion of the general aviation facilities. The 12.4 acres would be better suited and planned for general aviation aircraft apron, terminals, hangars, vehicle circulation, and parking. These general aviation improvements on 12.4 acres would meet the minimum general aviation facility requirements for 2015 as outlined in the Airport Master Plan.

Relocating the general aviation facility further away from Taxiway C and the runway end would also prevent conflicts between taxiing aircraft and the associated jet blast on the general aviation facilities apron. Relocating and expanding the general aviation facilities would allow the Airport to provide improved general aviation facilities for use and access by general aviation aircraft while improving both safety and efficiency.

Further Airport Support

The existing Airport support facilities at the SDIA are underdeveloped and insufficient to meet existing demand and future demand for air service including air cargo, airline maintenance, Airport maintenance, and Airport management. The services provided by each of the Airport support facilities will dictate the locations of the proposed improvements near the passenger terminal area or adjacent to the airfield.

2.4 Requested Federal Action

The requested Federal actions are as follows:

- Approval of the ALP to depict the proposed airfield improvements and other airfield development components pursuant 47107(a) (16);
- Determination of potential eligibility for Federal Assistance under the Federal Grand-in-aid program authorized by the Airport and Airway Improvement Act of 1982, as amended and/or for use of passenger facility charges, pursuant to 49 USC 47101 and 49 USC 40117; and
- Continued close coordination with the City of San Diego and appropriate FAA program offices, as required, to maintain aviation and airfield safety during construction pursuant to 14 CFR Part 139 (49 USC 44706).

The purpose of the FAA action is to ensure that the proposed alterations to the Airport do not adversely affect the safety, utility, or efficiency of the Airport.

2.5 State and Local Actions and Required Permits

The proposed State and local actions included the following:

- California Coastal Development Permit
- General NPDES Permit for Storm Water Discharges Associated with Construction Activities
- City of San Diego Building Permit
- San Diego Air Pollution Control District – Stationary Source Permit

2.6 Timeframe of the Proposed Action

Construction of the Sponsor's Proposed Action would begin upon FAA approval of the Airport Layout Plan (ALP) and issuance of an environmental finding. Construction of the Proposed Action is expected to take approximately three years to complete. Subject to the completion of the environmental review process, the Sponsor's Preferred Alternative is projected to be operational before 2015.

Chapter Three: Alternatives

The evaluation of reasonable alternatives to the Sponsor's Proposed Action is considered the heart of the NEPA process according to the CEQ. This chapter describes the alternatives considered for SDIA including the Sponsor's Proposed Action. A range of alternatives are examined to determine if they are reasonable and if they meet the purpose and need for the Sponsor's Proposed Action. Reasonable alternatives, which meet the purpose and need, are then screened and the alternatives to be evaluated in detail are determined.

When identifying alternatives, it is customary to consider both on-site and off-site alternatives. The following sections describe the on-site and off-site alternatives considered while evaluating alternatives to the Sponsor's Proposed Action.

3.1 Screening Analysis of Potential Alternatives

This section provides a brief description of potential alternatives and discloses if the alternatives will be carried forward for detailed analysis. Alternatives were considered in four general areas:

- Use of Other Terminal Locations on the Airport (On-Site Alternative)
- Airport Relocation (Off-Site Alternative)
- Use of Other Airport (Off-Site Alternative)
- Use of Other Modes of Transportation (Off-Site Alternative)

The Proposed Action and the reasonable alternatives to be carried forward for detailed environmental analysis are discussed in more detail in Section 3.2, *Alternatives Recommended for Further Consideration.*

3.1.1 On-Site Alternatives

On-site alternatives include improvements to the existing facilities such as the Sponsor's Preferred Alternative, the East Terminal Alternative and use of other terminal locations on the Airport.

3.1.1.1 West Terminal Alternative (Preferred Alternative)

The Proposed Action is the implementation of specific improvements to meet forecast demand through 2015. The Proposed Action includes adoption of the West Terminal Alternative. The following sections describe the two scenarios for the Proposed Action, the West Terminal Alternative (with Parking Structure), and the West Terminal Alternative (without Parking Structure).

West Terminal Alternative (with Parking Structure)

The West Terminal Alternative includes 10 additional gates at the Terminal 2 West to accommodate requirements for additional gates, additional pavement area to accommodate new aircraft parking and replacement Remain-Over-Night positions, new apron and aircraft taxilane to facilitate efficient aircraft movement on the west end, new surface and structural parking, relocation and reconfiguration of SAN Park Pacific Highway and improvements to the general aviation area, and construction of new apron hold areas and new taxiway east of Taxiway D. This alternative provides for meeting projected growth while enhancing customer services and thereby meets the purpose and need for the Proposed Action and will be retained for further analysis.

West Terminal Alternative (without Parking Structure)

With this variation of the West Terminal Alternative, all elements are the same as described in Section 3.2.1, *West Terminal Alternative (with Parking Structure)*, except that no parking structure would be constructed.

3.1.1.2 East Terminal Alternative

The East Terminal alternate would allow the Airport to effectively continue its mission of serving San Diego's commercial air transportation needs as forecast through 2015. Like the West Terminal Alternative (Preferred Alternative), the following sections describe the two scenarios for the East Terminal Alternative, the East Terminal Alternative (with Parking Structure), and the East Terminal Alternative (without Parking Structure).

East Terminal Alternative (with Parking Structure)

The East Terminal Alternative includes all of the elements of the Sponsor's Preferred Alternative with the exception of all the additional gates being constructed at Terminal 2 West. With this alternative, a new unit terminal with five replacement gates and seven new jet gates would be constructed east of Terminal 1 and three new jet gates would be constructed at Terminal 2 West. Additionally, surface parking will be expanded to meet projected demands and commuter aircraft operating at the Commuter Terminal will be relocated to Terminal 1 and Terminal 2. This alternative provides for meeting projected growth while enhancing customer services and thereby meets the purpose and need for the Proposed Action and will be retained for further analysis.

East Terminal Alternative (without Parking Structure)

With this variation of the East Terminal Alternative, all elements are the same as described in Section 3.2.2, *East Terminal Alternative (with Parking Structure)*, except that no parking structure would be constructed.

3.1.1.3 Use of Other Terminal Locations on Airport

As previously described, the existing airport property is constrained and consists of 661 acres. The SDIA is the smallest of the large hub airports, as classified by FAA, in the United States. Currently, the majority of airport property is being used for airfield/airspace, terminal, ground transportation, and air cargo and airport support facilities. The existing property layout consists of terminal facilities south of Runway 9-27. Extensive area is needed to accommodate consolidated terminal facilities and associated parking.

The previous Technical Report for the Draft Master Plan for the SDIA (HNTB, 2001), which was never adopted, recommended a long-term concept for the SDIA that involved the potential development of a unit terminal facility north of the runway in the North Area. In order for this unit terminal to be used for commercial aircraft operations, extensive airfield improvements were required, including the acquisition of approximately 27 acres on the Marine Corps Recruit Depot to extend Taxiway C for the entire length of the runway. This taxiway extension was a mandatory airfield improvement for arriving commercial aircraft to exit the runway after landing and taxi to a unit terminal facility in the North Area. This taxiway extension would require a land exchange and reconstruction of numerous Marine Corps Recruit Depot facilities. Also, during the development of the previous Draft Master Plan, potential concepts contemplated second runway and expanded terminal scenarios that would require the availability and use of the entire Marine Corps Recruit Depot property. In 2008 the SDCRAA received correspondence from the U.S. Marine Corps indicating that the Marine Corps Recruit Depot is not available.

The most recent federal Base Realignment and Closure process completed in 2005 did not identify the Marine Corps Recruit Depot as a military facility identified to be realigned or closed. The Airport Master Plan reconsidered the ultimate use of the Marine Corps Recruit Depot property and it was determined that the potential for acquisition or a land exchange with the Marine Corps Recruit Depot is not feasible. Without a land exchange and development of Marine Corps Recruit Depot property for airfield improvements, the development of terminal facilities on the north could not be conducted with a safe and efficient taxiway for aircraft. In addition, development of a unit terminal on the north would require that terminal operations be split between the existing infrastructure on the south and the new infrastructure in the north. Splitting the terminal infrastructure between two locations would require the duplication of many infrastructure components which would not avoid or substantially lessen any of the significant effects of the projects.

Specifically, accommodating terminal facilities in other locations on the Airport has the following issues:

Taxiway C does not extend for the length of the runway.

Without a full length parallel taxiway north of Runway 9-27, it is not possible to efficiently operate a terminal facility north of the runway. A large increase in runway crossings would be required if a terminal facility were to be constructed north of Runway 9-27 without extending Taxiway C to the west end of the runway. The extension of Taxiway C has been contemplated and analyzed and requires acquiring land from the adjacent Marine Corps Recruit Depot north of the SDIA. The extension of Taxiway C has been environmentally reviewed under California Environmental Quality Act (Negative Declaration finding 2001) and National Environmental Policy Act, however the U.S. Marine Corps never published the Finding of No Significant Impact. In addition, the acquisition of additional land along the taxiway from the Marine Corps could not be negotiated within the economic capacity of the San Diego County Regional Airport Authority. Lastly, in 2008 the SDCRAA received correspondence from the U.S. Marine Corps indicating that the Marine Corps Recruit Depot is not available.

Constrained land envelope does not allow for adequate terminal space, road/circulation system, and utilities.

The existing land envelope north of Runway 9-27 is not suitable for terminal development due to several issues. First and foremost, Marine Corps Recruit Depot is not currently planned for closure or acquisition by San Diego County Regional Airport Authority. Further, the Marine Corps Recruit Depot is federal land outside the San Diego County Regional Airport Authority jurisdiction, and is not available for possible use to meet the project objectives within the relevant time horizon. The remaining land envelope north of Runway 9-27 is heavily constrained and has limited roadway access. Existing Pacific Highway would have to be extensively altered to support access to a proposed terminal facility due to the existing connection between Interstate 5 and Pacific Highway. The existing vehicle flyovers that characterize this connection would conflict with access to a terminal roadway system.

The utility infrastructure in the vicinity of the North Area is also not adequate to support a terminal facility without construction of additional heating and cooling facilities. Currently, the SDIA is served by a Central Utility Plan located south of Terminal 2 along Harbor Drive. This facility is not adequately sized or located to support a facility located north of Runway 9-27. In addition, water, sewer, and electrical utilities could not be accommodated.

Split terminal operations would be confusing for passengers/airport users, require duplicate shuttle buses, and would create challenges for airline/tenant operations between split terminal operations.

The operation of two independent terminals in two different locations is problematic both externally and internally.

Externally, passengers attempting to find their airline would be required to navigate very confusing signage directing them to two wholly separate areas at the Airport on the north and south sides of the runway. Without at least a common access roadway it would be very challenging to direct traffic to the appropriate terminal in an efficient and safe manner.

Internally, the splitting of operations between two terminals separated by a runway would require duplication of many facilities that support airline operations as well as limit the ability for airlines to grow their operation with flexibility and economy.

Build upon the existing terminal and roadway complex.

Moving terminal facilities would not build upon the existing terminals or roadway system; therefore, new or improved systems would need to be built. In developing new terminal areas and roadway improvements, the previous extensive investments that were made to continue development in the existing area would be reduced. It is clear that expanding facilities in the existing terminal area is the most cost effective means of accommodating forecast growth through 2015.

Therefore, this category of alternatives is not considered to be a reasonable alternative for meeting the Purpose and Need of the Proposed Action and is not retained for detailed analysis.

3.1.2 Off-Site Alternatives

Off-site alternatives include relocation of the existing airport, use of other airports, and other modes of transportation. These alternatives were screened to consider how they would potentially meet the purpose and need of the Proposed Action and their potential for less in environmental impact.

3.1.2.1 Airport Relocation

Considering another location for the SDIA does not meet the project objectives for the Proposed Action. The main project objective requires that the acceptable alternative accommodate forecast growth through 2015 with an acceptable Level of Service. Developing a new facility to accommodate market demand for the San Diego region would require that a new facility be fully studied, designed, land acquired, and constructed by 2015 to meet forecast needs. Construction of a new Airport would likely take a minimum of 10 years and is not possible in consideration all necessary requirements (i.e., site selection, environmental documentation, property right-of-way and acquisition, permitting, design, and construction). The previous Airport Site Selection Program considered a new site for Lindbergh Field, this study ended in November 2006 when the people of San Diego voted to not move operations to MCAS Miramar.

The SDCRAA launched a study to investigate the potential consumer and airline interest in a cross-border terminal tied to Tijuana Rodriguez Field in August 2007. There are four options being examined, ranging from constructing a walkway across the border to designing a full facility on the U.S. side with ticket and check-in counters, and transportation for passengers to Tijuana.[1] Despite the fact that Mexico has responded positively to the ideas, the concept is still speculative at the writing of this Environmental Assessment. The South County Economic Development Council (SCEDC) has been evaluating the cross-border connection for about 10 years.[2] It is very likely that it would be as long, or longer, before a potential plan was agreed upon by the involved parties and the appropriate legislation was in place to make the idea a realization. The Proposed Action is necessary to accommodate air service demand (forecast growth through 2015) while improving Levels of Service at the SDIA. A cross-border terminal tied to Tijuana Rodriguez Field does not meet the project objective.

3.1.2.2 Use of Other Airports

Encouraging use of other airports does not meet the project objectives (i.e., accommodate forecast growth at the SDIA through 2015) for the Proposed Action. However, using other airports to accommodate near term (i.e. through 2015) operations and passengers was considered as an alternative to the Proposed Action. The following text details specific reasons why the use of other airports does not meet the project objectives.

Inadequate Certification for Passenger Service

Title 14 Code of Federal Regulations Part 139 requires the Federal Aviation Administration to issue airport operating certificates to airports that serve scheduled and unscheduled air carrier aircraft with more than 30 seats. The SDIA holds a Part 139 certification and is classified as a Class I airport under this Part. A Class I airport is certificated to serve scheduled operations of large air carrier aircraft that can also serve unscheduled passenger operations of large air carrier aircraft and/or scheduled operations of small air carrier aircraft. The Federal Aviation Administration website[3] provides more information on the Part 139 certification process. In order to use another airport instead of the SDIA, the alternative airport would need to hold a Class I Part 139 certification. The only other airport in San Diego County that holds a Class I Part 139 certification is McClellan-Palomar Airport. Although McClellan-Palomar Airport holds a Class I Part 139 certification, it does not have adequate runway length to accommodate the commercial aircraft fleet mix or volume of operations that is present at the SDIA. The runway length at McClellan-Palomar Airport is 4,897 feet with a displaced threshold of 297 feet. In order to extend the runway at McClellan-Palomar Airport to a minimum of 7,000 feet of useable runway, to be consistent with runway length requirements at the SDIA, extensive environmental analysis that would include consideration of moving roadways and ultimately an environmental review process both on a state and federal level.

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[1] "Cross-boarder Terminal Study Receives Mexico's Assurance" South County Economic Development Corporation: March 20, 2007< http://www.sandiegobusiness.org/article_template.asp?articleID=532>

[2] Ibid.

[3] "Part 139 Certification" Accessed August 29, 2007, <http://www.faa.gov/airports_airtraffic/airports/airport_safety/part139_cert>

Inadequate Runway Length

The existing runway length is adequate for the typical operation at the SDIA, which is a narrow-body, medium or long-haul, domestic passenger jet. Aircraft of this type typically require a minimum of 7,000 feet of usable runway for departure when fully loaded on a standard temperature day. Therefore, in order for another airport to accommodate the most common operations from the SDIA, the facilities must include a runway of at least 7,000 feet in length.

The nearest airports with the necessary runway length are Ontario International Airport and Long Beach Airport. However, both airports are approximately 100 miles, and depending on traffic congestion, a minimum of two hours away from downtown San Diego. Given that the SDIA is located less than five miles from downtown San Diego, Ontario and Long Beach Airports are not considered to be reasonable alternatives to the SDIA.

John Wayne Airport, in Santa Ana is located 87 miles north of the SDIA and is a minimum of an hour and half depending on traffic congestion. However, John Wayne Airport's main runway is only 5,701 feet long. The Airport is also at or very near its capacity in addition to being subject to heavy operational and time restrictions.

Brown Field Municipal Airport is located 18 miles south of downtown San Diego near the international border with Mexico. Brown Field Municipal Airport's main runway is 7,972 feet. However, Brown Field Municipal Airport is not Part 139 certified for commercial operations by the Federal Aviation Administration. In spite of the Brown Field Municipal Airport's runway length, there are terrain issues associated with nearby mountains and airspace issues due to the Airport's proximity to the international border less than two miles south of the Airport. These constraints make it infeasible to use Brown Field as an alternative to the SDIA.

Inadequate Taxiway/Apron Areas

The SDIA is the only airport in San Diego County that is constructed with the infrastructure to accommodate a commercial fleet mix of aircraft that the SDIA currently accommodates. The SDIA currently accommodates aircraft as large as the Boeing 767-400ER and has recently had Boeing 747-400 and Boeing 777-200 operations. These aircraft are classified as Aircraft Design Group IV and V aircraft, respectively. Their size and weight require specialized runway, taxiway, and apron area infrastructure that can safely accommodate the dimension of the aircraft as well as the weight of the aircraft. Such infrastructure is not present at any other commercial airport within San Diego County.

Inadequate Terminals

Because the SDIA remains the only commercial service airport within San Diego County that supports air carrier jet service, it is the only Airport with terminal facilities designed to accommodate regularly scheduled commercial passenger flights (McClellan-Palomar Airport services regional airline service). Should an alternative airport within the region be designated as having the appropriate airfield infrastructure for handling the commercial air traffic unable to operate at the SDIA, sufficient terminal facilities would need to be constructed to provide adequate processing, boarding and security screening of passengers. Prior to constructing such terminal facilities at an alternative airport, the appropriate airfield infrastructure would need to be planned, approved, funded, and constructed. This is not considered to be a feasible alternative to meet the 2015 passenger demand at the SDIA.

Extensive Distance and Limited Growth Capacity for Closest Comparable Airports

The two closest commercial airports to the SDIA are John Wayne Airport and Long Beach Airport; these airports are 82 miles and 104 miles away, respectively. The driving distance for these airports from downtown San Diego is one and a half hours to several hours or more depending on traffic congestion. John Wayne Airport, approximately 1.5-hours away, served 9.6 million passengers in 2006, which exceeds the Airport's projected capacity of 8.4 million annual passengers. Orange County, the Airport's operator, has agreed to an annual limit of 10.3 million passengers per year through 2015. Although the Airport has plans for a new terminal and new passenger gates as part of an expansion plan, it is not likely that additional passengers could be accommodated at John Wayne Airport. In 2006, Long Beach Airport accommodated nearly 3.0 million passengers. The capacity with existing facilities is 3.8 million passengers with capacity being reached by as early as 2007. Long Beach Airport is contemplating terminal expansion to meet local growth needs (Final Environmental Impact Report No. 37-03 for Long

Beach Airport Proposed Terminal Area Improvement Project adopted June 2006); however, additional demands from the SDIA are not likely accommodated at Long Beach Airport.

Los Angeles International Airport is approximately 125 miles away and a minimum two-hour drive from the SDIA. Los Angeles International Airport has been considering options for accommodating projected passenger and operational growth for over 10 years. It is expected that Los Angeles International Airport will reach passenger capacity by as early as 2015 with moderate improvements. Ontario International Airport is approximately 95 miles away, with an estimated driving time of minimum of two hours from the SDIA. Ontario International Airport is being considered to support regional growth demands that can not be accommodated at Los Angeles International Airport. Ontario International Airport could accommodate additional operations and passengers in the near term (i.e., through 2015); however the extensive driving time eliminates this option as a viable alternative.

None of these airports are, however, considered reasonable substitutions for users of the SDIA due to the driving distance and typical traffic congestion along the primary roadways between the San Diego region and these airports. Additionally, with the exception of Ontario International Airport, these airports are reaching passenger and/or operational capacity and therefore could not accommodate additional operations from the SDIA.

Operator Chooses Facilities to Service

The use of an airport is determined by aircraft operators and not the San Diego County Regional Airport Authority or the Federal Aviation Administration. Aircraft operators choose to serve an airport in response to consumer demand for air service. No regulatory mechanism exists for San Diego County Regional Airport Authority or the Federal Aviation Administration to redistribute air traffic to other airports. Federal legislation would be needed in order to give the Federal Aviation Administration the necessary authority to redistribute air traffic, which would represent a fundamental change to the nation's policy of a deregulated aviation system. In consideration of this deregulatory trend, legislation is not likely to be enacted.

Therefore, this category of alternative is not considered to be a reasonable alternative for meeting the purpose and need/project objectives of the Proposed Action and is not retained for detailed analysis.

3.1.2.3 Use of Other Modes of Transportation

This alternative would seek to expand the use of rail, bus, or auto travel, thereby reducing operations at the SDIA in the future. Examples of alternatives within this category include developing a high-speed rail system to serve major population areas and developing dedicated highway lanes for Bus Rapid Transit systems, both of which may help to reduce travel between major metropolitan areas (i.e. San Diego to Los Angeles and San Francisco).

Rail

The California High-Speed Rail Authority introduced a plan in 2000 for a system that would link all of the State's major population centers including the San Francisco Bay Area, Los Angeles, Sacramento, the Inland Empire, Orange County and San Diego. The California High-Speed Rail Authority and Federal Railroad Administration developed a Program Level Environmental Impact Report/Environmental Impact Statement considering the development of high speed rail to connect the population areas in the State. In November 2005, the Record of Decision for the environmental study was issued with high speed rail connecting these population areas identified as the preferred alternative. The Program Level Environmental Impact Report/Environmental Impact Statement considered a modal alternative that included increasing capacity at airports and highway improvements; however, this alternative was ultimately not chosen, as it would help to meet intercity travel needs but would have significant disadvantages such as increased congestion at airports and highways compared to existing conditions. Additionally, it was determined that the modal alternative (improvements to highways and airports) would have potentially significant environmental impacts. The Safe, Reliable High-Speed Passenger Train Bond Act for the 21st Century would provide for the issuance of general obligation bonds, some of which would be used in conjunction with available federal funds for funding the planning and construction of the proposed high-speed train system. The bond issue was slated to go before the voters as a proposition in 2004, and then again in the November 7, 2006 general election. Californians approved Proposition 1A to sell nearly $10 billion in bonds to get going on an 800-mile system of bullet trains on the November 4, 2008 ballot. The California High-Speed Rail Authority estimates that the rail project would begin initial operations in eight to eleven years. Therefore this alternative does not meet the objective of providing

adequate facilities to accommodate air service demand (forecast growth through 2015) while improving Levels of Service.

Bus

Use of bus travel may accommodate short trip travel (e.g., Los Angeles commuter travel); however, bus travel would require that the traveling public use a potentially less convenient mode of transportation. Bus travel would be less convenient travel in that it would take longer to reach a destination. Additionally, more bus service would need to be added to accommodate higher traffic levels and multiple trips to meet public demand. Potentially, this type of alternative would also serve to increase environmental impacts compared to the Proposed Action as it may add to congestion on the roadway system. This type of alternative does not provide a solution to long distance travel which, according to the approved forecast for the SDIA, will be the largest increase in operations in the future.

Vehicular Travel

Automobile travel is clearly not an environmentally preferred alternative, as this type of travel would potentially increase congestion unless improvements were made to the highway system. Use of automobiles may serve to meet commuter travel demand (e.g. Los Angeles), but as with bus travel it does not provide a solution for long distance travel. According to the approved forecast for the SDIA, long distance travel will have the largest increase in operations in the future.

It is also considered infeasible to substitute trucking cargo for air cargo. Because of the relatively high costs of air cargo relative to other shipping modes, air cargo is primarily made up of specialized goods that are either in need of being transported overseas or in need of time sensitive delivery. Because air cargo is not typically utilized for trips less than 250 miles, trucking is not considered a feasible alternative for trans-oceanic shipping or for the shipping of time sensitive materials.

Summary

Although this category of alternative may have the potential to decrease air travel at the SDIA, it does not meet the project objectives for the Proposed Action. The Proposed Action is needed to accommodate a specific mode of transportation (i.e., air travel) and any significant improvements to highways or high speed rail would not be implemented prior to 2015. Additionally this category of alternatives would only serve to meet in-State demands for air travel (e.g. approximately 37 percent of the travel needs in 2005). The forecast for the SDIA indicates that the largest growth in operations will be in longer haul operations (i.e. travel outside of California) with in-State travel dropping to about 29 percent of overall operations by 2015.

Therefore, this category of alternatives is not considered to be a reasonable alternative for meeting the project objectives of the Proposed Action and is not retained for detailed analysis.

3.1.3 Summary of Alternatives Considered

To summarize, **Table 3-1** shows the alternatives considered and whether they would meet the project objectives identified in Chapter 2, *Purpose and Need*.

Table 3-1

Comparison of Alternatives

Alternative	Meets Purpose and Need	Reasons for Meeting or Not Meeting Purpose and Need
Proposed Action – West Terminal Alternative with Parking Structure (Preferred Alternative)	Yes	Accommodates forecast growth through 2015 while improving Level of Service and utilizing Airport property efficiently.
West Terminal Alternative without Parking Structure	No	Accommodates forecast growth through 2015 and utilizes airport property efficiently but would not improve Level of Service/convenience for airport users including business travelers, "meeters and greeters," and other passengers such as families being accompanied to and from the terminal.
East Terminal Alternative with Parking Structure	Yes	Accommodates forecast growth through 2015 with potential improving Level of Services. Does not make most efficient use of Airport property.
East Terminal Alternative without Parking Structure	No	Accommodates forecast growth through 2015 but would not improve Level of Service/convenience for airport users including business travelers, "meeters and greeters," and other passengers such as families being accompanied to and from the terminal. Does not make most efficient use of Airport property.
No Action Alternative	No	Does not provide for airport land use guidance. Does not provide for adequate Level of Service to accommodate forecast growth through 2015. Would require that ground loading be used to accommodate increased passenger demand. Terminal crowding would increase and queues for security screening would require upwards of an hour.
Airport Relocation	No	Can not be developed within project timeline (available by the year 2015).
Use of Other Airports	No	Other airports within the San Diego region do not currently have adequate certification for passenger service, runway lengths, taxiway/apron areas, or terminals. Additionally, commercial airports closest to SDIA are in excess of 80 miles from the existing Airport and also have limited capacity for growth. Lastly, aircraft operators chose which airports they use and service therefore use of another airport can not be mandated by the San Diego County Regional Airport Authority.
Use of Other Modes of Transportation	No	Use of other modes of transportation could not be implemented with out assistance from other governmental agencies and any additional bus lanes or rail option could not be implemented within the project timeline. Increasing vehicular travel is clearly not the environmentally preferred alternative.
Use of Other Terminal Locations on Airport	No	Land is not currently available anywhere else on the Airport property that could accommodate the needed terminal area. If adequate land was available in the North Area it would require splitting terminal operations which would require duplication of many infrastructure components leading to inefficient operations. Splitting terminal operations is also confusing for departing passengers.

3.2 Alternatives Recommended for Further Consideration

The following section describes the Alternatives to be carried forward for detailed environmental analysis.

3.2.1 Proposed Action (Preferred Alternative)

The Proposed Action is the implementation of specific improvements to meet forecast demand through 2015. There are two variations of the Proposed Action (Preferred Alternative): Section 3.3.2, *West Terminal Alternative (with Parking Structure)*, and Section 3.3.3, *West Terminal Alternative (without Parking Structure)*. These two scenarios are described in detail below.

3.2.1.1 West Terminal Alternative (with Parking Structure)

The San Diego County Regional Airport Authority has identified specific physical improvements at the SDIA to allow the Airport to effectively continue its mission of serving San Diego's commercial air transportation needs as forecasted through 2015. The West Terminal Alternative (with Parking Structure) includes each of the following components. The project elements are described as follows and are depicted on **Figure 3.1**.

Expand Existing Terminal 2 West with Ten New Gates

Construct an addition to the existing Terminal 2 West that would include approximately 430,100 square feet of new space, ten additional jet aircraft contact gates and an additional 1,050 linear feet of curb frontage for departing passengers on a second level roadway and 1,200 linear feet for arriving passengers on the ground level (the existing departures curbside would be utilized as an arrivals curbside after construction of a second level roadway). The terminal would provide passenger processing facilities including airline ticketing, security screening, departure holdrooms, restrooms, concessions, public circulation, and outbound baggage areas. The existing Terminal 2 West baggage claim area would be reconfigured to improve service for arriving passengers and their baggage from both Terminal 2 West and Terminal 2 East. The additional aircraft gates would reduce existing crowding in Terminal 1, accommodate passenger volumes forecast through 2015, and reduce severe crowding in all terminals expected from the growth in Airport-wide traffic and flights. The proposed terminal expansion would also include an extension of the existing Terminal 2 West vehicle curbside used for pick-up and drop-off of arriving and departing passengers. This project feature also includes a reconfiguration of the existing Terminal 2 curbside to improve automobile flow and passenger convenience. The new roadway system for Terminal 2 would vertically segregate arriving and departing vehicle traffic between the existing ground level and a new second level (see *Construct New Second Level Road/Curb and Vehicle Circulation Serving Terminal 2* below). See Figure 3.1 Project Element Orange #1.

Construct New Aircraft Parking and Replacement Remain-Over-Night Aircraft Parking Apron

As part of the West Terminal Alternative (with Parking Structure), a new apron facility would be constructed to accommodate up to ten jet aircraft in a configuration suitable for Remain-Over-Night parking. Remain-Over-Night parking provides airlines a location to park aircraft near the terminal area without occupying a contact gate where passenger boarding and deplaning occurs. The Airport Master Plan facility requirements anticipate a need for eight new Remain-Over-Night positions in 2015, including five replacement positions. The facility requirements also propose relocating two existing Remain-Over-Night positions from a location north of the runway to a location at the west end of the terminal area. This would help reduce the number of airlines from taxiing aircraft across the runway to reach the terminal gates. Total demand for Remain-Over-Night positions would grow to 22 positions from 19 existing positions. The proposed Remain-Over-Night positions would meet a portion of the total demand while other existing Remain-Over-Night positions would remain in use after construction of the new facilities.

The proposed Remain-Over-Night positions would accommodate up to four wide-body aircraft and six narrow-body aircraft. See Figure 3.1 Project Element Orange #2.

Airfield Improvements Including Construct New Apron and Aircraft Taxilane

The Terminal 2 West expansion modifies the current aircraft parking positions located at the concourse end to accommodate proposed changes to airfield taxiway geometry. These modifications include providing dual parallel taxiway/taxilane access to Runway 9 and the west side of the Terminal 2 concourse area. In addition, the service drive would be relocated to provide clearance for a new apron edge Aircraft Design Group IV taxilane segment approximately 500 feet in length. This new taxilane segment would be configured parallel to Runway 9-27 and provide access to aircraft parking positions located on either the east or west side of the Terminal 2 West concourse. The proposed dual taxiway/taxilane access to the proposed aircraft parking apron would allow Group IV and smaller aircraft to operate in either direction without obstructing ingress or egress from the proposed apron area west of existing Terminal 2 West.

The modification is also required to minimize obstructions to aircraft taxiing on Taxiway B to the west end of Runway 9-27. By providing an additional taxilane at the north end of the Terminal 2 West concourse, aircraft could taxi in each direction simultaneously.

The proposed apron area west of the proposed terminal facility would feature a single Group V taxilane loop providing access to all gates and Remain-Over-Night parking positions. The loop taxiway would surround the six narrow body aircraft Remain-Over-Night positions. The proposed taxiway would typically operate in a single direction to provide efficient access to the proposed gates and Remain-Over-Night positions. These airfield improvements are necessary to provide safe and efficient access to the proposed gates and Remain-Over-Night positions. See Figure 3.1 Project Element Orange #3.

Construct New Second Level Road/Curb and Vehicle Circulation Serving Terminal 2

A new second level curbside would be integrated into the parking structure or constructed as a stand-alone facility adjacent to Terminal 2 in order to accommodate forecast growth of passengers expected by 2015. The second level curbside would serve as a private vehicle departure curb with airline check-in facilities and elevated pedestrian walkways connecting to the upper level Terminal 2 ticket lobbies. Access to the second level curbside would be provided from the Terminal 2 entrance roadway. The Terminal 2 exit roadways would be reconfigured to accommodate the second level curbside/roadway exit. Access to McCain Road would also be provided from the Terminal 2 roadways and would serve the taxi and Airport shuttle staging area and SAN Park NTC. See Figure 3.1 Project Element Orange #4.

Construct New Parking Structure and Vehicle Circulation Serving Terminal 2

A new multi-level parking structure accommodating a departure curb on the second level would be built adjacent to Terminal 2 to accommodate forecast growth of passengers expected by 2015. This structure would provide approximately 5,000 additional parking spaces on five levels and would be built over a portion of the existing surface parking lot providing approximately a net total of 4,300 additional parking spaces in the terminal area. Development of the parking structure would also include a second-level departure curb either integrated or as an adjacent stand-alone facility (See *Construct New Second Level Road/Curb and Vehicle Circulation* above), and a commercial vehicle curb accommodating shuttles, buses, taxis, and shared-ride vans. Elevated pedestrian walkways would connect the second level of the structure with the upper level Terminal 2 ticketing facilities. The new parking structure would be centralized within an expanded roadway loop. Vehicles approaching the terminal area would be directed to parking or passenger pick-up and drop-off well in advance of decision points in the roadway. New access roadways would eliminate the need for vehicles to utilize the curbside roadway to enter structured or surface parking areas. Removing these circulating vehicles from the roadway would reduce congestion during peak periods. See Figure 3.1 Project Element Orange #5.

Relocate and Reconfigure SAN Park Pacific Highway

The existing SAN Park Pacific Highway parking facility, with approximately 1,670 public parking spaces, would be relocated and reconfigured with 500 additional spaces. The parking facility would be relocated to the north of its current location to accommodate construction of new airfield and general aviation facilities. The site would be bounded by Pacific Highway to the east and a new access road to the south and west. Access/egress to the parking facility would be provided from the new access road. The parking spaces currently utilized by the Port of San Diego, approximately 210 parking spaces, would remain in the existing location along Pacific Highway. See Figure 3.1 Project Element Green #1.

Construct a New Access Road from Sassafras Street/ Pacific Highway Intersection

A new access road would be constructed to provide access to SAN Park Pacific Highway and new general aviation facilities. The access road would utilize the existing Sassafras Street/Pacific Highway intersection and existing traffic signal. Underground utilities required for Airport facilities including, water, electric, sanitary sewer, and storm drains, would be constructed in conjunction with the access road and connect with existing utilities located along the Pacific Highway corridor. See Figure 3.1 Project Element Green #2.

Construct New General Aviation Facilities Including Access, Terminal/Hangars and Apron to Improve Airport Safety for Airport Customer/Users

New general aviation facilities would be constructed on 12.4 acres to accommodate forecast general aviation operations through 2015. General aviation uses must be relocated to allow for the construction of airfield/taxiway improvements and apron hold pads. New general aviation terminal/hangars and apron would be located immediately north of the taxiway improvements and provide access to the airfield for general aviation aircraft. Landside access for vehicles and parking would be provided from the new access road through the Sassafras Street/Pacific Highway intersection. See Figure 3.1 Project Element Green #3.

Demolish Existing General Aviation Facilities to Improve Airport Safety and Circulation on Airfield

The existing general aviation facilities would be demolished to accommodate airfield/taxiway improvements. The removal of subsurface structures and site remediation, including removal of existing underground storage tanks, would be conducted. See Figure 3.1 Project Element Green #4.

Construct New Apron Hold Pads and New Taxiway East of Taxiway D

A new 195-foot wide aircraft apron and hold pads would be constructed north of Taxiway C and east of Taxiway D to allow aircraft to hold for extended periods while awaiting departure, but also allowing aircraft movement to continue unimpeded on adjacent taxiways. A new parallel taxiway north of the new apron and east of Taxiway D would also be constructed. This taxiway would facilitate efficient and safe aircraft movement by allowing aircraft to bypass those on the apron and also provide airfield access to the new general aviation facilities. See Figure 3.1 Project Element Green #5.

Summary of Proposed Action (Preferred Alternative)

Table 3-2 illustrates the key elements of the Proposed Action compared to project objectives identified in Chapter Two, *Purpose and Need*.

3.2.1.2 West Terminal Alternative (without Parking Structure)

For this variation of the Preferred Alternative, all elements of the West Terminal Alternative (without Parking Structure) are the same as described in Section 3.3.2, *West Terminal Alternative (with Parking Structure)*, except that no parking structure would be constructed. This variation of the Preferred Alternative assumes that excess parking demand would be served by off-property parking facilities and alternate modes of transportation. A second level roadway at Terminal 2 would be constructed independent of the parking structure to serve curbside demand. All of the project objectives would be met by this variation of the Proposed Action (Preferred Alternative) with the exception of providing an adequate Level of Service to meet forecast parking demand within the current Airport property. **Figure 3.2** illustrates this alternative.

Table 3-2

Comparison of West Terminal Alternative Project Elements and Purpose and Need

Proposed Action Element	Purpose and Need Components Met
Expand existing Terminal 2 West with 10 new gates	Provides for full service facility at adequate Levels of Service to meet forecast growth projected at SDIA through 2015 and utilizes the current Airport property and facilities efficiently.
Construct new aircraft parking and replacement Remain-Over-Night aircraft parking apron	Provides facilities to meet forecast growth projected at SDIA through 2015 and utilizes the current Airport property and facilities efficiently.
Airfield improvements including constructing new apron and aircraft taxilane	Provides facilities to meet forecast growth projected at SDIA through 2015 and utilizes the current Airport property and facilities efficiently.
Construct new second-level curb/road and vehicle circulation serving Terminal 2	Provides facilities with adequate Level of Service to meet forecast growth projected at SDIA through 2015 and utilizes the current Airport property and facilities efficiently.
Construct new parking structure and vehicle circulation serving Terminal 2	Provides adequate level of service facilities to meet forecast growth projected at SDIA through 2015 and utilizes the current Airport property and facilities efficiently.
Relocate and reconfigure SAN Park Pacific Highway	Provides adequate level of service facilities to meet forecast growth projected at SDIA through 2015 and utilizes the current Airport property and facilities efficiently.
Construct a new access road from Sassafras Street/Pacific Highway intersection	Provides facilities to meet forecast growth projected at SDIA through 2015 and utilizes the current Airport property and facilities efficiently.
Construct new general aviation facilities including access, terminal/hangars and apron to improve Airport safety for Airport customer/users	Utilizes the current Airport property efficiently and improves Airport safety and security for Airport customers/users.
Demolish existing general aviation facilities to improve Airport safety and circulation on airfield	Utilizes the current Airport property efficiently and improves Airport safety and security for Airport customers/users.
Construct new apron hold pads and new taxiway east of Taxiway D	Provides facilities to meet forecast growth projected at SDIA through 2015 and utilizes the current Airport property efficiently; improves Airport safety and security for Airport customers/users.

Source: HNTB Analysis, 2008.

3.2.2 East Terminal Alternative

The East Terminal Alternative provides an effective alternative to the Proposed Action. There are two variations of the East Terminal Alternative: (1) The East Terminal Alternative (with Parking Structure); and (2) the East Terminal Alternative (without Parking Structure). These two scenarios are described in detail below.

3.2.2.1 East Terminal Alternative (with Parking Structure)

The San Diego County Regional Airport Authority has identified an alternate build scenario that would allow the Airport to effectively continue its mission of serving San Diego's commercial air transportation needs as forecasted through 2015. The project elements are described following the summary table and are depicted on **Figure 3.3**.

Construct New Unit Terminal with Five Replacement Gates and Seven New Gates

A new 400,000 square foot, three-story unit terminal with 12 gates would be constructed under the East Terminal Alternative. This facility would be constructed east of Terminal 1 and include seven new aircraft gates, plus five replacement gates. New facilities for the unit terminal would be constructed within the

structure, including holdrooms, ticketing area, baggage claim, security screening, concessions, and a walkway linking the new facility to the existing Terminal 1 facility. The additional aircraft gates would reduce existing crowding in Terminals 1 and 2 while accommodating passenger volumes forecast through 2015. The proposed terminal expansion would also include a reconfiguration of the existing roadway to gain access to the vehicle curb. Three of the five replacement gates would be required because the proposed unit terminal would be constructed in the area currently utilized by gates 1, 2, and 3. The remaining two replacement gates result from the relocation of commuter flights to Terminals 1 and 2 East. See Figure 3.3 Project Element Orange #1.

Expand Existing Terminal 2 West with Three New Jet Gates

Expansion of the north end of Terminal 2 West passenger concourse to include approximately 30,000 square feet would accommodate three new gates and associated holdrooms. The total new gates for this build alternative would be ten new gates, the same as the Proposed Action. However, in the alternative, the ten additional gates would be split between two locations and would require replacement of five existing gates at Terminal 1. See Figure 3.3 Project Element Orange #2.

Relocate Commuter Aircraft to Terminal 1 and Terminal 2

In order to accommodate construction of the proposed unit terminal between Terminal 1 and the Commuter Terminal, the apron area presently located behind the Commuter Terminal would be utilized for aircraft parking at the proposed unit terminal. Therefore, the commuter flights now operating out of the Commuter Terminal would be relocated to Terminal 1 and Terminal 2 to operate with their parent airline companies (United Airlines and American Airlines). United Express flights would be relocated to Gate 19 at Terminal 1 and American Eagle flights would be relocated to Gate 23 at Terminal 2 East. The relocation of commuter flights to these existing jet gate locations accounts for two of the five required replacement gates associated with this alternative.

The existing Commuter Terminal structure would remain in place. Because the facility would no longer be utilized for commuter flight operations, it would be feasible to relocate the remaining San Diego County Regional Airport Authority offices from their temporary location near Harbor Drive and Stillwater Road to the ground floor of the facility, which is currently used for commuter flight passenger processing. See Figure 3.3 Project Element Orange #3.

Construct New Aircraft Parking and Replacement Remain-Over-Night Aircraft Parking Apron

Similar to the Proposed Action (Preferred Alternative), a new aircraft parking apron would be constructed to accommodate up to ten aircraft for use as Remain-Over-Night parking. See Figure 3.3 Project Element Orange #4.

Construct New Apron and Aircraft Taxilane

New aircraft parking apron would be constructed in two locations. Approximately 315,000 square feet of new apron would be required on the airside of the proposed unit terminal. The apron would accommodate parking for the twelve newly constructed gates at this facility.

Additionally, 765,000 square feet of new apron would be constructed west of Terminal 2 West to accommodate three new aircraft gate parking positions and ten additional Remain-Over-Night parking positions. The apron west of Terminal 2 West would also accommodate ingress and egress of aircraft to and from the proposed aircraft gates and Remain-Over-Night parking positions. See Figure 3.3.Project Elements Orange #2 and #5.

Construct New Surface Parking and Vehicle Circulation West of Terminal 2 West

This new surface parking lot would be constructed to accommodate forecast growth of passengers expected by 2015 and the associated need for additional employee parking. Other uses would include staging for taxis, Airport shuttle vans, and temporary public parking during the construction of the new parking structure south of Terminal 1. The same area would include a roadway entrance for delivery trucks to drop off Airport supplies and concessions and to remove refuse from the terminals. See Figure 3.3 Project Element Orange #6.

Construct New Surface and Structured Parking and Vehicle Circulation at Terminal 1 and New Unit Terminal

Construction of a new unit terminal between existing Terminal 1 and the Commuter Terminal would require reconfiguration and construction of new Airport access road from Harbor Drive. The access road would provide efficient access to the newly constructed curbside passenger drop-off and pickup area associated with the new unit terminal. The proposed roadway would then tie into the existing roadway system serving Terminal 1 and Terminal 2. The roadway would be designed to accommodate the expected passenger volume at the new unit terminal.

A new parking structure would be constructed adjacent to the roadway providing parking for the new unit terminal and for Terminal 1. An expansion of the surface parking in this area would also be included. The new parking structure and surface parking lot and a new parking structure would be constructed to accommodate forecast growth of passengers expected by 2015. See Figure 3.3 Project Element Orange #7.

Relocate and Reconfigure SAN Park Pacific Highway

The existing SAN Park Pacific Highway parking facility, approximately 1,670 public parking spaces, would be relocated and reconfigured with 500 additional spaces to the north of the existing parking facility to accommodate construction of new airfield and general aviation facilities. The site would be bounded by Pacific Highway to the east and a new access road to the south and west. Access/egress to the parking facility would be provided from the new access road. The parking spaces currently utilized by the Port of San Diego, approximately 210 parking spaces, would remain in the existing location along Pacific Highway. See Figure 3.3 Project Element Green #1.

Construct a New Access Road from Sassafras Street/Pacific Highway Intersection

A new access road would be constructed to provide access to SAN Park Pacific Highway and new general aviation facilities. The access road would utilize the existing Sassafras Street/Pacific Highway intersection and existing traffic signal. Underground utilities required for Airport facilities including water, electric, sanitary sewer, and storm drains would be constructed in conjunction with the access road and connect with existing utilities located along the Pacific Highway corridor. See Figure 3.3 Project Element Green #2.

Construct New General Aviation Facilities including Access, Terminal/Hangars and Apron to Improve Airport Safety for Airport Customer/Users

New general aviation facilities would be constructed on 12.4 acres to accommodate forecast general aviation operations through 2015. The existing general aviation facility's location prevents the realignment of Taxiway C to provide for standard separation from Runway 9-27. The location of the existing general aviation facility is at the east of Taxiway C. Keeping general aviation in its existing location was considered to allow for overall Airport efficiency, the general aviation uses must be relocated to allow for the construction of airfield/taxiway improvements and apron hold pads. New general aviation terminal/hangars and apron would be located immediately north of the Taxiway C improvements and provide access to the airfield for general aviation aircraft. Landside access for vehicles and parking would be provided from the new access road through the Sassafras Street/Pacific Highway intersection. See Figure 3.3 Project Element Green #3.

Demolish Existing General Aviation Facilities to Improve Airport Safety and Circulation on Airfield

The existing general aviation facilities would be demolished to accommodate airfield/taxiway improvements. The removal of subsurface structures and site remediation, including removal of existing underground storage tanks, would be conducted. See Figure 3.3 Project Element Green #4.

Construct New Apron Hold Pads and New Taxiway East of Taxiway D

A new 195-foot wide aircraft apron and hold pads would be constructed north of Taxiway C and east of Taxiway D to allow aircraft to hold for extended periods while awaiting departure, as well as allowing aircraft movement to continue unimpeded on adjacent taxiways. A new parallel taxiway north of the new apron and east of Taxiway D would also be constructed. This taxiway would facilitate efficient and safe aircraft movement by allowing aircraft to bypass those on the apron and also provide airfield access to the new general aviation facilities. See Figure 3.3 Project Element Green #5.

Summary of East Terminal Alternative

Table 3-3 illustrates the components and key elements of the East Terminal Alternative compared to the project objectives identified in Chapter Two, *Purpose and Need.*

Table 3-3

Comparison of East Terminal Alternative Project Elements and Purpose and Need

Project Element	Meets Purpose and Need	Reasons for Meeting or Not Meeting Purpose and Need
Construct new unit terminal with five replacement gates and seven new gates	Yes In combination with next project element	The additional aircraft gates would reduce existing crowding in Terminals 1 and 2, while partially accommodating passenger volumes forecast through 2015. This element must be combined with expansion of Terminal 2 West to adequately address forecast growth and Levels of Service.
Expand existing Terminal 2 West with three new jet gates	Yes In combination with previous project element	Expansion of the north end of Terminal 2 West passenger concourse to include approximately 30,000 square feet would accommodate three new gates and associated holdrooms.
Relocate commuter aircraft to Terminal 1 and Terminal 2	Yes	Meets forecast growth, however does not allow for most efficient use of Airport property.
Construct new aircraft parking and replacement Remain-Over-Night aircraft parking apron	Yes	Provides facilities to meet forecast growth projected at SDIA through 2015 and utilizes the current Airport property and facilities efficiently.
Construct new apron and aircraft taxilane	Yes	New aircraft parking apron would be constructed in two locations to accommodate forecast growth. Some efficiency is lost with this alternative.
Construct new surface parking and vehicle circulation west of Terminal 2 West	Yes	A new surface parking lot west of Terminal 2 West would be constructed to accommodate terminal area public and employee parking and commercial vehicle staging requirements with adequate Level of Service to meet forecast growth projected at SDIA through 2015 and utilize the current Airport property and facilities efficiently.
Construct new surface and structured parking and vehicle circulation at Terminal 1 and new unit terminal	Yes	A new surface parking lot and a new parking structure would be constructed to accommodate forecast growth at adequate levels of service for passengers expected by 2015.
Relocate and reconfigure SAN Park Pacific Highway	Yes	Provides facilities to meet forecast growth projected at SDIA through 2015 and utilizes the current Airport property and facilities efficiently.
Construct a new access road from Sassafras Street/Pacific Highway intersection	Yes	Provides facilities to meet forecast growth projected at SDIA through 2015 and utilizes the current Airport property and facilities efficiently.
Construct new general aviation facilities including access, terminal/hangars and apron to improve Airport safety for Airport customer/users	Yes	Utilizes the current Airport property efficiently and improves Airport safety and security for Airport customers/users.
Demolish existing general aviation facilities to improve Airport safety and circulation on airfield	Yes	Utilizes the current Airport property efficiently and improves Airport safety and security for Airport customers/users.
Construct new apron hold pads and new taxiway east of Taxiway D	Yes	Provides facilities to meet forecast growth projected at SDIA through 2015 and utilizes the current Airport property efficiently; improves Airport safety and security for Airport customers/users.

Source: HNTB Analysis, 2008.

3.2.2.2 East Terminal Alternative (without Parking Structure)

For this variation of the East Terminal Alternative, all elements of the East Terminal Alternative are the same as described in section 3.3.5, *East Terminal Alternative (with Parking Structure)* except that no parking structure would be constructed. This variation of the East Terminal Alternative assumes that excess parking demand would be served by off-property parking facilities and alternate modes of transportation. A second level roadway at the unit terminal would be constructed independent of the garage to serve curbside demand. All of the project objectives would be met by this variation of the Proposed Action with the exception of providing an adequate Level of Service to meet forecast parking demand with the current Airport property. **Figure 3.4** illustrates this variation of the alternative.

3.2.3 No Action Alternative

The No Action Alternative assumes that no projects beyond those currently included in the Airport's Capital Improvement Program Project list that have already received or will receive environmental approval prior to approval of this Environmental Assessment. **Figure 3.5** illustrates the No Action Alternative. Consideration of the No Action Alternative is required by NEPA per CEQ Regulations. This alternative serves as a basis of comparison with other alternatives considered for detailed analysis.

Only one development project will receive environmental approval prior to the project timeline assumed for the Proposed Action analyzed in this Environment Assessment. The Former Naval Training Center Landfill Remediation Final EIR was issued in November 2007. The project includes the required remediation of the contaminated areas on the former Naval Training Center. The Naval Training Center is approximately 51 acres of land transferred from the Navy to the Port District for Airport use. The remediation includes removal of existing municipal waste and burnt ash, grading and capping landfill areas, monitoring and analyzing the ground water, and reporting the results to the Regional Water Quality Control Board and the City of San Diego Office of Environmental Protection and Sustainability. Remediation and monitoring of the Naval Training Center landfill began July 18, 2004. Completion of this project will result in remediation of the landfill. The current schedule for the remediation indicates the project will require approximately nine months and this project is expected to be complete by the end of 2008. This project is necessary in and of itself and will be completed prior to the beginning of construction of the specific improvements analyzed in this Environmental Assessment. The remediation of the former Navy Training Center landfill provides a positive environmental effect.

As required by the National Environmental Policy Act, the No Action Alternative is considered, although this alternative will not meet the basic project objectives. Aircraft operations activity forecasts for the year 2015 would be handled by the existing airfield system, including apron, but with no new terminal facilities, gate demand by passengers will not be met by 2015.

The following sections describe how the major areas/functions of the SDIA would accommodate increased operations and passengers.

3.2.3.1 Airfield

In order to accommodate increased operations and passenger levels without constructing additional gates, San Diego County Regional Airport Authority and various airlines would need to identify areas on the Airport where aircraft could be staged for ground loading at remote locations from the terminals. Ground loading would require that passengers deplane via a stairway to the apron level and board busses for transport to the existing terminal facilities. Some of the concerns associated with ground loading are that it does not allow passengers requiring assistance the comfort of boarding via loading bridge and it requires an additional step in the boarding and deplaning process, the transport between the waiting aircraft and the terminal facility. At the current time there is not sufficient apron area to provide parking for ten additional aircraft to be ground loaded in a location that is considered safe for passengers. However, it was assumed in the No Action Alternative that when sterile gates were unavailable, remote parking would be used for non-precleared international flights. Remote parking was not assumed for any domestic flights. Lastly, in spite of San Diego's excellent weather, ground loading fails to offer passengers protection from inclement weather and direct sun/heat. Ground loading of passenger aircraft does not meet the project objectives set forth in the Airport Master Plan process. Namely, ground loading would not allow San Diego County Regional Airport Authority to improve upon existing Levels of Service

or even maintain existing Levels of Service. The existing facilities were not designed to accommodate the existing or future demand.

3.2.3.2 Terminal

Increasing passenger demand would continue to erode Levels of Service within the terminal facility in four key areas: ticketing, security screening, hold rooms, and baggage claim.

3.2.3.3 Ticketing

Continued passenger growth without an increase in ticketing capacity would continue to increase wait times for check-in. Levels of Service would continue to erode. Although passengers are able to check in at electronic kiosks or from home via the Internet, baggage check-in must remain at the SDIA. The existing facilities were not designed to accommodate the existing demand. The current demand for ticket counters from new airline entrants is being met by compressing existing airlines' space. This is causing increased wait times and reduced Levels of Service.

3.2.3.4 Security Screening

The existing infrastructure was not designed to accommodate the security screening requirements associated with Transportation Security Administration and current guidelines for baggage screening. Passenger queues at security screening areas would increase, resulting in wait times of up to an hour. Such wait times are not consistent with the goals set forth at the outset of the Airport Master Plan to provide a high Level of Service for the traveling public at the SDIA.

3.2.3.5 Hold Rooms

Existing facilities are not sufficient to handle additional passengers and flights. Several gates at Terminal 2 East do not currently have hold rooms. Without construction of new gates, congestion in the existing hold rooms would increase. Aircraft turn-around time can be kept to a minimum. However, such schedules are more vulnerable to disruption during events such as system-wide weather related delay and airfield delays due to additional congestion associated with the increased demand for airline service.

3.2.3.6 Baggage Claim

The growth in passenger volumes from 2004 to 2006 has exceeded the high forecast, causing an early demand for airport infrastructure. The existing baggage claim facilities were designed to accommodate the existing volume of passenger traffic at the SDIA. However, without construction of the expanded terminal, baggage claim wait times would deteriorate as passenger demand continues to grow. The baggage claim hall was sized to add additional claim devices for forecast growth.

3.2.3.7 Ground Transportation

Growing demand for air service results in increasing numbers of visitors to the Airport and an increase in demand for transportation and parking at the Airport. Without increasing the parking capacity at the Airport to accommodate the forecast level of demand, the price of Airport parking would continue to increase at a rapid rate to reflect a lack of balance between supply and demand. Some demand may be met by off-site airport parking companies, directly impacting the Airport's ability to maximize potential revenue for maintaining and supporting facilities to meet passenger demand and customer convenience. Congestion would also increase on the circulation roads through and around the terminal curbsides and parking areas. This congestion would lead to delay.

3.2.3.8 Airport Support

Existing Airport support facilities are already deficient in areas of cargo facilities, ground support equipment, maintenance and storage, airfield maintenance and other support infrastructure. Further, there is limited existing potential for expansion of existing facilities. Without improvements to the air cargo facilities in San Diego, additional cargo may be transported via truck or rail out of the region. Adequate support facilities are needed to maintain efficient and safe airport operation. In addition, existing general aviation facilities are located so as to prevent taxiways from being relocated in order to meet Federal Aviation Administration design standards. Thus, continuation of general aviation facilities at the current location would directly conflict with the objective to improve Airport safety for Airport customers/users.

3.2.3.9 Summary of No Action Alternative

Aircraft operations activity forecasts for the year 2015 would be handled by the existing airfield system, including apron, however, without new terminal facilities, gate demand by passengers would not be met by 2015. Without expanding facilities to serve the forecast demand for air service in and out of San Diego, it is not possible for San Diego County Regional Airport Authority to maintain existing Levels of Service. The No Action Alternative would result in a steady deterioration of Levels of Service due to an overall increase in delay associated with overburdened passenger processing and other facilities (See Section 3.2.3, *Use of Other Terminal Locations on Airport*). As delay continues to increase with demand, costs would begin to rise for the passengers and airlines using the SDIA. This is directly in conflict with the Airport's project objectives of providing facilities that can meet the forecast demand for operations and passengers in an efficient, safe, and environmentally responsible manner as laid out in the Airport Master Plan. **Table 3-4** illustrates the key elements of the No Action compared to project objectives identified in Chapter Two, *Purpose and Need*.

Table 3-4

Comparison of No Action Alternative Elements and Purpose and Need

Project Element	Meets Purpose and Need	Reasons for Meeting or Not Meeting Purpose and Need
Airfield	No	Existing Levels of Service would continue to deteriorate as passenger demand continues to increase.
Terminal		
Ticketing	No	Levels of Service would continue to erode. The existing facilities were not designed to accommodate the existing demand, nor security and baggage screening requirements.
Security Screening	No	Passenger queues at security screening areas would increase, resulting in wait times of up to an hour. Such wait times are not consistent with the goal set forth at the outset of the Airport Master Plan to provide a high Level of Service for the traveling public at SDIA.
Hold Rooms	No	Existing facilities are not sufficient to handle additional passengers and flights.
Baggage Claim	No	The existing baggage claim facilities were not designed to accommodate the existing or forecast volume of passenger traffic.
Ground Transportation	No	Without increasing the parking capacity at the Airport to accommodate the forecast level of demand, congestion would also increase on the circulation roads through and around the terminal curbside and parking areas, thereby reducing Levels of Service.
Airport Support	No	Existing Airport support facilities are already deficient; therefore, this Alternative could not accommodate forecast growth at adequate Levels of Service.

Source: HNTB Analysis, 2008.

Chapter Four: Affected Environment

The description of the affected environment serves as a baseline by which to analyze potential environmental impacts. The first step in describing the affected environment is to establish the geographic area where potential impacts are expected to take place. This area is known as the study area. Once the limits of the study area are determined, existing conditions for only the environmental factors potentially affected by the Sponsor's Proposed Action are described.

The existing conditions within the Study Area will be described for only those environmental resources that the Sponsor's Proposed Action would likely affect. FAA Order 1050.1E lists the potential environmental impact categories for aviation projects as: air quality; coastal resources; compatible land use; construction impacts; Department of Transportation Act Section 4(f); farmlands; fish, wildlife and plants; floodplains; hazardous materials, pollution prevention, and solid waste; historical, architectural, archaeological, and cultural resources; light emissions and visual impacts; natural resources and energy supply; noise; secondary impacts; socioeconomic impacts, environmental justice, children's environmental health and safety risks; water quality; wetlands; and wild and scenic rivers. Of these categories, the Sponsor's Proposed Action may result in environmental impacts to Noise; Compatible Land Use; Air Quality; Water Quality; Historical, Architectural, Archaeological, and Cultural Resources; Fish, Wildlife, and Plants; Wetlands; Coastal Resources; Light Emissions and Visual Impacts; Hazardous Materials; Department of Transportation Act: Section 4(f); and Socioeconomic Impacts, Environmental Justice, and Children's Environmental Health and Safety Risks. Therefore, only the related existing conditions will be described in this Chapter. Note that all impact categories will be discussed in Chapter Five, *Environmental Consequences*.

4.1 Study Area

The study area is the geographic area where the potential impacts of the alternatives retained for further study are analyzed. Two study areas have been identified for the Sponsor's Proposed Action. The direct Study Area (boundary of physical disturbance) for the Sponsor's Proposed Action and the viable alternatives is defined by the SDIA property in its entirety and the adjacent areas under San Diego Country Regional Airport Authority (SDCRAA) planning control. This includes a portion of the former Naval Training Center (NTC), located at the west end of the SDIA property, and the former Teledyne Ryan parcel, located in the southeastern portion of the SDIA property.

The Study Area limits of potential impact associated with *noise disturbance* has the same boundaries as the SDIA Airport Influence Area (AIA). According to the 2004 *Airport Land Use Compatibility Plan for San Diego International Airport,* the AIA encompasses those areas adjacent to the Airport that are impacted by noise levels exceeding California State Noise Standards or areas where height restrictions would be needed to prevent obstructions to navigable airspace. The AIA also delineates the boundary of the planning and review authority of SANDAG. The AIA for SDIA was determined by using the 60 dB CNEL Airport noise contour projected for the year 2020. Proposed development within the perimeter of the AIA is subject to a determination of consistency with the Airport Land Use Compatibility Plan (ALUCP).[1] The Study Area boundary of physical disturbance and the Study Area limits associated with noise disturbance are both shown in **Figure 4.1-1**.

This section presents a summary of existing land use plans and policies that affect development of the project site and surrounding area. Land use plans that apply to the area surrounding the project site include City of San Diego Community and Redevelopment Plans, Navy Redevelopment/Reuse Plans, and the Port Master Plan.

4.2 Population and Housing

SDIA is located in San Diego's Central Metropolitan Statistical Area (MSA), the most densely populated area of San Diego County. The Central MSA extends from I-8 to the north, to SR-54 to the south (including Coronado Peninsula), and from the Pacific Ocean to the west to the western borders of La Mesa and Lemon Grove neighborhoods in the east (**Figure 4.2-1**). As shown in **Table 4-2.1**, the Central

[1] Airport Land Use Compatibility Plan for San Diego International Airport (Amended October 4, 2004).

MSA population was approximately 619,000 in 2000; by 2005, the population had risen to approximately 649,500, an increase of 4.9% percent.[2] Based on 2000 population statistics, over half (50.6%) of the population of the City of San Diego resides in the Central MSA.[3]

Table 4-2.1

Population Characteristics of the SDIA Area and Region: 2000 and 2005

Statistical Area	Total Population	
	2000 Census (April 1)	2005 Estimate (January 1)
Peninsula Subregion of Central MSA*	61,098	61,733
Central San Diego Subregion of Central MSA**	155,827	167,233
Central MSA	619,133	649,523
City of San Diego	1,223,400	1,305,736
Greater San Diego Region	2,813,833	3,051,280

* SDIA lies in the Peninsula Subregion of the Central MSA

** The Central San Diego Subregion of the Central MSA lies directly east of SDIA

Source: SANDAG, 2003.

SDIA lies within the Peninsula Subregion of the Central MSA. Compared to the larger Central MSA of which it is a part, the Peninsula Subregion population grew at a slower rate (from approximately 61,100 in 2000 to an estimated approximately 61,730; a one percent increase).[4] There is no permanent residential population adjacent to SDIA due to the airport-related industrial/commercial nature of the area and the presence of I-5 directly east of the project site. The nearest population centers to the Airport include the redeveloped Liberty Station on the former Naval Training Center, to the west; other Peninsula Community Planning Area neighborhoods, also to the west; and the Uptown Community Planning Area, to the east of I-5. Military personnel also are stationed at the Marine Corps Recruit Depot to the north of SDIA.

There is no housing within or immediately adjacent to SDIA (although there are military quarters at the Marine Corps Recruit Depot to the north). The Central MSA, which encompasses SDIA, is among the primary housing areas for San Diego County. The area had approximately 225,305 housing units in 2000 and an estimated approximately 230,943 units in 2005, an increase of 5,638 units (2.5 percent).[5] Approximately one quarter of all San Diego County housing units are located in the Central MSA. The Peninsula Subregion of the Central MSA had approximately 26,874 total dwelling units in 2000 with a 3.9 percent vacancy rate, and an estimated 26,934 units in 2005 with a 3.5 percent vacancy rate.[6] **Table 4-2.2** provides housing information for the Peninsula and Central San Diego Subregions, Central MSA, City of San Diego and greater San Diego Region.

4.3 Race, Ethnicity, and Income

Race and Hispanic origin data for these areas are presented in **Table 4-3.1**. City of San Diego, County of San Diego and State of California data also are provided in Table 4-3.1 for reference. This information is relevant to the analysis of whether the proposed project would disproportionately affect minority populations.

The description of household incomes in the vicinity of SDIA is provided in order to help assess the potential of the proposed project to disproportionately affect low-income populations. The income information is from 1999, at which time the U.S. Census Bureau established the poverty level at $8,500 for one person and $17,029 for a family of four. Note that some of the higher income brackets used by the census have been consolidated in **Table 4-3.2** because the focus of this analysis is on low-income populations.

[2] San Diego Association of Governments, Fall 2005a. Population and Housing Estimates, Major Statistical Area – Central. The 2000 population estimate is from the U.S. Census (for April 1). The 2005 population is an estimate (for January 1).

[3] San Diego Association of Governments, June 12, 2003. Census 2000 Profile, City of San Diego.

[4] San Diego Association of Governments, Fall 2005b. Population and Housing Estimates, Subregional Area 2 – Peninsula. The 2000 population estimate is from the U.S. Census (for April 1). The 2005 population is an estimate (for January 1).

[5] San Diego Association of Governments, Fall 2005a. Population and Housing Estimates, Major Statistical Area – Central.

[6] San Diego Association of Governments, Fall 2005b. Population and Housing Estimates, Subregional Area 2 – Peninsula.

Table 4-2.2

Housing in Study Area

Area	Year	Total Housing Stock	Single Family	Multi-Family	Mobile Homes & Other	Persons per Household	Units per Acre
Peninsula Subregion of Central MSA*	2000	26,874	14,199	12,472	203	2.05	11.5
	2005	26,934	13,476	13,458	0	2.09	n/a
Central San Diego** Subregion of Central MSA	2000	70,466	24,296	46,047	123	2.09	21.8
	2005	77,035	23,475	53,549	11	2.09	n/a
Central MSA	2000	225,305	113,536	109,583	2,186	2.69	11.6
	2005	230,943	103,651	125,614	1,678	2.72	n/a
City of San Diego	2000	469,689	264,933	198,342	6,414	2.61	9.7
	2005	495,378	288,638	201,142	5,598	2.65	n/a
Greater San Diego Region	2000	1,040,149	628,652	364,636	46,861	2.73	3.2
	2005	1,108,500	678,221	384,242	46,037	2.77	n/a

* SDIA lies in the Peninsula Subregion of the Central MSA
** The Central San Diego Subregion of the Central MSA lies directly east of SDIA
n/a – not available

Source: San Diego Association of Governments 2006, SANDAG "Data Warehouse" at http://www.sandag.org/dw/.

Table 4-3.1

Race and Hispanic Origin Baseline Conditions by Percentage (2000 Census)

	White	Black or African American	American Indian	Asian	Native Hawaiian or Other Pac. Islander	Some Other Race	Two or More Races	Hispanic*
Peninsula Subregion	85	3	1	3	0	4	4	11
Central Subregion	63	9	1	4	0	18	5	37
Central MSA	50	13	1	12	1	19	5	36
City of San Diego	60	8	1	14	0	12	5	25
County of San Diego	67	6	1	9	1	13	5	27
State of California	60	7	1	11	0	17	5	32

*Hispanics can be of any race

Source: SANDAG, 2003 and 2005; U.S. Census, 2005.

Table 4-3.2

Household Incomes by Percentage (1999)

	Less than $10,000	$10,000 to $19,999	$20,000 to $29,999	$30,000 to $39,999	$40,000 to $49,999	$50,000 to $59,999	$60,000 to $74,999	$75,000 or more
Peninsula Subregion	7	11	13	14	10	8	10	27
Central Subregion	14	17	17	13	9	7	8	14
Central MSA	12	16	16	13	10	8	9	17
City of San Diego	8	12	12	12	10	9	11	27
County of San Diego	7	11	12	12	10	9	11	28
State of California	8	11	12	11	10	9	11	29

Source: SANDAG, 2003 and 2005; U.S. Census, 2005 SANDAG "Data Warehouse" at http://www.sandag.org/dw/.

4.4 Noise

The FAA has developed specific guidance and requirements for the assessment of aircraft noise in order to comply with NEPA requirements. This guidance, specified in FAA Order 1050.1E, requires that aircraft noise be analyzed in terms of the yearly Day-Night Average Sound Level (DNL) metric (See **Appendix B** for additional information on noise metrics). In practice, this requirement means that DNL noise levels are computed for the Average Annual Day (AAD) of operations for the year of interest. DNL noise levels are calculated by using FAA's authorized noise model, the Integrated Noise Model (INM).

The Community Noise Equivalent Level (CNEL) is the noise metric used by the State of California to assess cumulative (i.e., multiple aircraft events) community noise in the vicinity of airports. While the FAA uses the methodologically similar Day-Night Average Sound Level (DNL) metric for noise analyses throughout the United States, the FAA accepts use of the CNEL metric for federal aviation noise assessments in California. Therefore, in this EA, aircraft noise is reported in CNEL. Noise model development, methodology, and operational data are described in Appendix B.

CNEL is the average noise level over a 24-hour period with a 5 dB penalty applied to evening operations (i.e., operations between 7 PM to 10 PM) and a 10 dB penalty applied to nighttime operations (i.e., operations between 10 PM and 7 AM). The 5 dB and 10 dB increases during evening and nighttime hours, respectively, are intended to account for the added intrusiveness of aircraft noise during time periods when ambient noise due to vehicle traffic and other sources is typically less than during the daytime. CNEL is similar to DNL; however DNL does not add a 5-dB penalty to evening operations. Appendix B provides detailed information on the noise modeling assumptions used in this analysis, including average weather conditions, fleet mix, runway use, and flight tracks.

As shown in **Figure 4.4-1**, average annual daily noise contours were developed for the Baseline Condition 2005, based upon the existing facilities at the Airport and the number and type of annual operations that were projected for 2005.[7] A comparison of 2005 and 2006 monitored CNEL values to those modeled in 2005 is provided in **Table 4-4.1**. **Table 4-4.2** shows population and housing units within the Baseline Conditions 2005 CNEL contours.

There are some differences between the CNEL contours shown in this study versus those published by SDIA in the quarterly noise reports. Specifically, SDIA adjusts the contours in the quarterly noise reports based upon noise monitoring data, including measurements of the lateral attenuation effects[8] with takeoff noise in the vicinity of the Runway 27 approach end.

Noise monitoring efforts by SDIA staff have indicated that lateral attenuation due to takeoff noise in the vicinity of the Runway 27 approach end, as measured by noise monitors, differs from that calculated by

[7] Analysis of noise started prior to 2005 year end; therefore operations were necessarily projected for completion of 2005.
[8] Lateral attenuation includes the affect of the ground and aircraft engine installations on the propagation of noise.

INM. The INM-calculated noise exposure levels in the vicinity of the runway end could be overstated or understated, depending on the location. This is due to the terrain (including buildings) in the vicinity of SDIA and the prevalence of both hard and soft ground coverage. INM assumes that surfaces are soft and absorb some sound energy; however, the hard surfaces (such as water, streets, etc.) in the vicinity of SAN tend to reflect and increase noise exposure. As a result of these differences, SDIA staff adjusts the CNEL contours published in the quarterly noise reports based upon the noise monitoring data.

For federal documents, the FAA directs that noise exposure contours be calculated by INM without incorporation of noise monitoring data.[9] The baseline and future contours are intended to provide a reasonable and methodologically consistent basis for comparing noise impact between the alternatives as required by NEPA. Although noise monitoring data is not used in this study, the Baseline Conditions 2005 shown in Figure 4.4-1 is a reasonable evaluation of existing aircraft noise exposure levels. Note that the contours in this study are not intended to supplant those used in the quarterly noise reports, sound insulation program, and/or other programs.

Table 4-4.1

Comparison of 2005 and 2006 Monitored CNEL and 2005 Modeled CNEL

RMT #	Location	2005 Annual Monitored CNEL	2006 Annual Monitored CNEL	2005 Modeled CNEL
1	Park & Recreation Building – Balboa Park	70.0	69.8	72.4
2	1328 ½ Dale Street	66.2	65.9	67.1
3	740 ½ Cedar Street	62.5	59.8	65.1
4	2425 ½ Third Avenue	62.5	58.8	63.9
6	Marine Corps Recruit Depot	69.8	69.2	71.4
7	Naval Training Center Building #187	75.3	74.8	75.3
8	Naval Training Center Building #8	73.8	no data available	68.1
9	1134 ½ Redwood Street	67.6	66.7	62.4
10	3225 ½ Michaelmas Terrace	N/A[a]	63.2	63.5
11	4313 ½ Browning Street	72.4	71.5	72.4
12	3232 ½ Duke Street	61.1	60.7	61.2
13	4669 ½ Larkspur Street	66.3	65.5	66.6
14	4823 ½ Saratoga Avenue	65.6	64.7	66.8
15	809 ½ Dover Court	60.1	59.7	59.3
16	3385 ½ “B” Street	64.3	63.6	64.5
17	2651 ½ “A” Street	64.7	64.3	66.4
19	1290 ½ West Thorn Street	63.9	62.7	59.3
20	1944 ½ Plum Street	61.4	60.8	62.2
21	1615 ½ Froude Street	58.4	58.5	59.7
22	5029 ½ Lotus Street	65.0	64.2	64.6

[a] RMT #10 was knocked over (termite rot of pole) and shutdown on October 19, 2004

Sources: Airport Noise Mitigation Office, San Diego International Airport
HNTB noise analysis, 2008.
New data added for 2006 monitored data and new values provided for 2005 model with 5 dB evening penalty.

[9] FAA Order 1050.1E, pp.A-60-61, paragraph 14, June 8, 2004.

Table 4-4.2

Population and Housing Units within the Baseline Conditions 2005 CNEL Contours

Decibel Level	Baseline 2005 CNEL	
	Population	Housing Units
60dB	32,677	14,988
65dB	27,149	10,919
70dB	3,540	1,778
75dB	7	5

Source: HNTB analysis using SANDAG GIS land use coverage and 2000 Census Block Demographics.

4.5 Compatible Land Use

This section describes existing and planned land uses on Airport property and within the study area, and presents a summary of current land use plans and policies that affect development of the project site and surrounding area. Because the compatibility of land use near an airport is typically associated with the extent of the airport's noise impacts, the FAA sets forth guidelines and measures to encourage a coordination of efforts between the project sponsor and local officials early in the project planning process.

Land use plans that apply to the area surrounding the study area include City of San Diego Community and Redevelopment Plans, Navy Redevelopment/Reuse Plans, and the Port Master Plan.

4.5.1 Airport Property Land Uses

SDIA is situated on 661 acres on the north side of San Diego Bay on State Tidelands. It is the major airport in San Diego County that is served directly by commercial air-carrier operations. SDIA includes the existing 9,401-foot runway with associated airfield taxiways and existing cargo and air support facilities, including the Air Traffic Control Tower, the Air Rescue/Fire Station, and general aviation services.

The Airport consists of the following existing facilities: existing airfield, terminals, ground transportation, circulation, parking, transit plazas, air cargo and general aviation facilities including:

- Runway 9-27 and Taxiway System.
- North Side: The north side of Runway 9-27, formerly known as the General Dynamics site, with the area used for long-term and short-term parking. However, there is a cargo-related business and Fixed Based Operator (FBO) of general aviation uses located at the southerly end of the site along Pacific Highway.
- South Side: The south side of Runway 9-27 consists of the existing terminals, gates and parking areas on SDIA. Additionally, the south side includes approximately 47-acres of the former Teledyne Ryan property. The improvements at the facility include multiple buildings (approximately 50) that have been built over the last 60 years. This Teledyne Ryan facility was in operation until 1999. The site and all of the buildings are vacant. Currently, long-term and short-term parking is operating along the area adjacent to North Harbor Drive.

4.5.2 Surrounding Land Uses and Land Use Plans

This section identifies the existing land uses on the lands contiguous to and in the Airport Influence Area of SDIA and the Proposed Study Area.

The existing Airport site is severely constrained by its location. It is bounded by North Harbor Drive and the San Diego Bay to the south, the Navy water channel and Liberty Station to the west, the Marine Corps Recruit Depot to the north, and Pacific Highway and Interstate 5 to the east. Land in the vicinity of

the San Diego International Airport is densely developed and has high developable value due to San Diego International Airport's proximity within two miles of Downtown San Diego.

The lands surrounding SDIA support a very diverse set of uses, including military training and headquarters areas, mixed-use residential, commercial, and civic developments, Port operations, parks, recreation and boating, single-family residential, commercial, and industrial areas. These uses are described in more detail and in relation to SDIA and the Sponsor's Proposed Action site below.

The primary land uses immediately surrounding the SDIA site are: the Marine Corps Recruit Depot (MCRD) San Diego to the north; Liberty Station (formerly the Naval Training Center) and the Peninsula Community Planning Area to the west; commercial uses and the San Diego Unified Port District administration building to the east along Pacific Highway; the Midway-Pacific Highway Community Planning Area (CPA) between SDIA and Interstate-5; the Uptown CPA to the east across Interstate-5; and aircraft-related industrial and commercial uses to the south in the North Embarcadero area. Further south, past SDIA and across North Harbor Drive, is a complex of hotels, restaurants, and marinas located on Harbor Island, the Spanish Landing Park, and the U.S. Coast Guard Office. Existing surrounding land uses and planning areas are depicted in **Figure 4.5-1**.

North/Northeast of Study Area

US Marine Corps Recruit Depot San Diego

US Marine Corps Recruit Depot (MCRD) San Diego comprises 433 acres of land immediately north of and adjacent to the Study Area. MCRD San Diego has over 800 civilian employees and over 1,800 permanent military personnel. At any one time, approximately 4,000 recruits are housed at MCRD. Outdoor use areas adjacent to SDIA Project Area include an outdoor combat skills training area.

Midway-Pacific Highway Corridor Community Plan Area

A portion of the Midway-Pacific Highway CPA extends along Pacific Highway immediately adjacent to the Study Area. Existing land uses in this area consist primarily of light industrial and commercial transportation related uses (e.g., warehousing and car rentals). There are also educational facilities in the community that are in close proximity to the project area including Dewey Elementary School and St. Charles Borromeo Academy, a private school, industrial uses and a main US Postal Service facility. Immediately adjacent to the SDIA Study Area and to US MCRD San Diego is a portion of the Midway-Pacific Highway CPA that extends along Pacific Highway immediately adjacent to the eastern edge of the Study Area. Existing land uses in this area consist primarily of light industrial and airport-related commercial uses such as long and short term parking and car rentals and the headquarter offices of the San Diego Unified Port District and the Middletown Palm Avenue Trolley Station.

Uptown Community Plan Area

The Uptown CPA is located further east, across I-5, immediately north of the downtown Centre City area. The Uptown CPA is dominated by residential uses with some commercial business bordering I-5. Some of these residences and businesses are located on the western slopes of hills adjacent to I-5, overlooking SDIA and the Study Area.

South/Southeast of Study Area

San Diego Downtown Community Planning Area

The San Diego Downtown Community Planning Area (CPA) is located on the southeast side of SDIA and comprises approximately 1,500 acres. The Downtown San Diego Community is intended to be the City of San Diego's center, comprised of a financial/commercial core surrounded by well-integrated mixed-use areas, including residential neighborhoods, offices, open spaces, and commercial uses serving an urban downtown environment. The downtown area is divided into eight urban, high-density, mixed-use districts. The district that is most relevant to this project is the Little Italy District, which is immediately adjacent to southeast corner of the Study Area.

Little Italy District

The Little Italy District is a medium-density residential and commercial neighborhood located between Laurel Street on the north side and Ash Street on the south, between Harbor Drive on the west and I-5 and Front Street on the east. The Little Italy District is a community of diverse uses, with industrial, mixed-use, residential, commercial and open space land uses. The District is also home to the County

Administration Center on Harbor Drive. Additionally, the portion of the Little Italy District west of the railroad and trolley tracks, also known as the North Embarcadero Area, has been promoted for redevelopment under the North Embarcadero Visionary Plan.

North Embarcadero

The North Embarcadero area encompasses the downtown waterfront area bounded by Laurel Street on the north; Market Street on the south, San Diego Bay on the west, and the railroad and trolley tracks on the east. The northern end of the North Embarcadero area borders the southern property boundary of SDIA Study Area at Laurel Street.

Existing land uses in the area include: industrial and warehousing in the northern end, adjacent to the Proposed Study Area; visitor-serving commercial recreational, hotel, small-scale retail, and office in the central area; and the U.S. Navy and residential uses at the southern end of the area.

More specific North Embarcadero area that is immediately adjacent to SDIA Study Area, the existing land uses include: airport-related industrial and commercial uses such as Solar Turbines and car rental agencies, other commercial businesses, and the County of San Diego County Administration Center. There are also several public recreation facilities in this area, including viewing and fishing piers along Harbor Drive, a waterfront promenade, and the Grape Street pier.

A redevelopment plan including major public improvements has been drafted for the North Embarcadero area, called the North Embarcadero Visionary Plan, which includes major public improvements for the northern end of the area. This redevelopment plan, the North Embarcadero Visionary Plan, is discussed in greater detail in the subsequent section.

Directly South of Study Area

South Side of North Harbor Drive

Immediately south of the SDIA Study Area runs North Harbor Drive. Along the south side of North Harbor Drive are the City of San Diego Metropolitan Sewer Pump Station #2, the US Coast Guard Station, a rental car return center, the Harbor Police Station, and the Spanish Landing Park. Further to the south is Harbor Island.

Spanish Landing Park

Spanish Landing Park is an existing park located approximately 0.5-mile directly south of the SDIA Study Area, on the south side of North Harbor Drive. Spanish Landing Park extends along the north bank of the Harbor Island West Basin, occupying 11.2 acres of land, as shown in Figure 4.4, and includes a bicycle and pedestrian path along the shore of San Diego Bay. More specifically, there are 1.3 acres designated as a promenade in the form of a bicycle and pedestrian path. The park is developed with picnic tables, restrooms, parking, and extensive landscaping. Approximately one mile of public access to the shore is provided by this park.[10] The park has been designated as a California Historical Landmark as the site of the anchorage of the supply ships of the Portola-Serra expedition of 1769.

Harbor Island

Located on Harbor Island, south of North Harbor Drive and near to the SDIA Study Area, are uses that include: hotels, restaurants, marinas, and Harbor Island Park.

West of Study Area

Naval Training Center Redevelopment Area/Liberty Station

The former NTC property, comprising approximately 541 acres, is located adjacent to the SDIA Study Area on its west side across from the San Diego Bay Navy Boat Channel. The City has begun redevelopment at the site under the approved redevelopment plan for the property, now known as Liberty Station. Uses include residential, commercial, office, recreational, educational, and civic uses. Also, a portion of the former NTC property has been leased to SDCRAA for SDIA expansion uses.

[10] P&D Technologies, April 1988.

Peninsula CPA

The Peninsula CPA, located approximately 0.5-mile west of SDIA, comprises 4,407 acres of which over 90 percent is zoned for residential use. The community is divided into nine neighborhoods. Substantial landscaping, small winding concrete streets, old streetlights, and Spanish architecture characterize the area. The Point Loma High School, Loma Portal Elementary School, and the commercial district along Rosecrans and Voltaire Street are prominent features of the CPA. High Tech High School, another educational facility, is located in Liberty Station (former NTC). The area directly southwest of Liberty Station includes a small commercial district that includes retailers, restaurants, single-family and multifamily housing, hotels, office buildings, and a marina.

Navy Fleet Anti-Submarine Warfare Property

The Navy Fleet Anti-Submarine Warfare property occupies 37.7 acres of land approximately one mile southwest of the Study Area. The Navy uses the facility for training personnel in the use of antisubmarine warfare equipment. A portion of the site is leased by the Navy from the Unified Port District of San Diego.

4.6 Air Quality

The U.S. Environmental Protection Agency (EPA) has established National Ambient Air Quality Standards (NAAQS) for outdoor concentrations of the following "criteria" pollutants: carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), sulfur dioxide (SO_2), lead (Pb), and particulate matter with aerodynamic diameters of 10 or 2.5 microns and less ($PM_{10/2.5}$).

Under the federal Clean Air Act (CAA), each state must identify non-attainment areas that do not meet the NAAQS. For any non-attainment designation, a State Implementation Plan (SIP) is developed to demonstrate future attainment of the applicable NAAQS. In summary,

- An attainment area is any area that meets the NAAQS,
- A non-attainment area is any area that does not meet the NAAQS,
- A maintenance area is any area previously designated non-attainment but is in transition back to attainment.

The regulation and management of ambient (i.e., "outdoor") air quality conditions in San Diego County is the combined responsibility of federal, state, and local governmental agencies. These agencies are identified in **Table 4-6.1** and a brief description of their roles and responsibilities follow.

On the federal level, the EPA establishes the guiding principles and policies for protecting air quality conditions throughout the nation, including San Diego County. Relevant to this assessment, EPA is also responsible for promulgating the NAAQS, the approval of the SIP, and the regulation of aircraft emissions.

On the state level, the California Air Resources Board (CARB) serves to help ensure that federal air quality requirements and guidelines are met. CARB also enforces the California Ambient Air Quality Standards (CAAQS), monitors air quality, and regulates mobile sources of emissions (i.e., on-road and off-road motor vehicles and equipment).

On the local level, the San Diego County Air Pollution Control District (SDAPCD) is responsible for administrating federal and state air quality regulations, permitting of stationary sources of air emissions, and monitoring of air quality conditions in the county. Together, CARB, the SDAPCD, and the San Diego Association of Governments (SANDAG) are involved in the preparation and implementation of the SIP for San Diego County.

Table 4-6.1

Agencies Involved in Air Quality Management in San Diego County

Agency	Roles and Responsibilities
U.S. Environmental Protection Agency (EPA)	*Federal agency* - Sets national clean air policies under the federal CAA; promulgates the NAAQS; reviews and approves SIPs. Also regulates aircraft emissions. (All of California is located in EPA Region 9, headquartered in San Francisco.)
California Air Resources Board (CARB)	*State agency* - Establishes state-wide clean air policies and rules; promulgates the CAAQS; regulates mobile sources (i.e. motor vehicles) of emissions; and conducts ambient air monitoring throughout California. Also involved in the preparation of the SIP. (Located and headquartered in Sacramento.)
San Diego County Air Pollution Control District (SDAPCD)	*Local agency* – Enforces federal and state air quality regulations county-wide; permits stationary sources of emissions; conducts air monitoring; and is involved with SANDAG in preparation of the SIP for San Diego County. (Located in San Diego.)

CAA = Clean Air Act
CAAQS = California Ambient Air Quality Standards
NAAQS = National Ambient Air Quality Standards
SANDAG = San Diego Council of Governments
SIP = State Implementation Plan

Source: KB Environmental Sciences, Inc., 2008.

4.6.1 Ambient Air Quality Standards

As stated previously, the EPA has established standards, (i.e., NAAQS) to protect public health, the environment, and the quality of life from the detrimental effects of air pollution.[11] These pollutants, their characteristics and the standards are shown in **Table 4-6.2.**

4.6.2 Air Monitoring Data

Together, CARB and SDAPCD operate nine permanent ambient air quality monitoring sites scattered throughout San Diego County as part of their ongoing state and local air monitoring programs. As shown on **Figure 4.6-1**, the closest of these air monitoring stations to SDIA is located approximately two miles southeast of the airport in downtown San Diego[12]. No air monitoring stations are located directly on, or adjacent to, the SDIA.

Table 4-6.3 contains the most recent summary information and data from the downtown San Diego monitoring site including the pollutants measured and the highest recorded levels in the three year period ending in 2006 (e.g., the year for which the most recent data is available). These pollutant levels are not necessarily representative of the conditions near the airport, but are reported as indicators of air quality conditions in this part of San Diego County.[13] Information is also provided indicating whether or not the highest recorded levels represent exceedances of the NAAQS.

[11] The NAAQS may be viewed at www.epa.gov/air/criteria.html.
[12] These air monitoring stations are components of the permanent network operated by CARB/SDAPCD in San Diego County. The locations are established according to a series of parameters that take into consideration meteorological conditions, emission source(s) locations, demographics and pollutant characteristics.
[13] The downtown San Diego air monitoring station is located approximately two miles from SDIA. The area is characterized as urban core with periods of high motor vehicle traffic volumes and restricted air movement. Pollutants such as CO, NO_2, SO_2 and PM are considered "localized" in comparison to O_3 which is more "regional" in coverage. Based upon these parameters, the air quality conditions in the vicinity of the downtown San Diego site may differ from the airport area.

Table 4-6.2

National Ambient Air Quality Standards (NAAQS)

Pollutant	Averaging Time	NAAQS	Comments
Carbon monoxide (CO)	1 hour	35 ppm (40 mg/m^3)	CO is a colorless, odorless, tasteless gas; can temporarily accumulate into localized "hot-spots" in calm weather conditions and in the wintertime. CO usually dissipates quickly, posing no wide-spread threat to human health or the environment. Under elevated ambient concentrations, CO can cause headache and nausea in humans. Mobile sources (i.e. motor vehicles), indoor heating and open burning are among the pre-dominant anthropogenic (i.e. man-made) sources of CO.
	8-hour	9.0 ppm (10 mg/m^3)	
Ozone (O_3)	8-hour	0.075 ppm (147 $\mu g/m^3$)	O_3 is a secondary pollutant, formed from daytime reactions of NOx and VOC rather than being directly emitted by natural or man-made sources. In elevated concentrations, O_3 is a strong oxidant with deleterious effects on both human health and the natural environment. The CAAQS for O_3 was lowered recently and the averaging period changed from one to eight hours.
Nitrogen dioxide (NO_2)	Annual	0.053 ppm (100 $\mu g/m^3$)	NO_2, nitric oxide (NO), and the nitrate radical (NO_3) are collectively called oxides of nitrogen (NO_x) and NO_2 is the compound commonly measured with air quality monitors. NO_x is generally emitted in the form of NO, which is oxidized to NO_2. The principal man-made source of NO_x is fuel combustion in motor vehicles and power plants. In elevated concentrations, NO_2 causes adverse health effects and reactions of NO_x with other atmospheric chemicals can lead to the formation of O_3 and acidic precipitation.
Sulfur dioxide (SO_2)	3-hour	0.5 ppm (1300 $\mu g/m^3$)	For man-made sources, SO_2 is emitted primarily by the combustion of sulfur-containing fuels and sulfuric acid manufacturing. SO_2 can lead to the formation of acidic precipitation and in elevated concentrations impair human lung functions and plant growth.
	24-hour	0.14 ppm (365 $\mu g/m^3$)	
	Annual	0.03 ppm (80 $\mu g/m^3$)	
Respirable Particulate Matter (PM_{10})	24-hour	150 $\mu g/m^3$	PM comprises of very small particles of dirt, dust, soot or liquid droplets called aerosols. The regulatory standards for PM are segregated by sizes (i.e., respirable or PM_{10} and fine or $PM_{2.5}$). PM is formed from both natural and man-made sources including wind erosion over exposed soils (i.e., fugitive dust), the burning of fossil fuels and incineration of solid wastes, and as an exhaust product from the internal combustion engine. Of growing concern are the effects of PM on visibility and the potential impairment to human health in the form of diesel emissions.
Fine Particulate Matter ($PM_{2.5}$)	24-hour	35 $\mu g/m^3$	
	Annual	15 $\mu g/m^3$	
Lead (Pb)	Calendar Quarter	0.15 $\mu g/m^3$	Lead is a "heavy metal" most commonly associated with emissions from industrial sources including waste oil and solid waste incineration, iron and steel production, lead smelting, and battery and lead alkyl manufacturing. The lead content of motor vehicle fuel, which was a major source of atmospheric lead in the past, has significantly declined with the widespread use of unleaded fuel.

ppm = parts per million; $\mu g/m^3$ = micrograms per cubic meter; mg/m^3 = milligrams per cubic meter.

Source: KB Environmental Sciences, Inc., 2008.

Table 4-6.3

2004-2006 Downtown San Diego Air Monitoring Station Data Summary[a]

Pollutant	Averaging Time	Maximum Concentration	NAAQS	Above NAAQS (Yes/No)[b]
CO	1 hour	10.8 ppm	35 ppm	No
	8 hour	4.7 ppm	9 ppm	No
O_3	8 hour	0.108 ppm	0.08 ppm	Yes
NO_2	Annual	0.021 ppm	0.053 ppm	No
SO_2	3 hour	0.030 ppm	0.5 ppm	No
	24 hour	0.009 ppm	0.14 ppm	No
	Annual	0.004 ppm	0.030 ppm	No
PM_{10}	24 hour	76 µg/m^3	150 µg/m^3	No
$PM_{2.5}$	24 hour	63 µg/m^3	35 µg/m^3	Yes
	Annual	15.6 µg/m^3	15 µg/m^3	Yes

[a] See Figure 4.6-1 for map of station locations.

[b] The maximum concentrations were compared to the NAAQS and determined whether that the concentration is above the standard (yes) or that the concentration is equal to or below the standard (no).

NAAQS = National Ambient Air Quality Standards (NAAQS) CO = Carbon monoxide; O_3 = Ozone; NO_2 = Nitrogen dioxide; SO_2 = Sulfur dioxide.

PM_{10} = Respirable particulate matter less than 10 microns in diameter; $PM_{2.5}$ = Fine particulate matter less than 2.5 microns in diameter;

ppm = parts per million; µg/m^3 = micrograms per cubic meter.

Source: SDAPCD, Air Quality in San Diego County, 2006 Annual Report, 2006.

4.6.3 Attainment/Non-attainment Status

The current attainment/non-attainment designations for San Diego County are summarized in **Table 4-6-4.** As shown, San Diego County (including the area surrounding SDIA) is currently designated as "attainment" for NO_2, SO_2, and lead; classified as "maintenance" for CO, "unclassifiable/attainment" for $PM_{2.5}$ and "unclassifiable" for PM_{10}. For O_3, San Diego County is designated as a "non-attainment area" under Subpart 1 (the lowest classification). The area is designated a Subpart 1 area because studies have shown that some pollutants are transported into San Diego Air Basin from other regions located outside the air shed.

Table 4-6.4

Federal Attainment/Non-attainment Designations for San Diego County

Pollutant	Attainment Status
CO	Maintenance
NO_2	Attainment
O_3	Non-attainment
SO_2	Attainment
PM_{10}	Unclassifiable
$PM_{2.5}$	Unclassifiable / Attainment
Lead	Attainment

Source: U.S. EPA (http://www.epa.gov/air/oaqps/greenbk/index.html), 2007 and CARB (http://www.arb.ca.gov/desig/adm/adm.htm), 2007.

4.6.4 Air Quality Management Plans

Because of the O_3 non-attainment designation and the CO maintenance designation described above, air quality management plans have been developed to help bring the San Diego area back into compliance with the NAAQS for these pollutants. Prepared jointly by the SDAPCD and SANDAG, these plans establish emission budgets, control strategies and timeframes for achieving the requisite attainment statuses. On the local level the plans are called the "Regional Air Quality Strategies" (RAQS) and when

combined with plans from other non-attainment areas in California they become part of the State Implementation Plan (SIP).

The last O_3 SIP developed for the San Diego air basin and approved by the U.S. EPA is called the "*1994 SIP*" [SDAPCD, 1994]. This plan was later re-designated as a "*Maintenance Plan*" in 2003 when the area achieved attainment for the old one-hour O_3 NAAQS [SDAPCD, 2002, Federal Register, 2003] Triennial updates to the SIP (called RAQS) were also developed for the area and the latest one is entitled the *2004 RAQS* [SDAPCD, 2004].

In 2004 the U.S. EPA classified the San Diego area as a "Subpart 1" (or "Basic") Non-Attainment area for the 8-hour NAAQS for O_3 [U.S. EPA, 2004].[14] Under the federal CAA, the SDAPCD/SANDAG must submit a SIP to the U.S. EPA demonstrating how the area will attain the 8-hour standard by either 2009 or 2014. This plan will call for the continued control of NOx and VOCs – the two primary contributors to O_3 formation.[15]

The San Diego area is also under the *CO Maintenance Plan* developed by SDAPCD/SANDAG in 1998. As there have been no violations of the CO standard in several years, it is expected that the San Diego area will become a full attainment area by 2009 [SDAPCD, 1998].

4.6.5 Sources of Airport Air Emissions

Almost all large metropolitan airports (including SDIA) experience air emissions from the following general source categories: aircraft; ground service equipment (GSE); motor vehicles; fuel storage and transfer facilities; a variety of stationary sources; an assortment of aircraft (including auxiliary power units (APUs), airfield and building maintenance activities; and periodic construction activities for new projects or improvements to existing facilities. **Table 4-6.5** provides a summary listing of these sources of air emissions, the pollutants, and their characteristics.

Table 4-6.5
Airport-Related Sources of Air Emissions

Sources	Emissions	Characteristics
Aircraft	CO, NO_x, PM, SO_x, VOC	Exhaust products of fuel combustion that vary depending on aircraft engine type, number of engines, power setting, and period of operation. Emissions are also emitted by an aircraft's auxiliary power unit (APU).
Motor vehicles	CO, NO_x, PM, VOC	Exhaust products of fuel combustion from motor vehicles approaching, departing, and moving about the Airport site. Emissions vary depending on vehicle type, distance traveled and operating speed.
Ground service equipment (GSE)	CO, NO_x, PM, SO_x, VOC	Exhaust products of fuel combustion from service trucks, tow tugs, belt loaders, and other portable equipment.
Fuel storage and transfer	VOC	Formed from evaporation and vapor displacement of fuel from storage tanks and fuel transfer facilities. Emissions vary with fuel usage, type of storage tank, refueling method and fuel type.
Stationary sources	CO, NOx, PM, SOx, VOC	Exhaust products of fossil fuel combustion. Emissions are generally well controlled with operational techniques and post-burn collection methods. Sources include boilers, emergency generators, paint and surface coating operations, etc.

[14] A Subpart 1 (or "Basic) classification is the least severe of the six degrees of O_3 non-attainment.
[15] In 2007, U.S. EPA promulgated a new 8-hour NAAQS for ozone. Attainment/non-attainment designations for this new standard will be assigned in 2010 and SIP documents will be developed in 2013.

Table 4-6.5 cont'd

Airport-Related Sources of Air Emissions

Construction	CO, NOx, PM, SOx, VOC	Dust generated during excavation and land clearing, exhaust emissions from construction equipment and motor vehicles, and evaporative emissions from asphalt paving and painting.

The emissions shown are considered to be the primary ones.

CO = Carbon monoxide NO_x = Nitrogen oxides

SOx = Sulfur oxides PM = Particulate matter

VOC = Volatile organic compounds

Source: KB Environmental Sciences, Inc. 2008.

4.6.6 Existing Air Quality

The assessment of existing (i.e., 2005) air quality conditions at SDIA is comprised of two primary components: (1) an emissions inventory, which discloses the amounts of emissions generated by existing airport-related activities and (2) dispersion modeling, which provides an indication of how these emissions affect ambient ("outdoor") air quality conditions.[16] These models, assessment methods, and supporting materials are summarized in **Table 4-6.6**.

The following sections summarize the analysis of the existing conditions. See **Appendix E,** *Air Quality,* for a more detailed discussion of the methodologies, models, data sources, and assumptions used for these analyses.

Emissions Inventory

The sources of emissions included in the emissions inventory for SDIA comprise aircraft, GSE, on- and off-site motor vehicles and stationary sources. Aircraft emissions encompass those that are generated throughout the entire landing/take-off (LTO) cycle (i.e., approach, landing, taxi-in, taxi-out, take-off and climb-out). On-site motor vehicles include passenger, employee and cargo traffic operating on all the major roadways, parking facilities and curbsides on the airport property. Off-site motor vehicles are those bound for, or departing the airport on the nearby surface transportation network (i.e., arterials and freeways). Stationary source emissions are those associated with the airport central heating plant, the fuel storage facility and a number of back-up electrical generators.

For calculating emissions from aircraft, GSE and APU, the most recent version of the FAA Emissions and Dispersion Modeling System (EDMS5.0.2) was used.[17] The aircraft activity levels, fleet mix, and other SDIA-specific operational characteristics were obtained from the SDIA Airport Master Plan and are the same data as used for the Noise analysis (see Section 4.4, *Affected Environment Noise*). GSE/APU utilization information was derived from on-site surveys conducted at SAN and supplemented with EDMS data, wherever necessary.

For motor vehicles, the CARB EMFAC2007 model[18] was used along with traffic data, roadway operational conditions, and parking facility information used to produce vehicular emissions data. Information and emissions data for stationary sources were obtained from SDCRAA files and the appropriate U.S. EPA AP-42 documentation.[19]

The overall layout of the individual emissions sources at SDIA were obtained from up-to-date aerial photography and scaled drawings of the airport and its environs.

[16] Consistent with the Environmental Impact Report prepared under the California Environmental Quality Act (CEQA), year 2005 serves as the "existing" conditions scenario.

[17] FAA, Emissions and Dispersion Modeling System, Office of Environment and Energy, 2007.

[18] CARB 2002, EMFAC2002 Version 2.3, User's guide, November 2002, www.arb.ca.gov/msei/on-road/pubs.htm

[19] U.S. EPA, Compilation of Air Pollutant Emission Factors (AP-42), www.epa.gov/ttn/chief/ap42/index

Table 4-6.6

Air Quality Analysis Models, Methods and Sources of Information

Emission Source Type	Model or Method	Supporting Data & Information
Aircraft	FAA Emissions & Dispersion Modeling System (EDMS)[a]	• Total operations – SIMMOD Analysis for *SDIA Master Plan* • Fleet mix – SIMMOD Analysis for *SDIA Master Plan* • Times-in-mode – Default data except for taxi-in, taxi-out & delay which was based on *SDIA Master Plan* SIMMOD modeling. • Atmospheric mixing height - NCDC • Runway/taxiway layout and locations – Current aerial photo with scaled drawings of existing and future-year plans for SDIA.
APU	EDMS	• APU Type – EDMS default, by aircraft type. • Usage rates – Based on SDIA GSE / gate survey and EDMS default data. • Gate layout and locations – Current aerial photo with scaled drawings of existing and future-year plans for SDIA.
GSE	EDMS	• Fleet mix - Based on SDIA gate survey. • Operating times – Based on SDIA GSE survey. • Operating characteristics, engine and fuel type – EDMS default data. • Gate layout & locations – Current aerial photo with scaled drawings of existing and future-year plans for SDIA.
Motor vehicles	CARB EMFAC2007[b]	• Traffic volumes – Final EIR *Traffic Section* • Fleet mix – Final EIR *Traffic Section* and SDIA Master Plan • Operating speeds – Final EIR *Traffic Section* • Operating characteristics – Final EIR *Traffic Section* • Roadway layout and locations - Current aerial photo, scaled drawings of existing & future-year plans for SDIA, and roadway/intersection schematics.
Stationary sources	U.S. EPA AP-42[c] and EDMS	• Source & fuel type – *SDIA Air Quality Compliance Guide* • Operating times – *SDIA Air Quality Compliance Guide* • Emission factors – AP-42 • Locations - Current aerial photo with scaled drawings of existing and future-year plans for SDIA.
Construction	CARB OFFROAD2007[d] URBIMIS	• Equipment Schedule - HNTB in association with SDCRAA • Equipment size and hours of operation – HNTB in association with SDCRAA • Emission factors – OFFROAD for combustion sources and URBEMIS for fugitive dust sources

[a] EDMS Version 5.0.2 (FAA, 2007), most current version.

[b] EMFAC2007 Version 2.3 On-road Emissions Inventory Estimation Model.

[c] U.S. EPA AP-42.

[d] OFFROAD2007 – Emissions Inventory Estimation Model for Off-road Sources. URBEMIS – CARB Land Use Emissions Model

Source: KB Environmental Sciences, 2007.

The results of the Existing Condition emissions inventory for SAN, which include the pollutants CO, VOC, NO_x, SO_x, and $PM_{10/2.5}$ expressed in units of tons per year (tpy) for each emission source, and are summarized in **Table 4-6.7**.

Table 4-6.7

2005 Existing Condition Air Emissions Inventory (tons per year)

Source	CO	VOC	NO_x	SO_x	PM_{10}	$PM_{2.5}$
Aircraft[a]	344	112	688	66	15	15
GSE/APU[b]	513	20	70	6.3	2.0	1.9
Stationary Sources[c]	3.7	3.2	12	4.0	0.6	0.6
Motor Vehicles (On-site)[d]	51	3.0	5.6	0.0	0.5	0.3
Motor Vehicles (Off-site)[e]	328	10	58	0.5	2.9	1.9
Totals	**1,239.7**	**148.2**	**833.6**	**76.8**	**21**	**19.7**

CO = Carbon monoxide; VOC = Volatile organic compounds; NO_x = Nitrogen oxides; SO_x = Sulfur oxides; $PM_{10/2.5}$ = Particulate matter (10 and 2.5 microns, respectively); GSE = ground support equipment; APU = auxiliary power units

[a] Aircraft emissions comprise those from the entire LTO cycle (i.e., approach, landing, taxi-in, taxi-out, take-off and climbout).

[b] GSE and APU emissions based upon observed operating times from on-site surveys conducted at SDIA.

[c] Stationary source emissions include those associated with boilers, emergency generators, and fuel storage facilities.

[d] On-site motor vehicles are airport-related traffic operating on airport roadway and parking facilities.

[e] Off-site motor vehicles are airport-related traffic operating on public roadways/freeways.

Note: Values may be rounded.

Source: KB Environmental Sciences, Inc. 2007.

As shown, aircraft represent the largest source of NO_x, SO_x, VOC, and $PM_{10/2.5}$ associated with SAN while GSE represent the largest source of CO. Future-year emissions associated with SAN, both with and without the planned improvements, are presented in Section 5.5, *Environmental Consequences, Air Quality*.

Ambient Concentrations

As with the emissions inventory, EDMS served as the principal model for predicting ambient concentrations of CO, NO_2, $PM_{10/2.5}$, and SO_2 both on the airport and in neighboring areas. Therefore, the same sets of input data and other supporting information developed for the emissions inventory (and listed in Table 4-6.6) were also used for the dispersion analysis.

Based on land use information contained in Section 4.5, *Compatible Land Use*, sensitive receptors were located in areas within close proximity to SDIA and where the general public could have unrestricted access for one to several hours or longer. These include the school and residential areas of Liberty Station to the west and northwest; Spanish Landing Park and the recreation area along Navy Lagoon to the south and west; and the military installations (i.e., MCRD and United States Coast Guard) to the north and southeast. Other receptors were placed along the SDIA property boundary approximately 1,000 feet apart as a means of the identifying areas of highest pollutant concentrations whether the pubic had access or not. As shown in **Figure 4.6-2** a total of 33 receptors were analyzed.

A full year (e.g., 2002) of meteorological data (i.e., wind speed and direction, atmospheric mixing height, etc.) collected at the SDIA (for lower air data) and San Diego Miramar Marine Corps Air Station (for upper air data) weather stations were used.[20] Notably, the year 2002 was determined to be the "worst-case" meteorological year within the five-year period of 2002 through 2006.[21]

For consistency, all of the EDMS dispersion modeling results are expressed in units of micrograms/cubic meter ($\mu g/m^3$) for each pollutant and receptor. In each case, the highest predicted concentrations are reported. Background concentrations were also added to account for the effects from sources located outside the dispersion modeling Study Area.[22] This combination of adding the highest modeled concentrations to the background concentrations produces conservatively high results that are unlikely to occur in reality.

[20] National Climatic Data Center (NCDC), Electronic Meteorological Data for San Diego, CA, provided to KB Environmental Sciences, 2007.

[21] See Appendix E for discussion on worst-case meteorological data analysis.

[22] See Appendix E for discussion on the determination of the background concentrations.

Table 4-6.8 contains a summary of the 2005 Existing Condition dispersion modeling results. Reported as *Maximum Modeled Concentrations*, these values represent the highest predicted levels at all of the 33 receptors analyzed.

As shown, predicted concentrations of CO, SO_2, NO2, and PM_{10} are well within the NAAQS for these pollutants. By comparison, the highest predicted levels of $PM_{2.5}$ are above the NAAQS. For $PM_{2.5}$ these results are to be expected as monitoring data from the San Diego area reveal violations of the NAAQS for these parameters.

Table 4-6.8

Existing Conditions (2005) Dispersion Modeling Results (µg/m^3) [a]

Pollutant	Averaging Time	Maximum Concentration[b]	NAAQS[c]	Above NAAQS (Yes/No)[d]
CO	1-hour	19,008	40,000	No
	8-hour	6,804	10,000	No
NO_2	Annual	54	100	No
SO_2	3-hour	78	1,300	No
	24-hour	24	365	No
	Annual	11	80	No
PM_{10}	24-hour	76	150	No
$PM_{2.5}$	24-hour	63	35	**Yes**
	Annual	16	15	**Yes**

CO = Carbon monoxide; NO_2 = Nitrogen dioxide; SO_2 = Sulfur dioxide; $PM_{10/2.5}$ = Particulate matter (10 and 2.5 microns, respectively).

[a] See Appendix E for map of receptor locations.

[b] Maximum Concentration means highest predicted concentration using EDMS at all of the receptors analyzed with conservatively high background concentrations added.

[c] The National Ambient Air Quality Standards (NAAQS).

[d] The maximum concentrations were compared to the NAAQS and determined whether that the concentration is above the standard (yes) or that the concentration is equal to or below the standard (no).

Source: KB Environmental Sciences, Inc. 2008.

Predictions of future-year ambient pollutant concentrations in the vicinity of SAN, both with and without the planned improvements, are presented in Section 5.5, *Environmental Consequences, Air Quality*. A separate dispersion modeling assessment of potential CO "hot-spots" was also conducted in areas of high motor vehicle traffic volumes (i.e., roadway intersections) and deteriorating Levels of Service (LOS). These data for existing and future year conditions are also presented in Section 5.5, *Environmental Consequences, Air Quality*.

4.6.7 Hazardous Air Pollutants and Greenhouse Gases

Because hazardous air pollutants (HAPs) and greenhouse gases (GHG) are evaluated independently from the U.S. EPA criteria pollutants in FAA NEPA documents, these emissions for existing conditions at SAN are presented and discussed later in Section 5.5, *Environmental Consequences, Air Quality*.

4.7 Water Resources

The following sections describe the existing hydrologic and water quality environment of the Study Area and Airport vicinity.

4.7.1 Hydrology

This section describes the existing hydrologic conditions at SDIA and the vicinity. SDIA is generally flat with local minor elevation variations due to landscaping. Elevations across the area range from

approximately 7 to 15 feet above mean sea level (msl).[23] The Study Area is situated within the Pueblo San Diego Hydrologic Unit (HU) listed in the San Diego Basin Plan.[24] The average annual precipitation at SDIA is approximately 12 inches.[25]

This information is based on previous evaluations and reports, including the following:

- Hydrology Report for Storm Drainage System BMP Program, at San Diego International Airport, MACTEC, April 2005.
- Hydraulic Modeling and Tidal Surge Study Final Report for Storm Drainage System BMP Program at San Diego International Airport, MACTEC, November 2005.
- California Environmental Quality Act Significance Determination Thresholds, City of San Diego Development Services Department, January 2007.
- San Diego County Regional Airport Authority, Airport Master Plan Public Outreach Summary Report, January – December 2005, January-December 2006, and January-July 2007 Interim Report.

4.7.2 Groundwater

Depths to groundwater ranges from approximately 7 to 12 feet below ground surface.[26] Flow rate is low due to flat topography, and low permeability. Recharge of the groundwater is limited since most of the land surface at SDIA is paved or semi-paved and, therefore, impervious. Groundwater flow is assumed to be southward toward the Bay.[27]

The general hydrologic regime includes: freshwater underflow from the regional groundwater system toward San Diego Bay; freshwater recharge from water and wastewater distribution, collection, and transmission lines; saline water encroachment from the ocean, and potentially from the larger, deeper storm drains; and brackish to saline native groundwater beneath the artificial fill. The San Diego Formation in the area south of SDIA is the principal aquifer that provides groundwater recharge. Because of SDIA's proximity to San Diego Bay, diurnal changes in sea level caused by lunar tides would cause concurrent changes in the level of groundwater elevations in the near-shore groundwater.

4.7.3 Surface Water

In 2005 approximately 85-90% of Airport property is considered impervious area as the surface is covered by buildings and paved surfaces.[28]

Surface water in the vicinity of SDIA is dominated by San Diego Bay to the south and a leg of the bay called the boat channel, which runs north-south along the western boundary of the airport. Drainage typically flows in a southerly direction toward the Bay and a southwesterly direction toward the boat channel. The largest body of fresh water in proximity to SDIA is the San Diego River, which flows in an east-west direction and drains into the Pacific Ocean approximately one mile to the north. The storm drain system for SDIA is illustrated in **Figure 4.7-1**.

San Diego Bay is the largest marine and bay estuary in Southern California. Depths range from 20 feet at narrow areas to 40 feet in the northern portion with an average depth of 15 feet. As a working harbor, the bay includes recreational boating areas and commercial docks. The boat channel formerly was a portion of the San Diego River Channel, which was diverted to its present location in the 1800s. The channel measures approximately 4,922 feet long by 558 feet wide with an average depth of 15 feet. As a result of shoaling (i.e., sediment accumulation/deposition), the boat channel entrance to the Bay may be shallow.[29]

Portions of San Diego Bay in the vicinity of SDIA are listed under Section 303(d) for impacts due to coliform bacteria and metals. Of the four Toxic Hot Spots in the San Diego Bay, the one located between

[23] San Diego Regional Water Quality Control Board, San Diego Region. Water Quality Control Plan for the San Diego Basin. September 8, 1994.
[24] Hydrology Report for Storm Drainage System BMP Program at San Diego International Airport. MACTEC, April 2005.
[25] Fiscal-year 2004-2005 Municipal Stormwater Permit Annual Report. San Diego County Regional Airport Authority, January 2006.
[26] Redevelopment Agency of the City of San Diego. November 1999.
[27] San Diego Regional Water Quality Control Board, San Diego Region. Water Quality Control Plan for the San Diego Basin. September 8, 1994.
[28] Hydrology Report for Storm Drainage System BMP Program at San Diego International Airport. MACTEC, April 2005.
[29] Redevelopment Agency of the City of San Diego. November 1999.

the foot of Grape Street and the foot of Laurel Street receives stormwater runoff from local urbanized areas of the City of San Diego as well as SDIA.[30]

4.7.4 Water Quality

Rainfall on runways, taxiways, as well as industrial and commercial sites picks up a multitude of pollutants. These pollutants dissolve in the runoff or adsorb onto soil particles and are quickly transported by gravity flow through the network of concrete channels and underground pipes that comprise the SDIA storm drain conveyance systems. These systems ultimately discharge the polluted runoff, without treatment, directly to the San Diego Bay, or indirectly through the boat channel.

Beneficial uses of surface water and groundwater have been established for each body of water within the San Diego County region. According to the Basin Plan, beneficial uses are defined as the uses of water necessary for the survival or well being of man, plants, and wildlife. These uses of water serve to promote the tangible and intangible economic, social, and environmental goals of mankind and include drinking, swimming, industrial, and agricultural water supply, as well as the support of fresh and saline aquatic habitats.

Beneficial uses have been designated for specific coastal bodies of water, inland surface waters, and groundwaters.[31] There are no surface bodies of water located on SDIA property or near the Sponsor's Proposed Action site. The waters near SDIA are the coastal waters of the San Diego Bay and groundwater of the San Diego Mesa Hydrologic Area.

Surface Water Quality

The designated "existing beneficial uses" of the coastal waters of San Diego Bay are:

- Industrial Service Supply (IND) comprises uses of water for industrial activities that do not depend primarily on water quality including, but not limited to, mining, cooling water supply, hydraulic conveyance, gravel washing, fire protection, and oil well repressurization.
- Contact Water Recreation (REC-1) includes uses of water for recreational activities involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, water skiing, skin and scuba diving, surfing, white water activities, fishing, or use of natural hot springs.
- Noncontact Water Recreation (REC-2) includes the uses of water for recreational activities involving proximity to water, but not normally involving body contact with water so that ingestion of water is not reasonably possible. These uses include, but are not limited to, picnicking, sunbathing, hiking, beach combing, camping, boating, tide pool and marine-life study, hunting, sightseeing, or aesthetic enjoyment in conjunction with the above activities.
- Wildlife Habitat (WILD) comprises the uses of water that support terrestrial ecosystems including, but not limited to, preservation and enhancement of terrestrial habitats, vegetation, wildlife (e.g., mammals, birds, reptiles, amphibians, invertebrates) or wildlife water and food sources.
- Commercial and Sport Fishing (COMM) comprises the uses of water for commercial or recreational collection of fish, shellfish, or other organisms including, but not limited to, uses involving organisms intended for human consumption or bait purposes.
- Estuarine Habitat (EST) comprises uses of water that support estuarine ecosystems including, but not limited to, preservation or enhancement of estuarine habitats, vegetation, fish, shellfish, or wildlife (e.g., estuarine mammals, waterfowl, shorebirds).
- Marine Habitat (MAR) comprises uses of water that support marine ecosystems including, but not limited to, preservation or enhancement of marine habitats, vegetation such as kelp, fish, shellfish, or wildlife (e.g., marine mammals, shorebirds).
- Rare, Threatened, or Endangered Species (RARE) includes uses of water that support habitats necessary, at least in part, for the survival and successful maintenance of plant or animal species established under state or federal law as rare, threatened, or endangered.

[30] Hydrology Report for Storm Drainage System BMP Program at San Diego International Airport. MACTEC, April 2005.
[31] California Regional Water Quality Control Board, San Diego Region. Water Quality Control Plan, Chapter 2, "Beneficial Uses," September 1994.

- Migration of Aquatic Organisms (MIGR) includes uses of water that support habitats necessary for migration, acclimatization between fresh and salt water, or other temporary activities by aquatic organisms, such as anadromous fish.
- Shellfish Harvesting (SHELL) includes uses of water that support habitats suitable for the collection of filter-feeding shellfish (e.g., clams, oysters and mussels) for human consumption, commercial, or sport purposes.
- Preservation of Biological Habitats of Special Significance (BIOL) includes uses of water that support designated areas of habitats, such as established refuges, parks, sanctuaries, ecological reserves, or Areas of Special Biological Significance where the preservation or enhancement of natural resources requires special protection.
- Navigation (NAV) includes uses of water for shipping, travel or other transportation by private, commercial, or military vessels.

Currently, there are no "potential beneficial uses" designated for the coastal waters of the San Diego Bay.[32]

The closest identified coastal stream is Powerhouse Canyon located in Balboa Park, more than one (1) mile northeast of the site. Existing beneficial uses for inland surface waters of the Powerhouse Canyon include non-contact water recreation, warm freshwater habitat, and wildlife habitat. Currently, the potential beneficial use of inland surface water for the Powerhouse Canyon is contact water recreation. Powerhouse Canyon does not drain onto SDIA, nor does SDIA drain into Powerhouse Canyon.

Groundwater Quality

Due to poor quality, groundwater underlying SDIA and the former NTC is not used for drinking, irrigation, or industrial supply purposes. No existing or potential beneficial uses for groundwater are designated for the San Diego Mesa Hydrologic Area. According to the Basin Plan, groundwater within this Hydrologic Area has been exempted by RWQCB from the municipal use designation under the terms and conditions of State Board Resolution No. 88-63, "Sources of Drinking Water Policy."

Groundwater testing at the former NTC indicates that metals and minerals did not exceed total threshold limit concentration limits; however, concentration of chromium, copper, lead, nickel, and zinc exceeded San Diego RWQCB standards for protection of marine resources in San Diego Bay. Groundwater exceeding these standards, removed as part of construction site dewatering, is subject to NPDES permitting and would require either discharge into the sanitary sewer system or treatment before discharge into the Bay.[33]

Stormwater Quality

Pollutants typically found in SDIA runoff include sediment, nutrients (e.g., fertilizers), oxygen-demanding substances (e.g., decaying vegetation), bacteria, heavy metals, synthetic organics (e.g., fuels, oils, solvents, lubricants), pesticides, and other toxic substances.[34]

In addition to the pollutants contributed by stormwater or wet weather flows, dry weather runoff can also seriously degrade the quality of the receiving water. Dry weather flows conveyed by the stormwater conveyance system, which can be substantial, consist of flows from groundwater infiltration and accidental, improper, or illegal discharges to the stormwater conveyance system. Common examples of the latter are illegally disposed used motor oil and antifreeze, or spilled jet fuel. These pollutants can severely degrade the beneficial uses of receiving surface waters.

4.8 Historic, Architectural, Archeological, and Cultural Resources

To comply with the National Historic Preservation Act of 1966 and Archaeological and Historic Preservation Act of 1974, historic properties potentially impacted by the Sponsor's Proposed Action must

[32] California Regional Water Quality Control Board, San Diego Region. Water Quality Control Plan, Chapter 2, "Beneficial Uses," September 1994. See Table 2-3.
[33] Redevelopment Agency of the City of San Diego, November 1999.
[34] San Diego County Regional Airport Authority, Storm Water Management Plan, January 2005.

be identified and evaluated. A historic property is defined as one that is listed in, or eligible for listing in, the National Register of Historic Places (NRHP), the official list of the nation's cultural resources.

The National Historic Preservation Act of 1966 (as amended) establishes the National Historic Preservation Program which includes elements for identification, assistance, and protection of historic properties. The Act establishes the Advisory Council on Historic Preservation to advise the President and Congress on historic preservation matters, to recommend measures to coordinate Federal preservation activities, and to comment on Federal actions affecting properties included in or eligible for inclusion in the NRHP.

The Archaeological and Historic Preservation Act of 1974 provides for the survey, recovery, and preservation of significant scientific, prehistoric, historic, or archaeological data that may be destroyed or irreparably lost due to a federally funded or federally licensed project.

The NRHP has established standards by which individual resources (both archaeological and architectural) are evaluated to determine their eligibility for listing. Resources may include buildings, sites, objects, and structures and are placed on the National Register according to the following summarized criteria:

A) Association with events that have made a significant contribution to the broad patterns of American history; or

B) Association with the lives of persons significant in our past; or

C) Significance for architecture; or

D) Significance for archaeology (36 Code of Federal Regulations (CFR) 60.4).

To determine the presence of cultural properties, an Area of Potential Effect (APE) must be determined. The APE must include the area that may be environmentally impacted by the Sponsor's Proposed Action. The Area of Potential Affect (APE) for the Sponsor's Proposed Action, as illustrated in **Figure 4.8-1**, is defined as the SDIA property in its entirety and the adjacent areas under Authority control as this area represents the area that may be disturbed by construction of the Proposed Action. This includes a portion of the former Naval Training Center (NTC), located at the west end of the SDIA property, and the former Teledyne Ryan parcel, located in the southeastern portion of the SDIA property. It is noted that potential noise impacts were considered in establishing the proposed APE. Analysis showed that the noise impacts resulting from the Proposed Action would not meet the FAA's criteria to be considered significant (i.e. the difference between the noise exposure level resulting from the Proposed Action and the No Action Alternative over noise sensitive areas exposed to DNL 65 dB or greater is less than DNL 1.5 dB[35]), see Section 5.1, *Noise*, for details on the noise analysis. Therefore, the Proposed Action when compared to the No Action Alternative would not impact the character or use of historic properties outside the area disturbed by construction. Consultation with the State Historic Preservation Office (SHPO) is included in Appendix A.

Potential historical and architectural significance of buildings, structures and historic archaeological sites, as well as potential significance of prehistoric archaeological resources, was determined by applying criteria of the National Register of Historic Places and the California Register of Historical Resources.

4.8.1 Architectural Resources

Prior to undertaking field studies, the NRHP's database, the California Inventory of Historic Resources, and California Historical Landmarks were reviewed through a record search obtained from the South Coastal Information Center at San Diego State University to determine the presence of previously identified resources within the APE. In addition, SDCRAA provided historic survey information for the former Teledyne Ryan Aeronautical Complex. Research was conducted at the archives of the San Diego Aerospace Museum and the San Diego Historical Society, to prepare a historical overview that would identify important themes and contexts against which to evaluate buildings and structures located in the APE. These included: (1) early airport development, (2) development of the airline industry, (3) development of the aircraft manufacturing industry at Lindbergh Field, and (4) contributions of Lindbergh Field aircraft manufacturers to World War II and the early Cold War.

[35] In California the standard cumulative noise metric is CNEL, in this analysis CNEL is substituted for the DNL metric used by FAA to assess noise.

SDCRAA provided dates of construction for buildings and structures in the APE. This information was augmented by research conducted for the historic background study. All buildings older than 45 years old or that would be 50 years old by 2015 were recorded and assessed for significance as historic resources based on their potential eligibility for listing on the National Register of Historic Places, California Register of Historical Resources, or local City of San Diego Historic Resources Board List. A qualified historian inspected each potentially significant historic resource within the study area and took field notes and photographs. State of California Department of Parks and Recreation Primary and District, or Building, Structure, and Object Record forms were completed for each of the buildings evaluated.

The Historic Architectural Survey Report and the Archaeological Survey Report are included in **Appendix F**, *Historic Resources*.

Table 4-8.1 lists the buildings evaluated for significance (shown in **Figure 4.8-2**); that is, those properties older than 45 years old or that would be 50 years old by 2015, which is the year of future analysis for the EA. There are five buildings in the Airport area that will be at least 50 years old by 2015: Southwest Airlines Cargo/US Airways Building, the two former Sky Chefs Buildings, the Aircraft Service International Group (ASIG) Building, and the Allied Aerospace Building. A complex of buildings at the former Teledyne Ryan property is over 50 years old. All these buildings are discussed in this section.

The two former Sky Chefs Buildings were constructed between 1956 and 1966. They are not shown in a 1956 Sanborn Fire Insurance map, but they are present on the USGS topographic map, prepared in 1966. These two buildings are on a parcel owned by the Port Authority that is surrounded by Airport property and the former Teledyne Ryan property. The Southwest Airlines Cargo/US Airways Building was built in 1960. These three buildings all lack any significant historical associations or architectural distinction, and so are not eligible for listing on the National or California Registers or the City of San Diego's Historical Resources Board list. Although started in 1965, Terminal 1 was not completed until 1967. It, therefore, will not be 50 years old until 2017 and for this reason was not included in the building assessments.

The ASIG building is the original United Airlines hangar and terminal, constructed along Pacific Highway at the southeast corner of the airfield in May 1931. It was the second building constructed at Lindbergh Field. The building is significant under National Register Criterion C. Its design reflects early aircraft hangar and terminal construction typical of the late 1920s and early 1930s. The building shows very little modification from its original design and retains excellent integrity of design, workmanship, and materials which still convey a strong feeling and association for the early airport development at Lindbergh Field and the early pioneering development of airline industry. The building is also significant under National Register Criterion A, due to the fact that it was the second building constructed at the airport and was used by United Airlines as its hangar and terminal when San Diego was United's hub during the early years of passenger aviation. As such, it has strong associations with the development of the airline industry at Lindbergh Field and along the west coast. United Airlines was instrumental in the growth passenger aviation on the west coast. Although it has been moved from its original location, the building meets National Register Criteria Consideration B. This allows moved properties that are significant primarily for their architectural value, or as a surviving property most importantly associated with historic persons or events, to be considered eligible for the National Register, even though they are no longer located where they stood during their period of significance.[36,37] The original United Terminal meets this consideration in that the building retains its original architectural design and integrity and is the only surviving building from the earliest period of development at Lindbergh Field between 1928 and 1933. In addition, the building would qualify for listing as an important resource by the City of San Diego's Historic Resources Board and is eligible for listing on the California Register of Historic Places.

The Allied Aerospace building was built in 1945 and was part of the Consolidated (later Convair, and finally General Dynamics) complex. Currently, the San Diego Air & Space Museum has assumed control over the Allied Aerospace building. This building is significant for its association with the Consolidated Aircraft Plant and the aircraft manufacturing industry as Lindbergh Field's contribution to World War Two. This building was identified as part of the Consolidated Historic District Complex in 1996, when General Dynamics vacated the former Consolidated site. It was not included in the Historic American Building Survey / Historic American Engineering Record (HABS/HAER) level documentation conducted as

[36] 1990 National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation. U.S. Department of the Interior, National Park Service, Interagency Resources Division, Washington D.C.

[37] 1993 National Register Bulletin 36: Guidelines for Evaluating and Registering Historical Archaeological Sites and Districts. U.S. Department of the Interior, National Park Service, Interagency Resources Division, Washington D.C.

mitigation for the demolition of the buildings at that time, as it was outside of the project footprint. The Allied Aerospace building retains integrity of design, materials, workmanship, feeling, and association and

Table 4-8.1

Evaluated Buildings and Structures

Area	Facility No.	Current Function	Original Function	Date of Construction	Significance
Main Airport Area					
	2412	Southwest Airlines Cargo / US Airways Building	Pacific Southwest Airlines (PSA) Headquarters	1960	Not significant
	2415 &2417	Vacant	Sky Chefs Buildings	1956-1966	Not significant
	2340 A-D	ASIG Building	United Airlines 1931 Hangar & Terminal	1931, moved 1957	Eligible for local City of San Diego Historic Resources Board listing, and National and California Register listing
	NA	Allied Aerospace Building	Consolidated Aircraft Wind Tunnel	1945	Eligible for National and California Register listing
Former Teledyne Ryan Complex					
	100	Vacant	Ryan Aeronautical Administration Building	1940	Eligible for National and California Register listing as an element of a district and individually
	102	Vacant	Ryan Aeronautical Contracts and Pricing Office	1944	Eligible for National and California Register listing as an element of a district
	104	Vacant	Ryan Aeronautical Engineering Building	1943	Eligible for National and California Register listing as an element of a district
	105	Vacant	Ryan Aeronautical Materials & Processing Laboratory & Engineering Building	1957	Eligible for National and California Register listing as an element of a district
	111	Vacant	Ryan Aeronautical Welding Shop	After 1956	Eligible for National and California Register listing as an element of a district
	110/112 (122)	Vacant	Ryan Aeronautical Planishing (Metal Finishing) Shed	c. 1940s	Eligible for National and California Register listing as an element of a district
	115	Vacant	Ryan Aeronautical Ancillary Building	After 1956	Not significant
	120	Vacant	Ryan Aeronautical Main Factory Building	1939	Eligible for National and California Register listing as an element of a district and individually
	121	Vacant	Ryan Aeronautical Receiving Warehouse	1939-1940	Eligible for National and California Register listing as an element of a district
	123	Vacant	Ryan Aeronautical Pump Headquarters associated with Standby Water Tank	1943	Not significant
	125	Vacant	Ryan Aeronautical Paint & Oil Storage Building	1941	Not significant

Table 4-8.1

Evaluated Buildings and Structures

Area	Facility No.	Current Function	Original Function	Date of Construction	Significance
	126	Vacant	Ryan Aeronautical Paint Shop Building	1941	Not significant
	127	Vacant	Ryan Aeronautical Office & Photo Lab	c. 1940s	Not significant
	129	Vacant	Ryan Aeronautical Sandblasting Shed	c. 1950s	Not significant
	130	Vacant	Ryan Aeronautical Ancillary Building	After 1956	Not significant
	131	Vacant	Ryan Aeronautical Factory Building	1956-1966	Eligible for National and California Register listing as an element of a district
	140	Vacant	Ryan Aeronautical Final Assembly Building	1943	Eligible for National and California Register listing as an element of a district and individually
	142	Vacant	Ryan Aeronautical Repair Building	c. 1940s	Not significant
	146	Vacant	Ryan Aeronautical Engineering & Manufacturing Building	1945	Eligible for National and California Register listing as an element of a district
	147	Vacant	Ryan Aeronautical Ancillary Building		Not significant
	148/149	Vacant	Ryan Aeronautical Ancillary Building		Not significant
	150	Vacant	Ryan Aeronautical Ancillary Building		Not significant
	152	Vacant	Ryan Aeronautical Jet Engine Drone Assembly Building	1952	Eligible for National and California Register listing as an element of a district
	153	Vacant	Ryan Aeronautical Burner Shed	c. 1950s	Not significant
	154	Vacant	Ryan Aeronautical Ancillary Building	c. 1950s	Not significant
	156	Vacant	Ryan Aeronautical Warehouse. Identified as Building # 154 on 1956 Sanborn Fire Insurance Map (Sanborn 1956)		Eligible for National and California Register listing as an element of a district
	157	Vacant	Ryan Aeronautical - use undetermined	c. 1950s	Not significant
	158	Vacant	Ryan Aeronautical Test Building associated with Final Assembly Building	c. 1950s	Not significant
	159	Vacant	Ryan Aeronautical Storage Building	c. 1950s	Not significant
	160	Vacant	Ryan Aeronautical Foundry and Plaster Shop	1940	Eligible for National and California Register listing as an element of a district
	161	Vacant	Ryan Aeronautical Carpenter Shop	1941	Not significant
	166	Vacant	Ryan Aeronautical Salvage Headquarters	1940-1941	Not significant
	167	Vacant	Ryan Aeronautical Acid Storage Building	c. 1940s	Not significant

Table 4-8.1

Evaluated Buildings and Structures

Area	Facility No.	Current Function	Original Function	Date of Construction	Significance
	168	Vacant	Ryan Aeronautical Warehouse Addition Building	c. 1950s	Not significant
	169	Vacant	Ryan Aeronautical Plaster Pattern Staging Building	c. 1940s	Not significant
	170	Vacant	Ryan Aeronautical Parts/Drop Hammer Structures	c. 1950s	Not significant
	180	Vacant	Ryan Aeronautical Experimental/Receiving & Assembly Building	1932, moved 1944	Eligible for National and California Register listing as an element of a district and individually
	181	Vacant	Ryan Aeronautical Airplane Storage Building	1937-1938, moved 1944	Eligible for National and California Register listing as an element of a district
	182	Gone	Ryan Aeronautical Old Record Storage Building	c. 1940s	Not significant
	183	Vacant	Ryan Aeronautical Tool Storage Building	1951	Eligible for National and California Register listing as an element of a district
	221	Vacant	Ryan Aeronautical Covered Walkway	c. 1950s	Not significant
	230	Vacant	Ryan Aeronautical - use undetermined	c. 1950s	Not significant
	236	Vacant	Ryan Aeronautical Ancillary Building		Not significant
	240	Vacant	Ryan Aeronautical Ancillary Building		Not significant
	242	Vacant	Ryan Aeronautical Storage Shed	c. 1950s	Not significant
	513	Vacant	Ryan Aeronautical associated with Jet Engine/Drone Assembly Building	c. 1950s	Not significant
	NA	Abandoned	Ryan Aeronautical Company Standby Water Tank	1943	Not significant

Source: Affinis and Walter Enterprises, May 2006. *Historic Architectural Survey Report: San Diego International Airport Master Plan.* Prepared for San Diego County Regional Airport Authority (See Appendix F).

As a result of the current study, 17 buildings at the former Teledyne Ryan Aeronautical Complex, listed on **Table 4-8.2**, have been determined to be eligible for listing on the National Register of Historic Places, the California Register of Historical Resources, and the City of San Diego Historical Resources Board list, as contributing elements to a Ryan Aeronautical Company Historic District. The buildings that constitute contributing elements to the district are described in detail on the accompanying California Department of Parks and Recreation District Form included in Appendix 1 of Appendix F. Non-contributing elements are listed in **Table 4-8.3**.

These buildings constitute a district that is eligible at a regional level for a period of significance between 1939 and 1969. It was during this 30 year span that the site was directly associated with aviation pioneer T. Claude Ryan and his management of the company, as well as Ryan Aeronautical's contributions to national defense production during the Second World War and important developments in aerospace research and development during the 1950s and 1960s. The buildings and structures have been chosen because of all the resources on the 43-acre complex, they architecturally embody the distinctive design characteristics of aircraft manufacturing plants in southern California during the period of significance. They serve as representations of the Ryan Aeronautical Company manufacturing plant during the time

when numerous advances in aviation technology were made and are directly associated with T. Claude Ryan's important contributions in aviation during that time, as well as his role in the establishment of the aircraft industry in San Diego. The buildings also represent the accomplishments of the aircraft industry at Lindbergh Field and the contribution to defense production these aircraft manufacturing plants made during the Second World War.

Table 4-8.2
Ryan Aeronautical Company Historic District Contributing Elements

Building No.	Function
100	Ryan Aeronautical Administration Building
102	Ryan Aeronautical Contracts and Pricing Office
104	Ryan Aeronautical Engineering Building
105	Ryan Aeronautical Materials & Processing Laboratory & Engineering Building
110/112	Ryan Aeronautical Planishing (Metal Finishing) Shed
111	Ryan Aeronautical Welding Shop
120	Ryan Aeronautical Main Factory Building
121	Ryan Aeronautical Receiving Warehouse
131	Ryan Aeronautical Factory Building
140	Ryan Aeronautical Final Assembly Building
146	Ryan Aeronautical Engineering & Manufacturing Building
152	Ryan Aeronautical Jet Engine Drone Assembly Building
156	Ryan Aeronautical Warehouse
160	Ryan Aeronautical Foundry and Plaster Shop
180	Ryan Aeronautical Experimental/Receiving & Assembly Building
181	Ryan Aeronautical Airplane Storage Building
183	Ryan Aeronautical Tool Storage Building

Source: Affinis and Walter Enterprises, 2006.

Teledyne Ryan conducted aeronautical manufacturing operations using a variety of chemicals and hazardous substances during its years of operation. Subsequent to evidence of polychlorinated biphenyls (PCB) contamination found in sediment in Convair Lagoon, a nearby off-airport property site, environmental investigation and testing indicated that the former Teledyne Ryan Facility was the primary source of the contaminants (See Section 5.15, Hazardous Materials). In 2004, a Clean Up and Abatement Order (CAO) was issued by the California Regional Water Quality Control Board that requires the clean up and remediation of hazardous substances at the site.38 Under the CAO, the full extent of any involvement with asbestos containing materials (ACM) and/or lead-based paints (LBP), as well as the delineation of underlying environmental contamination will be determined. Due to the extensive contamination of the buildings, it is unlikely the buildings could be remediated to a usable state, and would therefore necessitate demolition.

Until these requirements are further identified and achieved, no actions or projects associated with the site will be undertaken that could potentially interfere with these abatement and clean up actions.

In addition to the historic district, Buildings 180 and 181 are significant as the original Ryan hangars, built on Pacific Highway in the early 1930s. These two hangars, along with the United Airlines hangar/terminal (the ASIG building) formed the core of the original Lindbergh Field. Although no longer at their original location, these buildings represent the first aircraft manufacturing plant at Lindbergh Field. They are significant for their association with T. Claude Ryan and his participation in the early development of Lindbergh Field and for their representation of shops typically used during the earlier phases of aircraft manufacturing, when it was still a craft industry and had not yet developed into the large-scale mass production required by the Second World War, which necessitated much larger buildings.

[38] Clean Up and Abatement Order (CAO) No. R9-2004-0258 from the California Regional Water Quality Control Board.

Table 4-8.3
Ryan Aeronautical Company Historic District Non-Contributing Elements

Building No.	Function
115	Ryan Aeronautical Ancillary Building
123	Ryan Aeronautical Pump Headquarters associated with Standby Water Tank
125	Ryan Aeronautical Paint & Oil Storage Building
126	Ryan Aeronautical Paint Shop building
127	Ryan Aeronautical Office & Photo Lab
128	Ryan Aeronautical Ancillary Building
129	Ryan Aeronautical Sandblasting Shed
130	Ryan Aeronautical Ancillary Building
142	Ryan Aeronautical Repair Building
147	Ryan Aeronautical Ancillary Building
148-149	Ryan Aeronautical Ancillary Building
150	Ryan Aeronautical Ancillary Building
153	Ryan Aeronautical Burner Shed
154	Ryan Aeronautical Ancillary Building
157	Ryan Aeronautical - Use Undetermined
158	Ryan Aeronautical Test Building Associated with Final Assembly Building
159	Ryan Aeronautical Storage Building
161	Ryan Aeronautical Carpenter Shop
166	Ryan Aeronautical Salvage Headquarters
167	Ryan Aeronautical Acid Storage Building
168	Ryan Aeronautical Warehouse Addition Building
169	Ryan Aeronautical Plaster Pattern Staging Building
170	Ryan Aeronautical Parts/Drop Hammer Structures
182	Ryan Aeronautical Old Record Storage Building
221	Ryan Aeronautical Covered Walkway
230	Ryan Aeronautical - Use Undetermined
236	Ryan Aeronautical Ancillary Building
240	Ryan Aeronautical Ancillary Building
242	Ryan Aeronautical Storage Shed
513	Ryan Aeronautical Building Associated with Jet Engine/Drone Assembly Building

Source: Affinis and Walter Enterprises, 2006.

4.8.2 Archaeological Resources

Thirteen archaeological sites have been recorded within a one-mile radius of the SDIA Master Plan project area, none within the project area itself. Four of these sites were recorded in the early part of the 20th century and were already quite disturbed at that time. Three of the sites (CA-SDI-36, CA-SDI-37, and CA-SDI-53) were described as traces of probable camp sites. The fourth site (CA-SDI-54) was described as traces of a refuse heap on a bluff, which washed away as the bluff receded. The site's documentation was based on observations of a gully. The only other prehistoric or Native American site in the vicinity is a light shell scatter that may have been redeposited from SDM-W-291, which Malcolm Rogers considered to be associated with the ethnohistoric village of Kosoy.

Eight historic archaeological sites have been documented within one mile of the APE. These include a sparse deposit of historic debris, redeposited from another area; the Barth Foundry Dump site; two historic period graves at the former NTC; World War II foundations at the former NTC; a 1930s dump at the former NTC; a historic artifact scatter from the early part of the 20th century; a historic dump used circa 1900-1930; and a small historic refuse deposit encountered during monitoring at the former NTC. A number of historic structures have been recorded within one mile of the APE, including buildings at NTC and MCRD, as well as buildings and structures associated with the Consolidated Aircraft Plant No. 1, almost all of which have been removed.

No archaeological sites have been identified within the APE. The current topography of the APE has been achieved through decades of dredging and placement of fill soils in an area of bay and mudflats. In addition, the APE is the site of the existing SDIA, and there is no undisturbed ground surface. Based on this, archaeological resources would not be anticipated in the Study Area. However, concerns expressed during the comment period by the San Diego County Archaeological Society indicated that shore side trash and debris may have been used as fill prior to 1940 in the east most area of the Airport which could mean that there may be a historic dump present in the APE.

4.8.3 Cultural Resources

No traditional cultural properties, Native American heritage sites or other culturally important sites or areas have been identified within the APE. The Native American Heritage Commission (NAHC) sacred lands files do not list any sacred sites in proximity to the APE.

4.9 Fish, Wildlife, and Plants

The Endangered Species Act of 1973, as amended, regulates activities affecting plants and animals designated as Threatened or Endangered. It also provides measures to help alleviate the loss of species and their habitat to ensure their survival.

Impacts to biotic communities and threatened and endangered species were assessed through a review of previous documents (e.g., least tern nesting records, Biological Opinion [BO]) and assessment of the potential for SDIA to support vegetation habitat. Because the vast majority of SDIA is developed or highly disturbed, this effort focused on two areas: (1) previously documented least tern nesting areas ("ovals") at the southeast portion of SDIA and (2) the undeveloped portion (approximately 34 acres) of the 52-acre parcel transferred from the former Naval Training Center (NTC). Within the former NTC Parcel, vegetation communities were mapped using aerial interpretation combined with direct observation.

In accordance with Section 7(c) of the Endangered Species Act of 1973, as amended, coordination was conducted with the U.S. Fish and Wildlife Service (USFWS) and the State of California to determine any documented occurrences of Threatened and Endangered or critical habitat that could potentially be present within the Study Area. For a more detailed list of plants and animal species with the potential to occur, see **Appendix G**, *Biological Resources.* Initial coordination with USFWS is included in Appendix A.

4.9.1 Biotic Communities

The habitat surrounding and including SDIA supports a limited number of biological resources because much of the area is already extensively developed. Except as noted below, the entire area within the perimeter of the SDIA boundaries is developed or disturbed in some manner with no native vegetation existing on the site. In areas where sparse vegetation has been able to grow, patches of ruderal species such as Bermuda grass (*Cynodon dactylon*), feathergrass (*Nassella tenuissima*), common tanglehead (*Heteropogon contortus*), and curly dock (*Rumex crispus*) exist. These areas are limited to the ovals between runways, taxiways, roads, and a strip between the runway and the northern fence at the western portion of the airport. Vegetation also is present in a portion of the former NTC parcel.

Ovals

Patches of ruderal fields in the ovals between taxiways, the runway and roads serve as wildlife habitat. The composition of these grasslands varies, consisting of a mosaic of weeds, grass, bare soil, and gravel. These areas offer potential nest sites for avian species.

Former NTC Parcel

The Landfill Remediation Plan for the former NTC was initiated in the Summer of 2008. Prior to the issuance of this Draft EA four vegetation communities and developed lands were mapped in the former NTC parcel, as described in the text that follows. Vegetation communities were determined pursuant to Holland 1986[39] and Oberbauer 1996[40]. These descriptions of vegetation communities and developed land are informational as the vegetation communities within the former NTC parcel will be largely replaced with disturbed habitat consisting of barren and compacted soil during the landfill remediation process.

Baccharis Scrub

Baccharis scrub is an upland community recognized by resource agencies as a subtype of coastal sage scrub. Due to the altered nature of the site and its location on fill soils, this habitat type most likely established as a pioneer community rather than following Diegan coastal sage scrub disturbance. It is dominated by broom baccharis (*Baccharis sarothroides*); with San Diego goldenbush (*Isocoma menziesii* var. *menziesii*), telegraph weed (*Heterotheca grandiflora*), horseweed (*Conyza canadensis*), red brome (*Bromus madritensis* ssp. *rubens*) and Russian thistle (*Salsola tragus*) as non-dominant species. San Diego goldenbush is dominant in disturbed areas. This habitat occurs in the northern portion of the former NTC parcel and covers approximately 0.5 acre.

Non-native Grassland

Non-native grassland is a dense to sparse cover of annual grasses, often associated with numerous species of showy-flowered native annual forbs. This association occurs on gradual slopes with deep, fine-textured, usually clay soils. Characteristic species on site consist of oats, red brome, ripgut grass (*Bromus diandrus*), Bermuda grass, rye grass (*Lolium multiflorum*), and smilo grass (*Piptatherum miliaceum*). This habitat occurs primarily in the westernmost portions of the former NTC parcel and covers approximately 1.1 acres.

Non-native Vegetation

This habitat type consists of cultivated plants that have naturalized into otherwise native habitat areas or were put in place by humans, usually for the purpose of beautification, windbreaks, or other related purposes. Non-native vegetation on site consists of a row of trees along the western property boundary and adjacent patches of non-native groundcover. Species observed include pine (*Pinus* sp.), Brazilian pepper (*Schinus terebinthifolius*), Canary Island date palm (*Phoenix canariensis*), and sea fig (*Carpobrotus edulis*). This habitat covers approximately 0.8 acre.

Disturbed Habitat

Disturbed habitat includes unvegetated or sparsely vegetated areas, particularly where the soil has been heavily compacted by prior development or where agricultural lands have been abandoned. Disturbed habitat on site is represented by a combination of bare, graded land, and areas comprised of weedy species. Characteristic species include crown daisy (*Chrysanthemum coronarium*), mustard (*Brassica* sp.), white sweet clover, pigweed (*Chenopodium album*), English plantain, and Russian thistle. This habitat covers the majority (approximately 31.7 acres) of the former NTC parcel.

4.9.2 Endangered and Threatened Species: Flora & Fauna

No listed endangered or threatened plant species have been observed on-site at SDIA, nor are any expected to occur due to the developed/disturbed nature of the Airport and the former Teledyne Ryan leasehold.

Coordination with the USFWS and the California Department of Fish and Game resulted in the identification of several listed animal species that have the potential to occur in the SDIA Study Area. SDIA is used by the California least tern (*Sterna antillarum browni*, federal and state listed as

[39] Holland, R.F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. Nongame-Heritage Program, State of California, Department of Fish and Game, Sacramento. 156 pp.

[40] Oberbauer, T. 1996. Terrestrial Vegetation Communities in San Diego County Based on Holland's Descriptions. February.

endangered); the western snowy plover (*Charadrius alexandrinus nivosus*; Pacific coastal population federally listed as threatened); and the California horned lark (*Eremophila alpestris actia*; a state species of concern and former federal Category 2 Candidate). The peregrine falcon (*Falco peregrinus anatum*, state listed as endangered [federal delisted as endangered]) also occasionally uses the SDIA area incidentally to its presence in the San Diego Bay region. The California brown pelican (*Pelecanus occidentalis californicus*) uses areas of the San Diego Bay region as foraging habitat. Of these avian species, the western snowy plover, the California horned lark, and the California least tern use or may use habitable areas of SDIA during the nesting season. These species are addressed below.

California Least Tern

California least terns breed from San Francisco Bay south to Baja California. In San Diego County, this species is a fairly common summer resident from early April to the end of September.[41] Wintering areas are along the Pacific coast of South America. This small migratory tern nests colonially on undisturbed, sparsely vegetated, flat areas with loose, sandy substrate adjacent to open water foraging areas. The California least tern is federally listed as endangered with loss of nesting habitat being the primary cause for the initial decline of the population of the California subspecies. Few undisturbed beach nesting areas remain and California least terns are now found in varied habitats ranging from mudflats to airports. Breeding California least terns begin nesting in mid-May and June. California least terns abandon the nesting colonies by mid-August and migrate south by mid-September. California least terns exhibit a tenacity to the colony site where they first breed successfully. Prey includes northern anchovy, top smelt, killifish, mosquito fish, shiner, surf perch, and mudflat gobies.

California least terns have nested at multiple locations at SDIA (**Figure 4.9-1**) with the first observations of terns thought to be nesting occurring in 1969.[42] It is likely, given the historic configuration of the San Diego shoreline and the tern's documented use of fill and airports, that nesting occurred at this site prior to 1969.[43] The site was first monitored for tern nesting in 1970; and, in that year, SDIA supported the third largest colony in the state. Nesting at the airport has been documented in 28 of the last 36 years. Areas used for nesting by the California least tern have been monitored annually by the California Department of Fish and Game (CDFG) since 1976. There is an annual fluctuation in the number of least tern nests at SDIA; the cause of this fluctuation is not known. **Table 4-9.1** lists the number of least tern nests observed at SDIA from 2001 to 2006. It should be noted that some pairs of least terns may have more than one nest.

The Airport has supported a significant percentage of the nesting population of the state in multiple years. Terns have nested at several locations around the Airport; with Oval 3 South being the area used most consistently (locations are indicated in Figure 4.9-1). Various projects have obligated tern management efforts at SDIA and a Biological Opinion (BO) prepared by the USFWS requires reasonable and prudent measures for protecting terns at SDIA. The BO stated a number of conditions/protective measures, which included, among others, the following:

- The FAA and the SDCRAA[44] will maintain in perpetuity Ovals 0-1S, 0-2S, 0-3S, and 0-4S as nesting habitat for California least tern.
- The FAA and SDCRAA placed tern fledgling nest barriers/fencing around the perimeter of the above ovals to prevent the movement of fledglings outside these areas onto runways and taxiways. The fence is inspected and maintained by a qualified tern biologist with the appropriate endangered species permit issued by the USFWS.
- The FAA and SDCRAA provide annual funding for a predator control program; however, no shooting of tern predators at SDIA is allowed and non-lethal means are preferred.
- The FAA and SDCRAA will prepare and maintain in perpetuity a minimum of 6.2 acres of contiguous supratidal habitat at the Chula Vista Wildlife Reserve in south San Diego Bay for tern nesting.

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41 Unitt, P. San Diego Society of Natural History. The Birds of San Diego County. 1984.

42 Craig, A. Survey of California Least Tern Nesting Sites. California Department of Fish and Game Wildlife Management Branch. 1970.

43 Craig, A. Survey of California Least Tern Nesting Sites. California Department of Fish and Game Wildlife Management Branch. 1970.

44 The Biological Opinion measures were directed at the Port of San Diego, not the SDCRAA, because at the time, SDIA was operated by the Port. Because the responsibilities regarding the least tern have transferred to the SDCRAA, references to the Port of San Diego have been revised accordingly.

Table 4-9.1

Least Tern Nesting at SDIA

Year	Estimated Number of Breeding Pairs at SDIA	Number of Nests at SDIA
2006	114	131
2005	121 – 150	157
2004	65 – 70	76
2003	46 – 51	53
2002	48	50
2001	35-66	36
5-year average	67*	74

* Based on mean of each annual range in estimated pairs.

Sources:

Patton, R. 2002. California least tern breeding survey, 2000 season. Calif. Dep. Fish and Game, Habitat Conservation and Planning Branch, Species Conservation and Recovery Program Report, 2002-03

Patton, R. 2003 draft. California least tern breeding survey, 2003 season. Calif. Dep. Fish and Game, Habitat Conservation and Planning Branch, Species Conservation and Recovery Program Report. Unpublished draft.

Marschalek, D. 2004 draft. California least tern breeding survey, 2004 season. Calif. Dep. Fish and Game, Habitat Conservation and Planning Branch, Species Conservation and Recovery Program Report. Unpublished draft.

Gilb, R. 2005. Preliminary draft summary of California least tern breeding at San Diego Regional Airport Authority and San Diego Unified Port District sites, 2005.

- The FAA and District are responsible for assuring ongoing monitoring of tern populations at SDIA and at Chula Vista Wildlife Reserve by qualified tern biologist(s).

In addition, the BO specified certain practices for construction crews working on facility improvements, including educating workers on prohibitions to applying materials, storing equipment, or performing maintenance near the ovals, constraining ingress and egress routes to specific locations during the nesting season (greater than 1,200 feet from the ovals), lowering crane booms when not in use, ensuring that trash would be properly disposed and that workers would not feed potential tern predators in the area. Correspondence with the USFWS and California Department of Fish & Game dated September 26, 2006, recommended that construction of the new apron hold pads and the new Taxiway east of Taxiway 'D' should be scheduled to occur from September 16 to March 31 (outside of the least tern nesting season) in accordance with the BO. **Figure 4.9-2** illustrates the area of concern for scheduling construction relative to the Sponsor's Preferred Alternative.

Western Snowy Plover

The coastal population of the western snowy plover is federally listed as threatened. A single pair of the western snowy plovers nested at SDIA in 1979.[45]

California Horned Lark

This subspecies of horned lark is known to use areas within SDIA. The California horned lark is a sensitive species that has decreased in abundance across its entire range, presumably because of loss of habitat.[46] California horned larks have been eliminated as a nesting species from much of the SDIA area. Horned larks are thought to nest at MCRD and are known to nest at North Island.[47]

The California horned lark is a designated California Species of Special Concern by CDFG, which means it must be considered in state environmental documentation and is a former federal Category 2 candidate. Protective measures afforded to Category 2 candidates have been removed by the federal government, and California horned larks have not been proposed for listing.

[45] Unitt, P. San Diego Society of Natural History. The Birds of San Diego County. 1984.
[46] Gallagher, S.R. Atlas of Breeding Birds, Orange County, California. 1997.
[47] San Diego Unified Port District. Environmental Constraints Analysis for San Diego International Airport Master Plan 2020. Prepared by CH2M HILL. March 1999.

4.9.3 Habitat Conservation and Natural Communities Conservation Plans

SDIA is not within an adopted habitat management plan or natural communities conservation plan. Although the Airport is within the municipal limits of the City of San Diego, and the City is a participating jurisdiction in the San Diego Multiple Species Conservation Program (MSCP), State Tidelands along San Diego Bay are specifically excluded from the MSCP. These State Tidelands are addressed in the *San Diego Bay Integrated Natural Resources Management Plan*, which was prepared by the U.S. Navy and the Port of San Diego; however, that plan does not focus on "developed fill areas" such as SDIA, nor does it provide applicable guidance for the development of SDIA or the former Teledyne Ryan leasehold.[48]

4.10 Wetlands

Executive Order 11990 requires Federal agencies to minimize the destruction, loss, or degradation of wetlands resulting from their actions. Section 404 of the Clean Water Act, as amended, requires regulation of discharges or fill matter into Waters of the United States. The U.S. Army Corps of Engineers (Corps) has primary responsibility for implementing, permitting, and enforcing the provisions of Section 404, Section 10 of the Rivers and Harbors Act, which regulates obstruction or alteration of navigable waters. The Corps and/or the Coast Guard are responsible for Section 10 permitting.

Wetlands are defined as those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar special aquatic habitats.[49]

SDIA is highly developed (e.g., buildings, paved surfaces, ornamental landscaping) and contains few areas with the potential to support wetlands. In 2008 the former NTC parcel includes the most unpaved surface on the SDIA property. The former NTC parcel that would be developed for the Terminal 2 West expansion supports nonnative and/or disturbed habitat that is isolated from other areas of native habitat by urban development. Virtually all of the remaining areas that would be developed under the West Terminal Alternative consist of bare earth, paved surfaces, structures or ornamental (low habitat value) landscaping. Recent aerial photographs (1"=150' scale), USGS topographic maps, and the County of San Diego soil survey were reviewed to determine the location of any potential jurisdictional wetland areas that may be affected by the Sponsor's Proposed Action. Review was undertaken for jurisdictional habitats that may fall under Corps jurisdiction pursuant to Section 404 of the Clean Water Act (33 U.S.C. 1344), wetland and streambed habitats under California Department of Fish and Game (CDFG) jurisdiction pursuant to Section 1600 of the Fish and Game Code, and wetland habitat under California Coastal Commission (CCC) jurisdiction pursuant to Section 30121 of the California Coastal Act. During this review it was determined that there was no habitat that met the criteria for jurisdictional wetlands per the federal Clean Water Act, California Game and Fish Code, or the California Coastal Act.

Lastly, the SDCRAA certified the final EIR for the Former NTC Landfill Remediation Project in November 2007. The Former NTC Landfill Remediation Project began in the summer of 2008 after completion of all permitting.

4.11 Coastal Resources

The Coastal Zone Management Act (CZMA) of 1972 ensures effective management, beneficial use, protection and development of the coastal zone. Coastal Zone Management Programs, prepared by states according to guidelines issued by the National Oceanic and Atmospheric Administration (NOAA), are designed to address issues affecting coastal areas.

Therefore, for this EA, coastal resources are identified in accordance with the California Coastal Act of 1976 ("Coastal Act"; California Public Resources Code Sections 30,000 et seq.). This act, which is

[48] U.S. Department of the Navy, Southwest Division and San Diego Unified Port District. San Diego Bay Integrated Natural Resources Management Plan. September 2000. Prepared by Tierra Data Systems. Citation is from Page 1-5 of the plan.

[49] 33 Code of Federal Regulations (CFR) 328.3(c), 1996.

consistent with the Federal Coastal Zone Management Act, contains the State's adopted policies with regard to the protection of coastal resources.

SDIA and the entire Study Area are within California's Coastal Zone, as designated by the Coastal Act. There is no Coastal Commission-certified Airport Land Use Plan for SDIA, although the Airport and its study area were encompassed previously by the Coastal Commission-certified *Port Master Plan*. The *Port Master Plan* designates SDIA as International Airport, Aviation Related Commercial and Aviation Related Industrial. In general, the International Airport designation encompasses areas where the Port operated SDIA facilities, the Aviation Related Commercial was applied to commercial operators' leaseholds (such as the existing FBO in the North Area), and Aviation Related Industrial encompasses the former General Dynamics leasehold (in the current North Area) and the former Teledyne Ryan leasehold. The *Port Master Plan* does envision, among other actions, (1) addition of an air terminal concourse, and associated aircraft apron areas; and (2) modification of existing parking and airport roadway improvements. However, it should be noted that SDCRAA does not use the *Port Master Plan* as a guide to future development of SDIA.

4.12 Natural Resources and Energy Supply

The FAA requires the environmental analysis of proposed airport projects to include an evaluation of the Sponsor's Proposed Action's effect on natural resources and energy supply. The analysis should take into account the project's energy consumption, energy conservation, and the use of natural and consumable resources required to construct and maintain the Sponsor's Proposed Action and its reasonable alternatives.

4.12.1 Utilities

Electrical Power

The Federal Energy Regulatory Commission (FERC) regulates rates for wholesale electric power sales of electricity and transmission in interstate commerce for investor-owned electric utilities, power marketers, power pools, power exchanges, and Regional Transmission Operators. FERC does not regulate the physical construction of generation, transmission, or distribution facilities. Prior to September 2001, direct access to electrical generation was permitted and local municipalities, businesses, and institutions established contracts for power directly with the generators. Since September 2001, the California Public Utilities Commission (CPUC) has regulated electrical rates, distribution, and services.

The FERC also regulates prices, services, and the construction of the interstate natural gas pipelines that serve California. The CPUC regulates intrastate and local natural gas distribution facilities and services, natural gas procurement, pipelines, as well as production and gathering. In addition, regulations related to natural gas services at the local level include the California Building Code, the California Health and Safety Code, the California Fire Code and their associated implementing ordinances at the County and City levels.

Electrical power and natural gas service at SDIA are provided by San Diego Gas and Electric Company (SDG&E), which supplies power to a population of 1.3 million business and residential accounts in a 4,100 square-mile service area spanning two counties and 25 communities. SDG&E addresses power and gas requirements for upcoming development projects on a case-by-case basis, and SDG&E consults with developers to incorporate energy saving devices into project design, where feasible. Forecasting future electric power and natural gas consumption demand is performed on a continual basis by SDG&E. In situations where projects with large power loads are planned, these new large power loads are considered together with other existing or anticipated future loads in the project vicinity, and electrical substations are upgraded or new substations are built if the capacities of existing substations are exceeded. Direct impacts to electrical and natural gas facilities are addressed by SDG&E at the time incoming development projects occur.

Near SDIA, the Pacific Highway right-of-way contains three 12-kilovolt (kV) circuits fed from the Kettner substation. Two of the circuits currently feed power to the former General Dynamics site in the northern portion of the SDIA near the intersection of Sassafras Street and Pacific Highway.

Harbor Drive presently serves as a corridor for five 12kV circuits, four from the Kettner substation and one from the Old Town substation. An additional circuit runs to SDIA from the Point Loma substation,

providing backup for the Airport. There are several emergency generators located throughout the SDIA, which currently provide backup lighting throughout the existing terminals. There are also several emergency generator hookups at various locations throughout the SDIA that were installed during the rolling blackouts experienced in southern California. There are hookups on the airfield at the central plant, Terminals 1 and 2, as well as the Commuter Terminal. These hookups currently do not have emergency generators, but are routed to provide full electrical service when properly energized.

Natural Gas

Natural gas utilities at SDIA include a 6-inch main, located in Harbor Drive, with 60 pounds per square inch (PSI) of pressure. The former General Dynamics property is connected by a 4-inch main with 60 PSI from Sassafras Street as well as a 4-inch line with 150 PSI from Pacific Highway terminating at the west end of the site.

Water Supply

At the federal level, the primary regulations relating to water services are associated with water quality. These laws and regulations include the Clean Water Act (CWA), the goal of which is pollution prevention (see Section 5.7, *Hydrology and Water Quality*), and the Safe Drinking Water Act (SDWA). The latter, enacted by Congress in 1974 and amended in 1986 and 1996, requires protection of drinking water and its source lakes, reservoirs, springs, and groundwater wells. The SDWA divides the responsibility of ensuring safe drinking water among the U.S. EPA, states, and local service providers.

At the state level there are two agencies that oversee water services. The first is the State Water Resources Control Board (including its Regional Water Quality Control Boards), which is responsible for the enforcement of the Porter-Cologne Water Quality Control Act (Division 7 of the California Water Code). The Porter-Cologne Act deals with the potential discharges into water bodies that could result in a negative impact to water quality (see also Section 5.7, *Hydrology and Water Quality*).

The second agency is the Department of Water Resources (DWR), whose mission is the overall management of California's water resources. The regulations overseen by DWR regarding water service availability include the Urban Water Management Planning Act, and those sections of the California Water Code added/amended by Senate Bills (SBs) 610 and 221. The California Act, adopted in 1983, requires all urban water suppliers within the state to prepare an Urban Water Management Plan (UWMP) and update them every five years. The City of San Diego updated its UWMP in 2005.

Approximately 90 percent of the San Diego region's water is imported, while 10 percent is supplied from water produced locally through a system of reservoirs and pipelines. The San Diego County Water Authority (SDCWA) is the main wholesale supplier of water in San Diego County. Imported water is supplied to SDCWA by The Metropolitan Water District of Southern California (Metropolitan), which serves the greater southern California area. Metropolitan's primary sources of water are the State Water Project (SWP) and the Colorado River. A 242-mile-long aqueduct brings Colorado River water from Lake Havasu to southern California. The City also receives water originating in northern California from the SWP. SWP water is initially captured in reservoirs north of Sacramento and released through natural rivers and streams into the Sacramento-San Joaquin Delta. The water is then delivered to southern California through a 444-mile-long aqueduct. Metropolitan blends Colorado River and SWP water at a facility in Riverside County, and then transfers it to San Diego water treatment plants.[50] The City of San Diego Water Department purchases water from SDCWA and delivers it throughout the City.

The City's Water Department maintains a complex water treatment and distribution system to support approximately 1.2 million people over a 330 square mile area. The City maintains three water treatment plants with a combined total treated capacity of 294 million gallons per day (MGD). The Miramar Water Treatment Plant, originally constructed in 1962, has a rated capacity of 140 MGD. The Alvarado Water Treatment Plant, operational since 1951, recently increased the rated capacity to 150 MGD. The Otay Water Treatment Plant was originally constructed in 1940 and has a current capacity of 34 MGD. The City Water Department also maintains and operates 32 treated water storage facilities, including steel tanks, standpipes, concrete tanks and rectangular concrete reservoirs, with capacities varying from less than 1 million gallons to 35 million gallons. The City's water system consists of approximately 3,460 miles of pipeline, including transmission lines up to 84 inches in diameter and distribution lines as small as 4 inches in diameter. There are approximately 250,000 metered service connections within the City

[50] City of San Diego. The 2005 City of San Diego Urban Water Management Plan. 2005.

Water Department's service area. The City Water Department also sells water to a number of other water agencies, and maintains emergency connections to these adjacent jurisdictions/districts in the event of water shortages.

Along with the potable water supply, the City of San Diego built the North City Wastewater Reclamation Plant (NCWRP) and the South Bay Water Reclamation Plant (SBWRP) to treat wastewater to a level that is approved for irrigation, manufacturing and other non-drinking/non-potable purposes. The NCWRP has the capability to treat 30 MGD of sewage and the SBWRP can treat 15 MGD. The City of San Diego Water Department maintains and operates the recycled water distribution system. It consists of 66 miles of recycled water pipeline, a 9-million gallon reservoir and two pump stations. The pipeline sizes vary from 4- to 36-inches in diameter.[51]

The majority of the water system at SDIA consists of pipes ranging in size from 12- to 16-inches in diameter. The secondary system of water laterals branching off of the primary system consists of 8- to 16-inch water lines providing service to the terminals, aprons, and the adjacent former TDY facilities along Harbor Drive. Water service to the fuel farm and ATCT extends from the water system in Pacific Highway along Washington Street. There are two 16-inch water mains running parallel along North Harbor Drive. The first one is aligned along Harbor Drive from Laurel Street to Nimitz Boulevard. The second one is on the south side portion of Harbor Drive along the entrance of Terminal 1 to Nimitz Boulevard. Both 16-inch mains merge into a single main before crossing the bridge at the Navy Lagoon.

There are a series of water mains ranging from 12 inches to 16 inches along Nimitz Boulevard: a 16-inch main from Harbor Drive to Rosecrans Street, a 12-inch main from Nimitz Boulevard to the Barnett Avenue intersection, and a 16-inch main from Rosecrans to the Sports Arena Boulevard. The 12-inch main in Barnett Avenue runs southeast from its intersection with Rosecrans Street to connect with an 18-inch water main in Kurtz Street (parallel to Pacific Highway). The 18-inch main in Kurtz Street runs southeast to intersect a 24-inch main southeast of Vine Street. The 24-inch main connects to a 12-inch main in Pacific Highway. This 12-inch main runs southeast along a portion of the General Dynamics site frontage to Laurel Street, where it joins a 16-inch water main in Laurel Street. Both a 12-inch main and a 20-inch main continue southeasterly in Pacific Highway toward Downtown San Diego. The 16-inch main in Laurel Street runs southwest to join the 16-inch main in Harbor Drive. This completes the closed loop water main system on the Airport property.

Surrounding the fuel storage tank farm is a 10-inch fire service water line connected along the north side of the main runway to a 16-inch ductile iron fire service. This 16-inch fire service extends along the access road between the MCRD and the General Dynamics site, where it joins a 12-inch main near the intersection of Washington and Pacific Highway.

Sewer

Wastewater (sewer) service in the SDIA area is provided by the City of San Diego Metropolitan Sewerage System, which is owned by the City of San Diego, and operated by the San Diego Metropolitan Wastewater Department (SDMWWD). The SDMWWD serves 2.2 million people from the City of San Diego and 15 other cities and special wastewater/water districts. The 330 square mile service area generates approximately 180 million gallons of wastewater per day. Within the City, there are approximately 2,894 sewer lines with over 250,000 connections and more than 55,000 manholes. There are 84 municipal pump stations that transport the sewage to the system's main treatment facility in Point Loma. The system's various elements range in age from brand new to over 100 years old.[52]

Sewer service at SDIA is provided by a network of pipes ranging from 6 to 21 inches in diameter. Wastewater from SDIA is conveyed to the Point Loma Treatment Plant via a 15-inch line located just south of Harbor Drive. There also is a 36-inch regional trunk sewer line under Kettner Boulevard, which also transports wastewater north, and than southwesterly to the Point Loma Treatment Plant.

The primary public sewer system lines serving the area in the vicinity of the SDIA are routed along Harbor Drive, Laurel Street, and Pacific Highway. A set of secondary sewer mains then feed these main lines by collecting waste from SDIA and the former General Dynamics site. Additional primary sewer mains run along Harbor Drive, Pacific Highway, Barnett Avenue, and south across the west side of the Airport. These lines converge on the north side of Harbor Drive west of the Airport at Pump Station No. 2. Two primary lines then exit Pump Station No. 2. One of these lines is an 87-inch force main aligned west

[51] City of San Diego. The 2005 City of San Diego Urban Water Management Plan. 2005.
[52] www.sandiego.gov/mwwd

along Harbor Drive, and the other is an 87-inch force main crossing Harbor Drive and following San Diego Bay to the Point Loma Treatment Plant.

Pacific Highway houses a 51-inch sewer primary line and a secondary 8-inch sewer line. The primary line runs from Sassafras to Laurel Street, continuing southeast along Pacific Highway. This line eventually bends west and connects to the 108-inch primary line located in Harbor Drive. The 8-inch line in Pacific Highway serves the former General Dynamics site between Vine and the extension of Olive Street along the south side of Pacific Highway. At the extension of Olive Street with Pacific Highway, the 8-inch sewer line outlets to the primary line.

The former General Dynamics site (North Area) was formerly serviced by a complete secondary sewer system. It was comprised of an 8-inch sewer line adjoining a 12-inch sewer line; however the current disposition of the 8-inch line is unknown at this time. The 12-inch sewer line runs south under the runway and connects to a 24-inch sewer line parallel to Laurel Street. This 24-inch sewer line crosses the site to the southwest where it connects to the 108-inch primary line at Harbor Drive near the U.S. Coast Guard Station.

Harbor Drive contains a 108-inch primary line that transverses the entire length of the TDY facilities and the airport frontage, connecting to Pump Station No. 2 just west of SDIA. This line is fed by numerous secondary sewer lines ranging from 8 to 21 inches that service the Airport and the TDY property. One of these lines, the 12-inch secondary line just north of the Commuter Terminal, has been abandoned. It has been replaced by a sewer service routed in Winship Lane that connects to the 108-inch primary line in Harbor Drive.

Two additional primary wastewater collection pipelines—the 96- and 114-inch-diameter North Metro Interceptor Sewers 1 and 2, respectively—cross under MCRD, traverse under the west end of the runway, continue under the east side of the former NTC site, and feed into Pump Station No. 2. The 114-inch primary line is protected in a utility tunnel as it traverses the SDIA and the MCRD.

4.12.2 Aviation Fuel

Aviation fuel is supplied to the San Diego region by a 16-inch common carrier pipeline extending south from Los Angeles. This fuel pipeline is operated by Kinder Morgan Energy Partners, L.P. (formerly Santa Fe Pacific Pipeline Partners, Ltd.), and it connects to the Kinder Morgan fuel terminal in Mission Valley. An 8-inch-diameter branch line provides aviation fuel from the fuel terminal to SDIA.

The SDIA fuel system consists of the 8-inch-diameter supply pipeline into the airport, two 1-million-gallon aboveground fuel storage tanks, and a 10-inch-diameter transfer line and a fuel dispensing facility (truck load rack). This 10-inch transfer line is routed from the fuel storage tank farm under the primary runway where it is routed inside of a 36-inch-diamter pipe conduit with other underground utilities and ends at the fuel dispensing facility located near the Commuter Terminal. A 14-inch-diameter containment-monitoring sleeve, routed in the 36-inch-diamter conduit, surrounds this 10-inch fuel line. The 8-inch supply pipeline enters the airport from pacific highway and runs west to Taxiway C4 and north to the fuel farm.

4.13 Hazardous Materials and Solid Waste

Four primary laws have been passed governing the handling and disposal of hazardous materials, chemicals, substances, and wastes. The two statutes most applicable to airport projects are the Resource Conservation and Recover Act (RCRA, as amended by the Federal Facilities Compliance Act of 1992) and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended (also known as Superfund). RCRA governs the generation, treatment, storage, and disposal of hazardous wastes. CERCLA provides for cleanup of any release of a hazardous substance (excluding petroleum) in the environment.

4.13.1 Hazardous Materials

Hazardous materials are regulated by a number of federal laws and regulations - most of which are promulgated by the U.S. Environmental Protection Agency (EPA). These include the RCRA and CERCLA, as mentioned above, in addition to the Clean Air and Clean Water Acts (CAA, CWA), the Safe Drinking Water Act (SWDA), Hazardous Materials Transportation Act (HMTA) and the Emergency Planning & Community Right to Know Act (EPCRA). Together, these regulations serve as guiding

principles governing the storage, use and transportation of hazardous and other regulated materials from their time of origin to their ultimate disposal. The recovery and clean-up of environmental contamination resulting from the accidental or unlawful release of these materials and substances are also governed by these regulations.

On the state level, the agency with similar authority to EPA over hazardous materials is the California Environmental Protection Agency (Cal-EPA). Specifically, the Cal-EPA Department of Toxic Substances Control (DTSC) is responsible statewide for matters concerning the use, storage, transport and disposal of hazardous materials. Similarly, California Integrated Waste Management Board (CIWMD) is responsible for the management of solid wastes and the Cal-EPA Office of Environmental Health Hazard Assessment (OEHHA) is involved in the evaluation of risks to public health and the environment posed by hazardous materials and environmental contamination. Importantly, Cal-EPA delegates much of the enforcement responsibility for hazardous materials to local governments under the Certified Unified Program Agency (CUPA) program.

Locally, the San Diego Department of Environmental Health (DEH) serves as the CUPA and is responsible for regulating hazardous materials, hazardous wastes and underground storage tanks (USTs) county-wide. The California (San Diego Region) Regional Water Quality Control Board (RWQCB) also has jurisdiction over the management of potential sources of surface and groundwater contamination such as the cleanup of UST and aboveground storage tank (AST) spill sites. The City of San Diego Solid Waste Department is designated as the Local Enforcement Agency (LEA) by the CIWMD and is responsible for enforcing regulations pertaining to solid waste disposal units (i.e., landfills, old burn dumps, etc.). Finally, the San Diego County Air Pollution Control District (APCD) is involved in the assessment of health and environmental hazards associated with toxic (or hazardous) air pollutants.

A listing of regulations pertaining to the management of hazardous materials and other hazard conditions in San Diego are listed in **Table 4-13.1**.

Based upon the review of available documents, discussions with SDIA staff and an in-the-field survey of existing conditions, the types, characteristics and utilization of hazardous materials and other similarly regulated substances at SDIA are typical of most metropolitan airports that offer commercial service. Activities and facilities that involve the use of these materials include the fueling, servicing and repair of aircraft, ground support equipment (GSE) and motor vehicles; the operation and maintenance of the airfield, main terminal complex and passenger concourses; and a range of other special purposes connected with commercial aviation (i.e., rental car and air cargo facilities, navigation and air traffic control functions, etc.).[53,54,55,56]

By far, the overall largest quantities of substances used at SDIA that are classifiable as hazardous include aircraft and motor vehicle fuels. These fuels are contained in underground storage tanks (USTs) and above-ground storage tanks (ASTs) ranging in size from less than 500 to greater than 1,000,000 gallons and are located on airport property or at the adjoining rental car facilities. The aircraft fuel types predominately include Jet-A and Av-gas and the motor vehicle fuels include gasoline and diesel.

Other, smaller amounts of petroleum-products (e.g., lubricants and solvents), waste materials (i.e., used oils, cleaning residues, and spent batteries) and manufactured chemicals (i.e., herbicides, fertilizers, paints, fire-fighting foam, de-icing fluids, etc.) are used in various locations throughout the airport. These are characteristically used on a routine basis in support of aircraft, GSE and motor vehicle maintenance activities and for a range of other functions to keep the airport operational and meet aviation safety requirements.

The SDCRAA and many of the tenants at SDIA have developed and implemented Stormwater Management Plans (SWMP) containing Best Management Practices (BMPs) intended to eliminate or reduce the release of contaminants into the environment. A number of these BMPs pertaining to hazardous materials include secondary containment and covered storage facilities; procedures and equipment for the clean up of spills and accidental releases; training, auditing, and other work practices.

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[53] Brown and Caldwell, Fate and Transport Modeling Report: Chlorinated Hydrocarbons, Lindbergh Field Plant, Building No. 1 Area. Prepared for General Dynamics Division, April 1998.

[54] Brown and Caldwell, Convair Lagoon PCB Technical Report. Prepared for San Diego Unified Port District, January 2002.

[55] Essentia, Limited Environmental Baseline Summary (EBS) Report, General Dynamics Lindbergh Field Plant Facility. Prepared for San Diego County Regional Airport Authority, May, 2004.

[56] MACTEC, Storm Drainage System BMP Program Final Site Audit Report for San Diego International Airport, prepared for San Diego county Regional Airport Authority, June 2005.

Table 4-13.1

Regulations Pertaining to the Management of Hazards and Hazardous Materials in San Diego County

----- Federal -----
Comprehensive Environmental Response, Compensation & Liability Act (CERCLA) – Regulation of former and new waste disposal and spill sites. Established the "Superfund" program and the National Priority List (NPL).
Resource Conservation & Recovery Act (RCRA) – Regulation of the generation, transportation, storage, treatment, and disposal of hazardous materials.
Clean Water Act (CWA) – Regulation of discharges and spills of pollutants (including hazardous materials) to surface and ground-waters.
Safe Drinking Water Act (SWDA) – Regulation of discharges of pollutants to underground aquifers.
Clean Air Act (CAA) – Regulation of discharges of air emissions (including hazardous air pollutants) to the ambient (i.e., "outside") air.
Hazardous Materials Transportation Act (HMTA) – Regulation of the transport of hazardous materials by motor vehicles, marine vessels, and aircraft.
Emergency Planning & Community Right to Know Act (EPCRA) – Regulation of facilities that use hazardous materials in quantities that require reporting to emergency response officials.
----- State -----
Hazardous Materials Release Response Plans & Inventory Act – Requires facilities using hazardous materials to prepare Hazardous Materials Business Plans.
Hazardous Waste Control Act – Similar to RCRA on the federal level in regulating the generation, transportation, storage, treatment, and disposal of hazardous materials.
Safe Drinking Water & Toxic Enforcement Act – Similar to the SWDA and CWA on the federal level in regulating the discharge of contaminants to groundwater.
California Government Code Section 56962.5 – Requires the DTSC to compile and maintain lists of potentially contaminated sites throughout the State.
Emergency Services Act – Similar to EPCRA on the federal level.
----- Local -----
APCD Rules 50, 51, and 59 – Requires permits, monitoring plans, and other dust mitigation measures for large scale construction projects and waste sites.

Source: KBE Environmental Sciences, Inc.

There are also a number of sites and facilities located on, or adjacent to, Airport property that are known, or have the potential, to contain environmental contamination of the soil and/or groundwater. The identification of these sites is again based upon documents and other sources of information possessed by SDIA staff; an electronic search of federal, state and local agency databases; and an in-the-field survey of existing conditions. From this assessment, 15 individual sites (8 on the Airport and 7 off the Airport) are identified and discussed below, listed in **Table 4-13.2** and located on **Figure 4.13-1**.

Table 4-13.2

Sites and Facilities Reported or with the Potential to Contain Hazardous Wastes or Environmental Contamination in the Vicinity of SDIA

Site No.	Name	Location	Summary Description
----- On Airport Property -----			
1.	Former Naval Training Center (NTC) Inactive Landfill	S.W. sector of airport, N. of Harbor Dr., E. of Navy Lagoon and W. of Term. 2 West.	52-acre site formerly used by NTC and MCRD from the 1940s to 1971 as a municipal landfill for consumer waste, burn ash and construction debris. Presently vacant with a portion covered with asphalt for motor vehicle parking. A Remediation Plan for municipal solid waste and burn ash removal was initiated in January 2008 and is expected to be complete by mid 2009.
2.	Former Rental Car Facility Fuel Farm	S.W. sector of airport, N. of Harbor Dr. and S. of Term. 2 West.	2-acre site formerly used as a rental car facility and contained USTs. The buildings and tanks have been removed and the site is now covered by an asphalt roadway and parking lot. Residual soil/groundwater contamination remains in place.
3.	Former Lindbergh Field Fuel Farm	S.-central boundary of	5-acre site formerly used until 1995 as a fuel storage facility for jet fuel, av-gas and motor vehicle fuel. The

Table 4-13.2

Sites and Facilities Reported or with the Potential to Contain Hazardous Wastes or Environmental Contamination in the Vicinity of SDIA

Site No.	Name	Location	Summary Description
		airport, N. of Harbor Dr. and W. of the Commuter Term.	tanks have been removed and the site is presently occupied with a one story office building and adjoining asphalt parking lot. Residual soil/groundwater contamination remains in place.
4.	Former US Air Hangar and Maintenance Facility (Commuter Terminal)	S. central sector of airport, N. of and adj. to the Commuter Term.	4-acre site formally occupied by an aircraft/GSE maintenance facility. Now covered with asphalt and concrete apron, the residual soil and groundwater contamination is not reported to be significant.
5.	Former Teledyne Ryan Facility	S.E. sector of airport, N. of Harbor Dr.	Also known as the former Northrop Grumman Corp. and Ryan Aeronautical Company facility, this 47-acre site is presently occupied with vacant buildings and other supporting infrastructure. The environmental condition of the property is currently under litigation.
6.	Airport Fuel Farm	N. central sector of airport.	Site of the existing airport fuel farm. Contains two 1 million-gallon aboveground storage tanks for jet fuel. No reported environmental contamination or significant leaks.
7.	Former Lindbergh Field Live-Fire Training Facility	N. central sector of airport near Runway 13.	This 3-acre site was used until 1987 for live-fire training. Now covered with dirt or asphalt, the extent of residual soil/groundwater contamination (if any) is unknown.
8.	Former General Dynamics (Lindbergh Field Plant) Facility	N.E. sector of airport; S. of Pacific Hwy.	90-acre site formerly used for manufacturing of aircraft and other military equipment Presently vacant and serves as a staging area for unloading trucks and parking cars. Chemicals of concern include chlorinated hydrocarbons, petroleum hydrocarbons and chromium. Designated for “open field” land-uses.
9.	Jimsair UST	S.E. of Site No. 8	Underground storage tank (UST) associated with an existing Fixed-base operator (FBO).
----- Off Airport Property -----			
10.	Rental Car Facilities	S. of airport property, S. of Harbor Dr.	Sites contain USTs for storage of motor vehicle fuel. No report soil or groundwater contamination or significant spills.
11.	Convair Lagoon	S. of airport property, W. of the U.S. Coast Guard facility and S. of Harbor Dr.	10-acre shallow embayment, site of stormwater conveyance system outfall. Evidence of PCB contamination in sediments reported in 1979. Sampling indicates the former Teledyne Ryan Facility is the primary source.
12.	U.S. Coast Guard Facility	S.E. of airport property, and S. of Harbor Dr.	Facility is listed on federal and state lists for hazardous materials and USTs. No report soil or groundwater contamination or significant spills.
13.	Solar Turbines Site	S.W. of airport property, N. of Harbor Dr.	Site of former aircraft parts manufacturing facility. Site is listed on federal and state lists for environmental corrective action.
14.	Former Rental Car Company	S.E. of airport property, E. of Runway 27	Site of former rental car service facility. Soil and groundwater contamination reported but is not expected to migrate onto adjoining properties.
15.	U.S. Marine Corps Recruit Depot	N.W. of and adjoining airport property.	Facility is listed on federal and state lists for hazardous materials use and USTs. No report soil or groundwater contamination or significant spills.
16.	Baron-Blakeslee Facility	N.E. of airport between Pacific Hwy. and I-5.	Chemical use and storage facility listed on state lists for environmental corrective action.

Source: KBE Environmental Sciences, Inc.

Former Naval Training Center (NTC) Inactive Landfill - Site No.1

Located in the southwest sector of the Airport, the majority of this 52-acre site is vacant with portions used by SDCRAA for long-term public vehicle parking and the temporary storage of construction debris. From the 1940s to 1971, the site was formerly used by NTC and U.S. Marine Corps Recruit Depot (MCRD) as a municipal landfill for solid waste.

Since 1986, numerous subsurface investigations have been performed both on the landfill and in adjoining areas to identify the waste types and delineate the horizontal and vertical extents of the buried material. The wastes are characterized primarily as consumer refuse (i.e., household garbage), burned refuse/ash (i.e., broken glass, charred metal and charcoal) and construction/landscaping debris (i.e., concrete, asphalt, bricks, wood, pipes, etc.). No evidence of drums or other containers of hazardous materials have yet been detected, but the dumping of such waste exists in historical reports. Located two to eight feet (ft.) below grade surface (bgs), the consumer refuse and burned refuse/ash are generally confined within trenches under the northern half of the site and the construction/landscaping debris is mostly located in the southern half.

Environmental test results indicate that some of the soils located between and beneath the trenches have been impacted and are contaminated with heavy metals and petroleum hydrocarbons. Notably, the groundwater underlying the landfill (located 7 to 10 ft. bgs) has not been impaired by the waste materials.

SDCRAA plans call for this site to undergo landfill remediation: a process by which the buried wastes and impacted soils will be excavated and transported off site to approved disposal facilities.[57] A *Remediation Plan for the NTC Inactive Landfill Site* has been prepared in accordance with state and local guidelines, details the overall approach, clean-up criteria other environmental requirements for this action.[58,59]

In summary, the Remediation Plan is being undertaken by a qualified contractor and involves the removal of an estimated 25,000 cubic yards (cy) of burned refuse/ash, approximately 150,000 cy of consumer refuse and roughly 25,000 cy of impacted soils. The removal and/or re-compaction of the construction debris in the southern portion of the site is not part of this remediation project. Prior to being implemented, all the necessary permits, approvals and safeguards were obtained. These included an *Excavation*, *Well Abandonment*, *Coastal Development*, *Wastewater* and *Stormwater Discharge Permit(s)*; an *Air Monitoring*, *Traffic Management*, *Waste Managemen*t *and Disposal*, *Field Sampling and Analysis*, *Drainage* and *Stormwater Pollution Prevention Plan(s)*; and a *Community Health & Safety Plan*[60] to address issues pertaining to noise and exhaust from heavy equipment (including diesel emissions), and potential mitigation measures for fugitive dust and odors.

SDCRAA's approach to the Remediation Plan included an Initial Study and an Environmental Impact Report in compliance with federal, state, and local laws and regulations. The Remediation Plan is being implemented in order to permanently eliminate any long-term environmental threats and to discontinue the ongoing maintenance and monitoring requirements associated with the NTC Inactive Landfill. Therefore, the closure of the NTC Inactive Landfill site has independent utility from the Sponsor's Proposed Action and will be accomplished whether or not the Sponsor's Proposed Action is implemented. As a result, the remediation of the NTC Inactive Landfill site does not impact the Sponsor's Proposed Action, and these two projects are treated separately. The SDCRAA certified the Final EIR for the Former NTC Landfill Remediation in November 2007.

Former Rental Car Facility Fuel Farm - Site No. 2

Located in the southwest sector of the airport, south of Terminal 2 West and north of Harbor Drive, this 2-acre site was formerly used by rental car companies to maintain and refuel motor vehicles. The buildings and USTs were removed in 1976 and the site is now covered by the Terminal 2 egress roadway and

[57] Correspondence John Robertus, Executive Officer to Ms. Thella Bowens, President, San Diego County Regional Airport Authority, June 6, 2005.

[58] Ninyo & Moore, *Clean Closure Plan, Naval Training Center Inactive Landfill*, San Diego California, prepared for San Diego Unified Port District, November 2002.

[59] Title 27 California Code of Regulations "General Closure and Post-Closure Maintenance Standards Applicable to Waste Management Units for Solid Wastes."

[60] Ninyo & Moore, *Community Health and Safety Plan, Former Naval Training Center Inactive Landfill Clean Closure*, San Diego California, prepare for San Diego county Regional Airport Authority, March 13, 2006.

parking lot. Environmental testing from the mid-1990s reveals fuel-based soil and groundwater contamination are still present, but do not present a significant environmental threat.[61]

Former Lindbergh Field Fuel Farm - Site No. 3

This site is located along south-central border of the Airport, north of Harbor Drive and west of the Commuter Terminal. Used from 1955 to 1995 as a fuel storage facility for jet fuel, Av-gas, automotive fuel and waste oil, this 5-acre site contained approximately 35 USTs over the years.[62] The storage tanks and piping as well as most of the residual fuel and contaminated soil were removed in 1997. The site is presently occupied by a SDCRAA one-story office building and asphalt parking lot for employees. The groundwater plume, bounded by Harbor Drive and Stillwater Road (now the Commuter Terminal Egress Road), was treated in-place with bioremediation.

Former US Air Hangar and Maintenance Facility - Site No. 4

Located in the south-central sector of the Airport, north of and adjacent to the existing Commuter Terminal, this area is now used as an aircraft apron. Formally the site was occupied by US Air and used as an aircraft/GSE maintenance facility, which has been demolished. Environmental testing revealed petroleum- and chlorinated-hydrocarbons in the underlying soils and groundwater.[63] However, the overall impacts are not reported to be significant.

Former Teledyne Ryan Facility - Site No. 5

Located in the southeast sector of the airport, east of the Commuter Terminal and north of Harbor Drive, this site was also known as the former Ryan Aeronautical Company and the former Northrop Grumman facility. Approximately 47-acres in size, this site is presently occupied with a large factory assembly building, paint shops, laboratory and other support facilities that are empty or no longer in use. The entire facility is undergoing litigation and the clean-up requirements will be determined during the course of this process.[64,65]

Airport Fuel Farm - Site No. 6

Located in the north-central area of the Airport, this facility contains two large ASTs for the storage of jet fuel. The tanks have secondary containment, overfill protection, and other environmental safeguards. There have been no reported spills or incidents of environmental contamination at this site.

Former Lindbergh Field Live-Fire Training Facility - Site No. 7

Located in the north-central sector of the Airport near the end of former Runway 13, this site was used for live-fire training from 1953 to 1987. Now covered with dirt or asphalt, it is not known if any residual environmental contamination exists at this site.[66]

Former General Dynamics Facility - Site No. 8

Located in the northeast sector of the Airport adjacent to the Pacific Highway and among a mixture of commercial and light industrial business, this 89-acre site is presently used by the San Diego Port Authority as a staging area for unloading trucks and parking cars. From 1937 to 1995, the site (also known as the Consolidated Aircraft Corporation ("Convair" facility) contained a manufacturing complex for military aircraft which involved a variety of industrial processes such as electroplating, vapor degreasing and the painting of parts and equipment.[67] The buildings and supporting facilities (i.e., holding tanks, USTs/ASTs, pipelines, etc.) were demolished or removed and the site permanently decommissioned by 1998.

For the purposes of conducting follow-up subsurface investigations, the site has been segregated into several areas based upon their historical uses and environmental condition. From these investigations, it

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61 SDCRAA, Communication between Rick Adcock and Michael Kenney, KB Environmental Inc. regarding Former Rental Car Facility – Terminal 2 Parking Lot, San Diego County Regional Airport Authority, 2006.

62 AMEC Earth & Environmental, *Historical Review of Lindberg Field, San Diego International Airport*, prepared for Port of San Diego, June 14, 2002.

63 Ibid, AMEC.

64 Ibid, AMEC.

65 Clean Up and Abatement Order (CAO) No. R9-2004-0258 from the California Regional Water Quality Control Board.

66 Ibid, AMEC.

67 Ibid, Brown and Caldwell; Ibid, Essentaia.

has been determined that the primary soil and groundwater contaminates consist of total petroleum hydrocarbons, chlorinated hydrocarbons and chromium. In most cases, the presence of these compounds is limited to only a few areas, confined to below the water table (i.e., 7 to 10 ft., bls) and are diminishing in concentrations from natural attenuation.

Currently, the site is covered with an impermeable layer of a compacted crushed gravel/sand mixture and sealed with an asphalt emulsion. Stormwater runoff is controlled through a system of storm drains. Because of these conditions and as there are no groundwater supply wells or sensitive receptors (i.e., daycare centers, schools, hospitals or nursing homes) nearby, portions of the site have been approved by DEH for "open field" land uses as long as site conditions remain the same (i.e., the impervious cap is not disrupted and no sub-surface structures are constructed). Further coordination between DEH (the lead environmental agency for the site), LEA and SDCRAA staff is presently underway to extend this land-use designation to other areas of the site.

Jimsair UST – Site No. 9

Located southeast and adjacent to Site No. 8, the site is a Fixed Base Operator (FBO) that contains underground storage tanks (UST) for fuel. It is not known if this site contains environmental contamination.

Rental Car Facilities - Site No. 10

Located off-airport property, south of Harbor Drive, this site is used by several rental car companies for the parking, maintenance and refueling of cars. These facilities appear on state lists of USTs but no significant spills or leaks are reported.[68]

Convair Lagoon - Site No. 11

Located off airport property, south of Harbor Drive and west of the U.S. Coast Guard facility, this area (also known as the "Tow Basin") is the site of two stormwater system outfalls. Consisting of a 10-acre shallow embayment, evidence of polychlorinated biphenyls (PCB) contamination in sediments was first reported in 1979.[69] Subsequent environmental investigations and testing indicates the former Teledyne Ryan Facility (Site No. 5) was the primary source of these contaminants. As a precautionary measure, the remaining sediments in the two stormwater systems were removed and BMPs are in place to prevent further PCB contamination.

U.S. Coast Guard Facility – Site No. 12

Located off airport property, south of Harbor Drive and east of the Rental Car facilities, this facility is on several federal and state lists for hazardous materials and USTs. However, there are no reports of significant spills or environmental contamination.[70]

Solar Turbines Site – Site No. 13

Located off airport property and southeast of the U.S. Coast Guard facility, this is a site of a former aircraft parts manufacturing facility that is on both federal and state lists for environmental corrective actions.[71]

Former Rental Car Facility - Site No. 14

Located off airport property at the intersection of Pacific Highway/Laurel Street and near the end of Runway 27, this site was reported to have limited soil/groundwater contamination from a UST. Environmental tests from 1998 indicate the contaminates would not likely migrate off-site and onto airport property.[72]

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[68] EDR, Radius Map, San Diego International Airport, San Diego CA, Inquiry No. 1547851.2s, Environmental Data Resources, prepared for KB Environmental Sciences, Inc., November 8, 2005.

[69] Ibid, Brown and Caldwell, 2002.

[70] Ibid, EDR.

[71] Ibid.

[72] Ibid, AMEC.

U.S. Marine Corps Recruit Depot - Site No. 15

Located adjacent to the northern boundary of airport property, this facility is listed on federal and state lists for hazardous materials use and USTs. However, there are no reports of significant spills or environmental contamination.[73]

Baron-Blakeslee Facility - Site No. 16

Located off the northeastern border of the airport between the Pacific Highway and I-5, this site is reported in federal and state listings sites requiring environmental corrective actions.[74]

Importantly, there are no sites or facilities at SDIA or in the immediate vicinity that are listed on the federal "Superfund" National Priorities List (NPL).

4.13.2 Solid Waste

In accordance with FAA Order 1050.1E, impacts to solid waste resulting from the Sponsor's Proposed Action were considered.

In September 1989, the California Integrated Solid Waste Management Act (also known as Assembly Bill [AB] 939) was enacted into law. The Integrated Waste Management Authority (IWMA) establishes an integrated system of waste management in California and requires each local jurisdiction to implement a Source Reduction and Recycling Element (SRRE), Household Hazardous Waste Element (HHWE), and Non-Disposal Facility Element (NDFE). The IWMA requires that the Siting Element be prepared by the county and approved by the County Board of Supervisors and a majority of the cities within the county. The IWMA requires each city in the state to divert at least 50 percent of its solid waste from landfill disposal through source reduction, recycling, and composting.

As described in the County Integrated Waste Management Plan,[75] the system of collection, removal and disposal of solid waste in the jurisdictions of San Diego County has evolved from the direct haul of waste to county or city owned landfills, to a system that integrates waste management alternatives. The current methods include separate collection of refuse and recyclables, and in certain cases removal of recyclables from waste at transfer stations. Collections are made by permitted and franchised haulers, which provide these services, by agreement, for ratepayers. In 2000, San Diego County was diverting 48 percent of its solid waste from landfill disposal through source reduction, recycling, and composting, and was 2% short of the 50% diversion mandated by the IWMA.

There are seven existing landfills in San Diego County, five accept municipal solid waste and two accept only military waste. Of the five landfills that accept municipal solid waste, four are privately owned and operated by Allied Waste Industries, Inc. The fifth, Miramar Landfill, is operated by the City of San Diego on land owned by the United States Navy.

Solid waste generated in the Study Area is generally collected by private contractors and transported to the Miramar Landfill. The Miramar Landfill is located at 5180 Convoy Street and is operated by the City's Environmental Services Department (ESD), Refuse Disposal Division (under a lease agreement with the Marine Corps Air Station Miramar). It has a current remaining capacity of approximately 23 million cubic yards and approximately more than 1.4 million tons of waste is disposed at the landfill every year.[76] Recently, with citywide recycling efforts, the amount of refuse directed to the landfill has been steadily decreasing. The landfill is currently filling its last excavated and lined cell and is expected to operate and accept refuse through the year 2011. However, the landfill is currently in the permitting process for a proposed height increase that would allow the landfill to continue to operate until around the year 2016.[77]

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[73] Ibid, EDR.

[74] Ibid.

[75] County of San Diego Department of Public Works, Solid Waste Planning and Recycling. San Diego County Integrated Waste Management Plan, Consisting of: Countywide Summary Plan & Countywide Siting Element, 2005 5-Year Revision, Final. Approved and Adopted by the Board Of Supervisors January 5, 2005. Approved by the California Integrated Waste Management Board September 20-21, 2005.

[76] County of San Diego Department of Public Works, Solid Waste Planning and Recycling. San Diego County Integrated Waste Management Plan, Consisting of: Countywide Summary Plan & Countywide Siting Element, 2005 5-Year Revision, Final. Approved and Adopted by the Board Of Supervisors January 5, 2005. Approved by the California Integrated Waste Management Board September 20-21, 2005.

[77] Personal communication with Rebecca Lafreniere, City of San Diego, Landfill Inspection and Permitting, September 29, 2006.

Approximately 35 percent of the total waste disposed in the Miramar Landfill has historically consisted of construction and demolition debris. On October 10, 2005 the San Diego City Council adopted a Deposit Construction and Demolition Debris Diversion Ordinance (C&D Ordinance). The ordinance mandates a recycling rate of 50 percent of debris for most construction, demolition and remodeling projects. Recycling 50 percent of construction and demolition debris is expected to increase waste diversion in the Miramar Landfill by over six percent and prolong the life of the Miramar Landfill.[78] A proposed demolition recycling facility at Miramar Landfill is currently undergoing environmental review and is in the permitting process.[79]

The City of San Diego has an agreement with Allied, Inc., the owner/operators of Sycamore Canyon Landfill in East Elliott, to provide San Diego preferred customer status if the capacity exists to accept waste after Miramar closes. Sycamore Landfill is located on a 520-acre site and is permitted to receive 3,960 tons of waste for disposal daily. Sycamore Canyon Landfill is fully permitted as a Class III landfill and accepts only routine household and commercial waste. Based on a revised permit for the landfill issued on September 15, 2006, Sycamore Canyon Landfill is anticipated to be at capacity in the year 2031.[80]

According to the Integrated Waste Management Plan Countywide Siting Element, if no additional in-county landfill capacity were added, the County would potentially run out of landfill capacity in approximately 2016. In order to meet the waste disposal needs of the County through 2020 and beyond, two landfill projects are currently under consideration: establishment of a new Gregory Canyon Landfill and the expansion of the Sycamore Canyon Landfill. If neither landfill project is approved without using other strategies, the region may need to export up to 55 percent of its waste in 2017. If these two projects are approved, the region may need to export only 7.2 percent of its waste out-of-county to meet a disposal need of 6.1 million tons annually. [81]

4.14 Light Emissions and Visual Impacts

FAA Order 5050.4B requires evaluation of Airport-related light emissions and visual effects that may be altered as a result of the Proposed Action. The following are considered under Section 12 of FAA Order 1050.1E: (1) The potential for lighting associated with an Airport action to create an annoyance among people in the vicinity of the installation is considered, and (2) the potential for a change in the setting of the existing environment to be objectionable to Federal, State, or local agencies, tribes, or the public.

Federal regulations governing EA's do not issue specific regulations to assess aesthetic impacts, which include both light emissions and visual impacts.[82] However, the impacts to properties and people's use of properties, covered by Section 4(f) of the U.S. Department of Transportation Act, Section 6(f) of the Land and Water Conservation Fund Act (LWCF), and Section 106 of the National Historic Preservation Act (NHPA), is considered by the FAA. Airport improvement activities involving potential disruption of the natural environment or aesthetic integrity of the area or any activities that may affect sensitive locations such as parks, historic sites, or other public use areas are relevant visually. Additionally, when State, regional, or local governments provide standards that regulate airport-related aesthetic impacts, those standards may apply.

The State of California and the City of San Diego do provide guidelines in the assessment of visual aesthetics related to environmental impacts. Therefore, potential significant aesthetic impacts in this analysis were evaluated based on the (1) CEQA State Guidelines, (2) the City of San Diego Environmental Analysis Section Significant Determination Guidelines for public policies regarding aesthetic/ urban design guidelines and visual resources, and (3) the SANDAG Impacts of Unconstrained Air Transportation Capacity on the San Diego Regional Economy Report.

Based on these documents, the evaluation criteria for the Sponsor's Proposed Action in regard to potential lighting and visual impacts are as follows:

1) *"Substantially alter aesthetics in the area by:*
    - *Altering the natural or naturalized landform*

[78] http://www.sandiego.gov/environmental-services/recycling/cdrecycling.shtml
[79] Personal communication with Bill Prinz, City of San Diego, Landfill Inspection and Permitting, September 29, 2006.
[80] Personal communication with Bill Prinz, City of San Diego, Landfill Inspection and Permitting, September 29, 2006.
[81] Ibid, County of San Diego Department of Public Works, Solid Waste Planning and Recycling, 2005.
[82] FAA Order 1050.1E, Section 12, *Light Emissions and Visual Impacts,* (06/08/04).

- *Conflicting with adopted urban design and view preservation policies within the District* [83]
- *Conflicting with related community plans*
- *Altering lighting so as to create substantial glare at sensitive receptors"*

2) *"Severely contrast with the character of the surrounding neighborhood"*

3) *"Substantially block public views from designated open space, roads, or parks to visual landmarks or scenic vistas (Pacific Ocean, San Diego Bay, mountains or waterways) for a majority of viewers"*

Using the above criteria, the following aesthetic/urban design and view corridor guidelines were reviewed to ensure that the Sponsor's Proposed Action is in conformance with plans and policies governing the surrounding area. The following plans and policies are summarized below: 1) the Port Master Plan, 2) the California Coastal Act, 3) the MCRD Base Exterior Architecture Plan (BEAP) and 4) the City of San Diego's Community and Redevelopment Plans.

Port Master Plan

The Port Master Plan (PMP) outlines general goals addressing the design of new development.[84] As a land use document governing land and water development, the primary goals of the PMP concern the preservation of views, access and use of the bay, and the maintenance of the bay and tidelands as an attractive physical and biological entity. While the PMP is not responsible for the design guidelines for SDIA, it does outline general goals that address the design of new development for property within its own jurisdiction.

The PMP also governs development within the areas surrounding SDIA as illustrated in **Figure 4.14-1**. The City of San Diego *Progress Guide and General Plan*, which outlines the City's objectives and guidelines for all phases of future development within its incorporated area and sphere of influence, divides San Diego into 44 Community Planning Areas (CPA). The project area is located within the boundaries of the Lindbergh Field/Harbor Island CPA. The Progress Guide and General Plan map (updated in 1996) designates the project site for "Civil Airport and Industrial" uses. Areas surrounding the project area to the north are military, office and specialized commercial and industrial; to the south are industrial, commercial recreation and mixed uses (downtown San Diego); to the east are office and specialized commercial uses; and to the west are military land uses. The City's *Progress Guide and General Plan* establishes noise compatibility standards that apply to all noise sources, including airport noise from SDIA. These noise compatibility standards have been incorporated into the ALUCP for SDIA.

The City of San Diego Progress Guide and General Plan Update also designates North Harbor Drive and Sports Arena Boulevard in the Study Area as scenic highways. In addition, the segment of I-5 from I-8 to State Route (SR)-94, and Rosecrans Street from I-8 to Point Loma, are identified as eligible for scenic highway designation in the Progress Guide and General Plan.

California Coastal Act

The primary goal of Section 30251 of the California Coastal Act is to preserve scenic resources along the coastal areas, minimize land form alteration and to be visually compatible with the character of the surrounding area.

MCRD Base Exterior Architecture Plan

In regard to aesthetic and visual resources, the MCRD BEAP only addresses visual resources. More specifically, visual and noise buffers between MCRD San Diego and SDIA are proposed at MCRD's BEAP if new projects at MCRD are constructed. MCRD San Diego has identified the view down Belleau Avenue, looking towards the downtown skyline, as an asset.

[83] San Diego Association of Governments (SANDAG). Impacts of Unconstrained Air Transportation Capacity on the San Diego Regional Economy. 2001.
[84] San Diego Unified Port District (District). *San Diego Unified Port District, Port Master Plan.* Revised July 2005. <http://www.portofsandiego.org/>

City of San Diego Community Plans and Redevelopment Plans

The key views are compatible with the view corridor descriptions within the San Diego Downtown Community Plan, the Uptown Community Plan, Midway Pacific Highway Corridor Community Plan, the Peninsula Community Plan and their related Redevelopment Plan Areas.

The following sections describe the existing conditions of the Sponsor's Proposed Action as they relate to the evaluation criteria described above.

4.14.1 Light Emissions

Existing light emissions were documented by evaluating the current facility site plan and observing current light sources. Primary sources of light at SDIA include light emanating from buildings (i.e., terminals and cargo, flight kitchen and other airport facilities) and light from exterior sources (i.e., airfield lighting, parking, security lighting, street lighting, wayfinding and landscaping lighting). Current SDIA facilities within the Study Area produce light common in highly urbanized areas, and specifically provides for the safety and security of people, property and the air transportation network located at SDIA. Certain airport facilities are visible from the airport periphery and emit light intensities that are noticeably above average ambient light conditions, but existing lighting does not interfere with the nighttime visibility of control tower operators and incoming pilots, or the existing biological resources or sensitive receptors.

4.14.2 Visual Impacts

SDIA is located in a fully urbanized area that is surrounded by existing commercial uses, industrial uses, military uses, a park, and San Diego Bay. This section describes both the environmental setting on-site at SDIA and in the surrounding area.

The impact of the Sponsor's Proposed Action on aesthetics is based on the degree to which it maintains the character of the neighborhood, existing landforms, and minimizes light and glare. The existing conditions at SDIA associated with each of these categories that pertain to aesthetics are identified below.

- Neighborhood Character – The current character of the SDIA Study Area and Lindbergh Field Planning Sub-area is represented by runways, taxiways, aircraft parking aprons, an airport traffic control tower, passenger terminals, and public parking.
- Landform – The existing site is relatively level.
- Light and Glare - Currently, some residences in the surrounding study area that have nighttime views of the downtown skyline and San Diego Bay, are impacted by bright light and glare from the current uses at the SDIA Study Area, existing uses in the surrounding urbanized area, and vehicle lights associated with the Interstate-5.

Onsite, the SDIA Study Area is relatively flat and sits within the landforms of the Point Loma peninsula on the west and the hillsides of Uptown and Middle Town on the east. The average elevation of SDIA is between 10 to 15 feet above mean sea level (msl). The topography at the site slopes gradually to the south and west towards San Diego Bay. Most of the structures associated with SDIA are low-scale development (approximately 50 feet at the highest point). SDIA has its primary aviation terminals on the south side of the facility facing North Harbor Drive. The principal uses between these terminals and North Harbor Drive are the landside parking facilities, transit plazas, and associated access routes. The runway, taxiways, and other airside support facilities are north of the terminals and are not easily viewed from North Harbor Drive. All of these facilities can be seen from the elevated Pacific Highway on-ramp to I-5 and from I-5 itself.

Existing visual resources within the SDIA Study Area consist of natural and human-made features. Natural visual features include San Diego Bay, the Pacific Ocean and distant views of the Point Loma peninsula. The human-made features include the downtown skyline and various historic structures located on the east side of U.S. Marine Corps Recruit Depot (MCRD) San Diego.

Immediately surrounding the SDIA Study Area, there are residential neighborhoods to the west, military uses to the north, tourist-recreational uses to the south, and industrial and airport-related uses to the east. What follows is a more detailed description of the aesthetics of the existing environment on each side of the SDIA Study Area.

West of the SDIA Study Area

Immediately adjacent to the west side of the SDIA Study Area is the City of Sand Diego Metropolitan Sewer Pump Station #2 and Liberty Station (formerly the Naval Training Center). It is currently being redeveloped with multiple uses including residential, commercial, office, open space, and tourist-oriented commercial development. A majority of this development has been completed.

Nearby to the SDIA Study Area there are east-facing residences in the Peninsula Community Plan Area that have distant views to San Diego Bay, the downtown skyline, the Pacific Ocean, and SDIA.

North of the SDIA Study Area

U.S. Marine Corps Recruit Depot (MCRD) San Diego is located to the north of the Study Area and includes historic buildings that are used to house and train Marine recruits. Outdoor-use areas on MCRD San Diego adjacent to the SDIA Study Area include the outdoor combat skills training areas. There are views to the downtown skyline from Belleau Avenue looking south and to the water from the north end of the San Diego Bay Navy Boat Channel.

East of the SDIA Study Area

Immediately east of the SDIA Study Area is a panhandle shaped area within the Midway Community Plan Area that is bounded by I-5 on its west side. This area includes a variety of commercial uses such as light industrial businesses, office uses, gas stations, and long- and short-term parking. Additionally, the area includes the Port of San Diego Headquarters and the Palm Avenue Trolley Station.

Nearby to the SDIA Study Area and East of the Midway Community Plan area is I-5, a major transportation corridor that leads south to the border of Mexico and north to Los Angeles. Currently, the motorist has views from the southbound lane of I-5, which is elevated above the SDIA Study Area, and include San Diego Bay, the Pacific Ocean, Point Loma peninsula, and the downtown skyline. These views are partially obstructed by freeway railings, and by buildings and private fences near the freeway. East of the I-5 are the residential communities within the City of San Diego's Uptown Planning area. These communities are located on hillsides rising up from the I-5 and they have distant views of the San Diego Bay, the Pacific Ocean, SDIA, and the Point Loma peninsula. These communities also have nighttime views of the same area including views of the SDIA runway lights.

South of the SDIA Study Area

Immediately to the south of the Study Area, there is North Harbor Drive. Along the south side of North Harbor Drive are the US Coast Guard Station, three rental car facilities, the Harbor Police Station, and the Spanish Landing Park.

Nearby the SDIA Study Area are hotels, restaurants, and marinas that are located on Harbor Island, an island that is south of North Harbor Drive.

All of these facilities have uninterrupted views of San Diego Bay and of downtown San Diego. There are no airport facilities that interrupt views towards coastal resources from North Harbor Drive and South.

4.15 Department of Transportation Act: Section 4(f) and Land and Water Conservation Fund Act Section 6(f)

49 U.S.C Section 303(c), commonly referred to as Section 4(f) of the Department of Transportation (DOT) Act, states that it is Federal policy that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites. Under Section 4(f), FAA may approve a program or project requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance, or land of a historic site of national, State or local significance only if: (1) there is no prudent and feasible alternative to using that land; and (2) the program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use.

The Land and Water Conservation Fund (LWCF) Act Section 6(f) states that no public outdoor recreation areas acquired or developed with any LWCF assistance can be converted to non-recreation uses without the approval of the Secretary of the Interior. The Secretary of the Interior may only approve conversions if they are in accordance with the comprehensive statewide outdoor recreation plan and if the converted areas will be replaced with other recreation lands of reasonably equivalent usefulness and location.

The National Park Service's website was consulted to compile a list of all parks within San Diego County that have been developed with the assistance of LWCF[85]. None of these parks fall within the vicinity of SDIA.

Existing and planned Section 4(f) properties near SDIA are identified in the following sections.

4.15.1 Existing Parks and Other Recreational Resources

Existing recreational resources near SDIA were documented through review of applicable plans (e.g., *Port of San Diego Port Master Plan*) and maps, and through field reconnaissance. As described in Section 5.1, *Noise* of *Environmental Consequences*, the Proposed Action and its alternatives would not noticeably affect off-Airport noise levels, meaning that there would not be indirect noise impacts at parks or other recreational areas located under the SDIA flight paths (such as at Balboa Park or Ocean Beach). Based on these factors, the assessment of recreational resources focused on those resources located in the immediate vicinity of the Airport.

There are a number of parks and other recreational areas near SDIA, including those maintained by the Port of San Diego, as well as the recreational opportunities associated with north San Diego Bay. **Figure 4.15-1** illustrates Section 4(f) properties near SDIA.

San Diego Bay

SDIA is located just north of San Diego Bay, a regionally important recreational resource. The north Bay area near SDIA includes Shelter and Harbor islands and Spanish Landing Park (described below), and it is the focal point for San Diego's North Embarcadero (also described below). Recreational opportunities associated with San Diego Bay include boating, fishing, ferry transportation/harbor tours, tourist attractions (e.g., San Diego Maritime Museum) and sightseeing.

Shelter Island

Shelter Island is an artificial island (technically, a peninsula) located approximately three miles northwest of SDIA on Port Tidelands. Recreational facilities on Shelter Island include Shelter Island Park and paved pedestrian and bike paths, picnic benches, rest rooms, a boat launch, marinas, a shoreline beach, docking slips and a public fishing pier. Shelter Island Park occupies open space around the Friendship Bell Monument and retains access to the bay and viewpoints.

Harbor Island

Located due south of SDIA, Harbor Island is another artificial island (technically, a peninsula) created on Port Tidelands. Its recreational resources include Harbor Island Drive Park, which runs along the south side of Harbor Island, scenic paved pedestrian paths and a bicycle route. Marinas and marine related commercial businesses occupy most of Harbor Island.

Spanish Landing Park

Spanish Landing Park is located along north San Diego Bay, extending east from the Navy's Anti-submarine Warfare Base to just across from SDIA. This Port of San Diego-operated park occupies approximately 11.2 acres, approximately 1.3 acres of which are used for a paved bicycle and pedestrian path along the scenic shorefront. Other recreational amenities include picnic benches/tables and a children's sandlot/playground.

North Embarcadero Waterfront

Generally consisting of the north Bay waterfront from Grape Street to Seaport Village, the North Embarcadero is lined by a scenic pedestrian and bicycle path. Recreational resources along the North Embarcadero include recreational fishing, recreational boat berthing and view points.

[85] National Park Service: "Land and Water Conservation Fund" <http://waso-lwcf.ncrc.nps.gov/public/index.cfm>

United States Marine Corps Recruit Depot

US Marine Corps Recruit Depot (MCRD) San Diego comprises 433 acres of land immediately north of and adjacent to the project site. MCRD San Diego has over 800 civilian employees and over 1,800 permanent military personnel. At any one time, approximately 4,000 recruits are housed at MCRD. Outdoor use areas adjacent to SDIA Project Area include an outdoor combat skills training area.

4.15.2 Planned Parks and Recreational Resources

Planning for new recreational resources in the vicinity of SDIA is limited by the highly developed nature of this area. New facilities are planned at the former Naval Training Center (NTC) property and there are also planned changes to the North Embarcadero.

Former Naval Training Center/Liberty Station

Located to the west of SDIA is the former NTC, which occupies approximately 502 acres. Of these 502 acres, 361 acres are being developed as "Liberty Station" under the *NTC Precise Plan and Local Coastal Program*, adopted in 2001. Within Liberty Station, 40 acres are intended for a waterfront park and 6 acres are intended for a 100-foot wide pedestrian, bicycle, and recreational path along the waterfront. Planned recreational facilities for the waterfront park include picnic tables and open lawn areas. Another recreational use on the former NTC property is an existing golf course, located in the northern corner of Liberty Station.

North Embarcadero

The *North Embarcadero Alliance Visionary Plan*, dated December 1998, is intended to guide development along the City's North Embarcadero. This plan is the outcome of an alliance among five government agencies with significant ownership and/or jurisdictional interests in the area: Port of San Diego, Centre City Development Corporation, City of San Diego, County of San Diego and United States Navy. The plan envisions a mix of uses, including public parks and cultural facilities, all encouraging a water orientation. With full plan implementation, new or upgraded recreational facilities in the North Embarcadero area could include 100,000 square feet of cultural facilities, revitalization of waterfront pedestrian paths, the addition of 1,770 trees and revitalization of the Broadway pier.

4.15.3 Historic Sites

As stated previously, historic resources are also considered Section 4(f) properties. For information regarding historic sites located within the Study Area, see Section 4.8, *Historic, Architectural, Archaeological, and Cultural Resources*.

4.16 Applicable Plans and Policies

Given the anticipated geographic scope of cumulative impacts, the following plans and policies have been considered throughout the development of this Environmental Assessment:

City of San Diego General Plan

- General Plan Housing Element, August/November 2001
- Strategic Framework Element, Sept 2002
- General Plan, March 2008

Community Plans/Precise Plans

- Final EIR for the Proposed San Diego Downtown Community Plan, Centre City Planned District Ordinance and 10th Amendment to the Redevelopment Plan for the Centre City Redevelopment Project, Volume 1A, January 2006
- Midway/Pacific Highway Corridor Community Plan, January 1999
- North Bay Revitalization Area Final EIR, March 1998

- Old Town San Diego, Community Plan, July 1987
- Peninsula Community Plan, September 1989
- Redevelopment Agency, Naval Training Center/Liberty Station Precise Plan/EIR, January 2000/September 2001
- Uptown Community Plan, February 1988/October 1989

San Diego Association of Governments (SANDAG) Regional Plans

- Regional Comprehensive Plan 2004
- Mobility 2030, The Transportation Plan for the San Diego Region, April 2003
- Draft 2007 Regional Transportation Plan, June 2007

Port of San Diego Plans

- Port of San Diego Master Plan, August 2004
- COMPASS Strategic Plan, 2007-2011, June 2006
- Woodfin Hotel Suites DEIR, February 2006
- Sunroad Marina Notice of Preparation of a DEIR, February 2006
- America's Cup Harbor Redevelopment Plan, June 2003
- Harbor Island Redevelopment (Staff Report), December 2005
- North Embarcadero Alliance Visionary Plan, December 1998 (in conjunction with the Centre City Development Corporation, the City of San Diego, the County of San Diego and the United States Navy); EIR certified April 2000

The community plans and precise plans provide a more detailed level of planning for specific segments of the City than that provided by the more comprehensive General Plan. In the same way, the *Port of San Diego Master Plan* is supplemented by several more specific plans for certain areas.

The major planning documents are described below, highlighting their growth projections and related anticipated environmental impacts.

4.16.1 City of San Diego General Plan

Until recently, the Progress Guide and General Plan, adopted in 1992, governed development in the City of San Diego. On March 10, 2008, however, the City of San Diego Council adopted a new General Plan to guide development in the City.

The recently adopted *General Plan* presents ten elements that together provide a comprehensive "blueprint" for the City of San Diego's evolution over the next twenty years and beyond. Planned growth is based on a strategy called the City of Villages, which focuses on pedestrian-friendly, mixed-use village centers that are linked by a high quality transit network, and served by public facilities and supporting infrastructure and amenities. The village centers are designed to maintain the unique character of each of San Diego's many neighborhoods, while facilitating connections among jobs, residences, local shopping, services, and public amenities such as parks and libraries. Growth is directed primarily toward aging commercial shopping areas, with the intention of protecting natural open spaces and single-family neighborhoods from development pressure.

The *General Plan* is composed of ten interlinked elements described below:

- Strategic Framework. Contains citywide goals, the comprehensive City of Villages strategy, overall policy direction for future community plan updates and amendments and the implementation program. The following summaries of the other plan elements are excerpted from the Strategic Framework element.
- Land Use and Community Planning Element. Provides policies to implement the City of Villages strategy within the context of San Diego's community planning program. The Land Use and Community Planning Element addresses land use issues that apply to the City as a whole and

identifies the community planning program as the mechanism to designate land uses, identify site-specific recommendations, and refine citywide policies as needed.

- Mobility Element. The Mobility Element contains policies to promote a balanced, multi-modal transportation network intended to get people where they want to go and to minimize environmental and neighborhood impacts.
- Urban Design Element. Urban Design Element policies are intended to capitalize on San Diego's natural beauty and unique neighborhoods by calling for development that respects the natural setting, enhances the distinctiveness of our neighborhoods, strengthens the natural and built linkages, and creates mixed-use, walkable villages throughout the City.
- Economic Prosperity Element. The Economic Prosperity Element seeks to help create an environment that fosters creativity and allows San Diego to better compete in the regional, national, and global economic setting. The Economic Prosperity Element links economic prosperity goals with land use distribution and employment land use policies. The Economic Prosperity Element also expands the traditional focus of a general plan to include economic development policies that have a less direct effect on land use. These include policies aimed at supporting existing and new businesses that reflect the changing nature of industry, creating the types of jobs most beneficial to the local economy, and preparing our workforce to compete for these jobs in the global marketplace. The Economic Prosperity Element also describes how the formation of redevelopment project areas can be used to help implement community goals.
- Public Facilities, Services, and Safety Element. The Public Facilities, Services, and Safety Element is intended to respond to the challenge of providing adequate public facilities to serve the City's current and future population through policies that address public financing strategies, public and developer financing responsibilities, prioritization, and the provision of specific facilities and services that must accompany growth. The policies within the Public Facilities Element also apply to transportation, and park and recreation facilities and services.
- Recreation Element. The goals and policies of the Recreation Element were developed to take advantage of the City's natural environment and resources, to build upon existing recreation facilities and services, to help achieve an equitable balance of recreational resources, and to adapt to future recreation needs.
- Conservation Element. The Conservation Element contains policies intended to guide the conservation of resources that are fundamental components of San Diego's environment, that help define the City's identify, and that are relied upon for continued economic prosperity.
- Noise Element. The Noise Element provides goals and policies to guide compatible land uses and the incorporation of noise attenuation measures for new uses to protect people living and working in the City from an excessive noise environment.
- Housing Element. The Housing Element identifies and analyzes the City's housing needs; establishes goals, objectives and policies based on those needs; and sets forth a five-year program of actions to achieve, as fully as possible, the identified goals and objectives. As mandated by State law, the Housing Element is updated every five-years. The Housing Element is provided under separate cover from the rest of the General Plan due to the need for frequent Housing Element updates, and to facilitate compliance with the state reporting requirements.

4.16.2 Community Plans / Precise Plans

The community plans and precise plans provide a more detailed level of planning for specific segments of the City than that provided by the more comprehensive General Plan. In the same way, the *Port of San Diego Master Plan* is supplemented by several more specific plans for certain areas.

Downtown Community Plan

The Downtown community planning area, encompassing roughly 1,450 acres, immediately adjoins SDIA to the southwest. This area is the focus of intense planned development, both commercial and residential, which is to be guided by the goals and policies presented in the Downtown Community Plan and associated documents. Projected expansion by land use and district within the Downtown area is presented in **Table 4-16.1**.

Midway/Pacific Highway Corridor Community Plan

The Midway/Pacific Highway Corridor borders the Study Area along the east and northeast. This area encompasses approximately 800 acres of relatively flat land, divided into two zones: the northern Midway area and the narrow, linear Pacific Highway Corridor. The area is currently used primarily for urbanized commercial and industrial purposes. A few multi-family residential complexes are located in the western portion of the Midway area, bordering Point Loma.

Table 4-16.1
Existing vs. Proposed Land Use by District

Land Use Type	Existing	Proposed Buildout
Little Italy District		
Residential	1,974 units	7,970 units
Office	978,853 s.f.	1,925,401 s.f.
Civic Office	208,000 s.f.	208,000 s.f.
Culture and Education	20,300 s.f.	63,903 s.f.
Retail	266,191 s.f.	380,607 s.f.
Hotel Rooms	1,134 rooms	1,261 rooms
Other	--- s.f.	--- s.f.
Cortez District		
Residential	2,700 units	6,238 units
Office	716,737 s.f.	1,192,836 s.f.
Civic Office	85,831 s.f.	85,831 s.f.
Culture and Education	125,000 s.f.	327,761 s.f.
Retail	67,300 s.f.	187,744 s.f.
Hotel Rooms	635 s.f.	667 s.f.
Other	--- s.f.	--- s.f.
Civic/Core District		
Residential	684 units	1,274 units
Office	4,169,900 s.f.	4,916,716 s.f.
Civic Office	1,085,618 s.f.	2,857,072 s.f.
Culture and Education	139,500 s.f.	124,500 s.f.
Retail	253,000 s.f.	402,000 s.f.
Hotel Rooms	1,116 s.f.	1,530 s.f.
Other	--- s.f.	--- s.f.
Columbia District		
Residential	1,132 units	3,859 units
Office	2,503,031 s.f.	6,043,011 s.f.
Civic Office	939,871 s.f.	3,290,227 s.f.
Culture and Education	115,495 s.f.	151,464 s.f.
Retail	183,880 s.f.	685,234 s.f.
Hotel Rooms	2,003 s.f.	4,321 s.f.
Other	--- s.f.	--- s.f.

Source: Centre City Development Corporation. Final EIR for the Proposed San Diego Downtown Community Plan, Centre City Planned District Ordinance and 10th Amendment to the Redevelopment Plan for the Centre City Redevelopment Project, Volume 1A, January 12, 2006.

The *Midway/Pacific Highway Corridor Community Plan*, as amended in 1999, governs development in this area. Four amendments to the *Midway/Pacific Highway Corridor Community Plan* are currently under consideration by the City of San Diego. Of these, three could change commercial or light industrial land

use designations to allow for residential development, as listed in **Table 4-16.2**. The fourth amendment would remove the Bay-to-Bay link[86] from the community plan.

Table 4-16.2
Proposed Midway/Pacific Highway Corridor Community Plan Amendments/Developments

	Mission Brewery	Laurel and Kettner Parking	Hancock Brickworks	Stella
Site Size (acres)	1.95 acres	0.85 acres	1.26 acres	0.89 acres
Current Land Use Designation	Commercial-Transportation	Industrial Small Lot Zone (IS-1-1) Zone	Light Industrial	Light Industrial
Proposed Land Use Designation	Multiple Use	Industrial Small Lot Zone (IS-1-1) Zone	Multiple Use	Very High Density Residential
Proposed Amendment/ Development	164,253 s.f. mixed use development (89 residential condos, 8 commercial condos with parking below)	Add 160,043 sq. ft. to existing 442,358 sq. ft. parking structure, adding additional 489 space	53 units, 21 of which would be live-work units	86 multi-family units
CEQA Document (Type, Date)	MND April 2006	MND May 2007	N/A (no application for specific project yet on file)	MND August 2005
Proposed Operation Date	Late 2007	unknown	Unknown	2008

Sources:

City of San Diego Development Services, Land Development Review Division. Draft Mitigated Negative Declaration, Mission Brewery Villas. April 5, 2006.City of San Diego Planning Department (Personal communication, Tony Kempton, Community Planner);

City of San Diego Development Services Department (Personal communication, Cory Wilkinson, Development Project Manager); Draft MND for Laurel and Kettner Parking (May 2007);

City of San Diego. Report No. PC-05-021. Subject: Initiation of an Amendment to the Progress Guide and General Plan and the Midway/Pacific Highway Corridor Community Plan and Local Coastal Program to revise the land use designation on a 1.26-acre site from Light Industrial to Multiple Use. 1895 Hancock/Brickworks - Project No. 47051. January 6, 2005;City of San Diego. Report No. PC-05-302. Subject: Stella - Project No. 65484. Process Five. October 20, 2005.; Report No. PC-06-115, Mission Brewery Villas, April 27, 2006.

North Bay Revitalization Area

The *Midway/Pacific Highway Corridor* previously described is also subject to the goals and policies of the North Bay Redevelopment Project and the North Bay Revitalization Area. The North Bay area includes the entire Midway/Pacific Highway Corridor, and also extends into parts of the northeastern section of the Peninsula community planning area, and further north along I-5, including small portions of the communities of Clairemont Mesa, Linda Vista, Old Town, and Uptown.

Projects slated for development in the North Bay Redevelopment Project area include the following:

Commercial Development

- SPAWAR High Technology District. Space and Naval Warfare Systems Command (SPAWAR) is a Navy facility responsible for the research, engineering, and management of all high technology systems for the U.S. Pacific fleet. The proposed SPAWAR District would include 40 to 70 acres of land, located at the interchange of I-5 and I-8, bound roughly by Pacific Highway, Barnett Avenue, Midway, Rosecrans and Camino del Rio. This district would offer large-floor plan, campus-style buildings, parking, shopping, and other amenities.
- YMCA. The Redevelopment Agency is contributing $575,000 to assist the Point Loma YMCA in a $5.5 million project to expand and improve their current facility.

[86] The Bay-to-Bay Link would have entailed a park-lined canal leading from the San Diego Bay, via the former NTC Boat Channel, to Mission Bay.

Mixed Use Housing Projects

- Hancock Street Mixed-Use Project. The Redevelopment Agency is working with two local property owners to develop housing projects near the corner of Hancock and Washington Streets (Mission Brewery and Hancock Brickworks; see Table 4-16.2.
- Morena Vista Mixed Use Project. The Morena Vista mixed-use project is a $32 million project being developed by City Link Investments. It consists of 161 residential units, 18,500 square feet of retail space and additional parking to support the Trolley Line.
- Upper Voltaire Street Mixed-Use Project. The Upper Voltaire Street mixed-use project proposed by PacWest Enterprises, LLC would provide a proposed 28 residential units and 6 commercial units (4,750 square feet of retail). Two other in-fill projects are being considered on the same block of Voltaire.
- Vietnam Veterans of San Diego. The Vietnam Veterans of San Diego, a social services provider for homeless Veterans, is in the process of building a campus of supportive services for their clients located at 4141 Pacific Highway. This small campus will be home to their corporate office, a counseling center, an employment and educational center, a kitchen, dining area, and a multipurpose area. It will also provide a 224-bed rehabilitation facility with an additional 24 three-bedroom apartments for program graduates.

Old Town San Diego Community Plan

Just east of the Midway/Pacific Highway Corridor is the 230-acre Old Town Community Planning Area. Although separated from the Study Area by the narrow band of land adjoining the Pacific Highway, Old Town is close enough to the Airport to potentially contribute to and/or be subject to SDIA Master Plan-related cumulative environmental impacts.

The *Old Town San Diego Community Plan*, adopted in 1987 and designed to guide development for a period of approximately 20 years, has not been updated in recent years. The Plan directed that development of the area be oriented toward a mix of tourist-related and residential development, with the implementation of architectural and density controls to ensure compatibility with the historical atmosphere of the area.

According to the Old Town Community Planning Committee, little further development is planned in the area in the foreseeable future. Remaining room for new development is extremely limited, and combining lots is not permitted, so most current development takes the form of improvements to existing structures, such as the addition of rooms to existing hotels. The only large projects planned or in progress are the Caltrans "campus", consisting of three buildings (the largest of which is five stories high) in an area at the north end of Old Town that was previously slated for mixed-use development in the community plan; and the proposed construction of a new parking structure to be located at one of two possible sites.[87] In addition, Delaware North Companies Parks and Resorts, the new concessionaire for restaurants and retail stores in the former Bazaar del Mundo within Old Town State Historic Park, plans to begin operation of three new restaurants and ten retail concessions in June 2006. The company plans to invest about $12 million to upgrade and renovate the historic structures that will include the new restaurants and retail stores, to be renamed Plaza del Pasado.

Peninsula Community Plan

To the north of SDIA is the 4,409-acre (approximately seven-square-mile) Peninsula community planning area, governed by the *Peninsula Community Plan*, as amended in September 1989. This highly urbanized community consists of 11 fairly distinct residential neighborhoods, several commercial districts, a university, three major regional recreational areas (Sunset Cliffs, Shelter Island and Cabrillo National Monument), and the former Naval Training Center (see discussion of the Naval Training Center/Liberty Station Precise Plan/EIR below).

Many of the neighborhoods of the Peninsula community are designated as "protected" single-family neighborhoods with densities in the range of two to nine dwelling units/acre, in which all development or redevelopment is limited to single-family residential use. Multi-family developments are located in several other neighborhoods, most notably adjacent to the Midway community planning area.

[87] Richard Stegner, member of the Old Town Community Planning Committee, personal communication: August 9, 2005.

The *Peninsula Community Plan* has not been updated in recent years. It envisioned the continued domination of the southern portion of the peninsula by Navy-related industry and the Cabrillo National Monument, with single-family residential uses occupying the majority of the rest of the area. Commercial recreational uses were expected to be prevalent in Shelter Island, North Harbor Drive and adjacent parts of Roseville, with the Roseville core/Rosecrans Street being the focus of community commercial uses, and neighborhood commercial development along Voltaire Street. Goals include conserving open space, public view access, and the character of existing single-family neighborhoods, while reducing traffic congestion and airport noise pollution, improving the transit network, and promoting multi-family infill projects and appropriate development in the commercial core.

Development of the Naval Training Center in the northeast corner of the Peninsula community planning area is subject to more recent planning efforts described in the following section.

Naval Training Center/Liberty Station Precise Plan

Immediately adjacent to the Airport to the north is the former Naval Training Center (NTC), which was transferred to the City of San Diego and established as a redevelopment area in 1997. A 361-acre portion of the NTC is being developed as "Liberty Station", under the NTC Precise Plan and Local Coastal Program, adopted in 2001. A 72-acre adjacent area remains under Navy ownership and is being developed as a military family housing complex. **Table 4-16.3** summarizes the planned NTC/Liberty Station development program.

One specific recent development proposal at Liberty Station is the proposed Nickelodeon/Marriott Hotel. This resort hotel will include a 650-room facility on 18 acres and will incorporate a 100,000-square-foot water park and activity deck complex featuring a variety of pools and interactive attractions. The resort is expected to begin construction in January 2008 and open in early 2010.[88]

Uptown Community Plan

The *Uptown Community Plan* governs development in this approximately 2,700-acre area between Old Town and Balboa Park, northeast of the Downtown area, and separated from the Airport by the relatively narrow Pacific Highway Corridor. Development goals for Uptown include:

- Encouragement of mixed-use projects with residential use over street-level retail use;
- Public right-of-way improvements;
- Preservation of low-density single-family residential neighborhoods and open-space hillsides and canyons; and,
- Implementation of permanent height limits and other design elements to protect public views.

The Plan proposed land uses including 57 percent of the total area, or 1,013 net acres, designated for residential use (over half at low-density); 30 percent, or 533 acres, of parks, open space, schools, and institutional use; with the remainder designated for mixed commercial use.

This Plan has not been updated in recent years, although an *Uptown Public Facilities Finance Plan* was produced in October 2002. The *Uptown Public Facilities Finance Plan* indicated that development was proceeding according to *Uptown Community Plan* guidelines, and by 2002 had reached a total of 21,601 dwelling units. Construction of an additional 7,134 dwelling units by the year 2022 was predicted.

At the time the *Uptown Community Plan* was produced in 1988/1989, the estimated buildout capacity for residential development was 25,410 dwelling units, compared to 20,275 dwelling units existing in 1987. This Plan has not been updated in recent years, although an *Uptown Public Facilities Finance Plan* was produced in October 2002. The *Uptown Public Facilities Finance Plan* indicated that development was proceeding according to *Uptown Community Plan* guidelines, and by 2002 had reached a total of 21,601 dwelling units. Construction of an additional 7,134 dwelling units by the year 2022 was predicted.

[88] Liberty Station website (www.libertystation.com), "Marriott International is Getting Slimed!" June 6, 2007 (last accessed 1/14/08).

Table 4-16.3

NTC/Liberty Station Planned Development Program Summary

NTC Specific Planning Area	General Description	Gross Acreage	Total Gross Square Footage	New Construction	Rehabilitation
Residential Area	Market rate single-family and multi-family homes	37	36,000 (pool/gym)	350 units	36,000 (pool/gym)
Educational Area	Focus on public and/or private education for children/adults	22	495,000	--	495,000
Office/Research & Development	Primarily traditional office uses	22	380,000	380,000	--
Mixed Use Commercial Precinct: Office, retail, live/work lofts, restaurants, commercial recreational facilities, museums	Reuse of buildings primarily within historic district	107 60	625,000 324,000	--	625,000 324,000
Civic, Arts, Culture Precinct: Civic, arts, cultural, nonprofit, office, museums, restaurants, specialty retail, special education	Reuse of buildings primarily within historic district	25	301,000	--	301,000
Golf Course Precinct	Golf Course	22	--	--	--
Park and Open Space	Public use open space and park	46*	19,000 (child care center)	--	19,000 (child care center)
Boat Channel	Open water area for public use	54	--	To be determined	To be determined
Visitor Hotel Area	350 rooms	2*	33,000 (conference center)	350 rooms	33,000 (conference center)
Business Hotel Area	650 rooms	16*	--	650 rooms	--
Metropolitan Waste-water Department Area	Water-Testing Laboratory	9*	140,000	140,000	--

* This gross acreage includes the waterfront esplanade area.

Source: NTC Precise Plan and Local Coastal Program, September 2001.

4.16.3 Regional Plans

SANDAG Regional Comprehensive Plan

The SANDAG Regional Comprehensive Plan (RCP), approved in 2004, provides the long-term planning framework for the San Diego region, intended to reflect and be implemented through updates of local and regional plans such as the community plans discussed above. The RCP focuses on the principles of sustainability and Smart Growth. SANDAG does not have the authority to make enforceable land use designations or approve proposed development projects (this authority lies with the respective local governments, such as the City of San Diego). Because of the RCP's regional focus and SANDAG's lack of land use jurisdiction, the SANDAG RCP does not identify proposed developments in the vicinity of SDIA. See the following regarding SANDAG transportation projects.

Mobility 2030, The Transportation Plan for the San Diego Region and 2007 Regional Transportation Plan*Mobility 2030, The Transportation Plan for the San Diego Region*[89] serves as the Regional Transportation Plan (RTP) for San Diego County. This plan is the product of collaboration between

[89] SANDAG 2003.

SANDAG, the 18 City governments in the area, the County government, the San Diego Metropolitan Transit Development Board (MTDB), the North San Diego County Transit District (NCTD) and the California Department of Transportation (Caltrans), as well as other agencies and many interest groups. *Mobility 2030* was designed to coordinate with the smart growth program developed in the RCP previously described, and focuses on expansion of travel choices (including buses, trolleys, trains and cars), integration of transit and roadway systems, taking advantage of new technologies, reducing demand on the transportation system during peak hours, and other region-wide changes.

The RTP contemplates possible long-term ground access improvements to the Airport including direct freeway ramps from I-5 to Pacific Highway, exclusive lanes for buses/high-occupancy vehicles (HOVs) between the Old Town Transit Center and the Airport, and intersection upgrades on Laurel Street.

Other transportation options in the Airport area that are planned or explored in the RTP include the following:

- A new freeway connection between I-5 and I-8 (for movement from East to North and from South to West);
- HOV/Managed lane facilities on I-5 from SR 54 in the south through the downtown area past the Airport to I-8;
- Implementation of signal timing programs;
- Improvements to the coastal rail corridor, including completion of double-tracking from downtown San Diego to Orange County;
- Possible high-speed rail connections from downtown San Diego through Orange County to Los Angeles;
- A review of the potential for consolidating intermodal rail, truck and air cargo freight facilities;
- New or improved transit services:
- Increases in the existing blue and orange line trolley services;
- Services through the mid-coast from Old Town to Sorrento Mesa;
- Services from Escondido to Centre City and the Airport via I-15/SR 94;
- Services from Old Town to Kearney Mesa via Mission Blvd./Balboa Avenue; and
- Services from Coronado and Centre City to Sorrento Mesa via Hillcrest/Genesee Avenue.

An update to the RTP was recently prepared by SANDAG. The *2007 RTP* incorporates a new regional growth forecast, strategic initiatives from the Regional Comprehensive Plan, the Independent Transit Planning Review, and several other white papers on topics not previously covered in the RTP. The SANDAG Board of Directors accepted the Draft *2007 RTP* and its Draft Environmental Impact Report (DEIR) for distribution and public comment in June 2007. The Final *2007 RTP* and its Environmental Impact Report (EIR) were approved by the SANDAG Board of Directors on November 30, 2007.[90]

4.16.4 Port of San Diego

Port Master Plan of San Diego

The Port of San Diego controls tidelands in the San Diego Bay area, including two planning districts in the area of the Sponsor's Proposed Action Study Area: the Harbor Island/Lindbergh Field planning district and the Centre City/Embarcadero planning district. According to the *Port of San Diego Port Master Plan* (2004), the Port's mission is "to balance regional Economic Benefits, Recreational Opportunities, Environmental Stewardship and Public Safety while protecting Tidelands Trust resources on behalf of the citizens of California."

In the 995.4-acre Harbor Island/Lindbergh Field planning district (of which 815.4 acres are tidelands and 180 acres are submerged tidelands), a significant portion of the land is already developed and under long-term lease commitment. Only the east end of the Harbor Island peninsula is vacant; this is currently

[90] SANDAG, "2030 Regional Transportation Approved," http://www.sandag.org/index.asp?newsid=499&fuseaction=news.detail, accessed 12/10/07.

slated for hotel development. The un-submerged land use allocations for this planning area are presented in **Table 4-16.4**.

Table 4-16.4
Harbor Island/Lindbergh Field Planning District Land Use Allocations

Land Use	Acres
Commercial	90.6
Airport-Related Commercial	38.0
Commercial Recreation	52.6
Industrial	631.8
Aviation-Related Industrial	130.6
Industrial Business Park	33.1
International Airport	468.1
Public Recreation	26.2
Open Space	7.5
Park	16.4
Promenade	2.3
Public Facilities	66.8
Harbor Services	1.3
Streets	65.5
Total Land Area	815.4

Source: Unified Port District of San Diego, Port Master Plan, August 2004.

The Port of San Diego is currently evaluating proposed changes to the Harbor Island/Lindbergh Field Planning District. These include deleting SDIA from the Port Master Plan, as well as the proposed Woodfin Suites Hotel & Port Master Plan Amendment project and the East Harbor Island Redevelopment, described later in this section.

The City Centre/Embarcadero planning district adjoins the Study Area on its southern boundary, and encompasses 441.3 acres, of which 245.2 acres are tidelands and 196.1 acres are submerged tidelands. The un-submerged land use allocations for this planning area are presented in **Table 4-16.5.**

A portion of the Port's City Centre/Embarcadero planning district is also within the North Embarcadero Alliance Visionary Plan, which is also described later in this section.

Table 4-16.5
City Centre/Embarcadero Planning District Land Use Allocations

Land Use	Acres
Commercial	109.8
Commercial Fishing	4.7
Commercial Recreation	105.1
Industrial	29.2
Aviation-Related Industrial	22.3
Marine Terminal	6.9
Public Recreation	59.5
Open Space	0.5
Park/Plaza	51.3
Promenade	7.7
Public Facilities	46.7
Streets	46.7
Total Land Area	245.2

Source: Unified Port District of San Diego, Port Master Plan, August 2004.

COMPASS Strategic Plan

The Port's 2006 *COMPASS Strategic Plan* identifies a number of action items for 2007-2011 that may result in development projects with the potential to incrementally contribute to cumulative impacts in the SDIA area. These include:

- Determine highest and best use for Navy Pier;
- Complete North Harbor Drive vacation and initiate construction of necessary road improvements;
- Implement Historic Waterfront and redevelopment of the old police station site;
- Monitor construction and hold ribbon-cutting ceremony for the new Hilton Convention Center Hotel;
- Implement Phase 1 of North Embarcadero Visionary Plan;
- Implement America's Cup Harbor projects for redevelopment of Shelter Island entrance;
- Negotiate and implement the option agreement(s) and monitor milestones on Lane Field development project, inclusive of the construction of a new Cruise Ship Terminal on B Street pier;
- Review, approve and facilitate tenant redevelopment plans for Harbor Island;
- Implement the option agreement and monitor milestones for the Spinnaker Hotel; and
- Evaluate and develop a plan for the best use of Pacific Highway complex.

Specific development proposals and/or projects under construction that are consistent with the Port District's identified action items are summarized below.

- Cruise Terminal Expansions. The Port District is currently evaluating proposed development concepts for the Broadway Pier and B Street Cruise Terminal Pier that would improve these facilities to serve projected growth in the San Diego cruise ship market. The improvements would be intended to meet transportation security requirements, increase terminal capacity, and improve the experience of cruise passengers, including those on transient and homeported cruise ships. Potential development concepts are undergoing evaluation and neither pier has a set schedule for its planned major upgrade. Renovation of Broadway Pier to strengthen its pier deck is, however, ongoing and expected to be completed in 2008.[91]

- Lane Field Redevelopment. This proposed redevelopment project, named for the former athletic field located near B Street and Harbor Drive, includes two elements, Lane Field North and Lane Field South. The Port District Board has approved the development of a 500 to 550 room hotel on Lane Field South and a 250 to 300 room hotel on Lane Field North. These projects are currently undergoing review to determine if any additional environmental analysis is required under CEQA, or if the projects are adequately addressed under the Port Master Plan and its associated EIR.[92]

- West Island Palms West Hotel. The Port District approved the Island Palms West Hotel project in October 2006. The proposed Island Palms West Hotel Project, which would be located on Shelter Island, includes demolition and removal of the former Voyager Restaurant building of approximately 11,627 square feet; construction of a new three-story hotel building of approximately 25,600 square feet that includes 48 guest rooms plus marina offices and facilities; remodeling of the existing building to provide 77 guestrooms, an approximately 1,560-square foot two-story main lobby, and an approximately 1,330-square foot dining area; and other related elements.[93]

- Hilton San Diego Convention Center Hotel. This hotel project, located adjacent to the San Diego Convention Center, includes a 385 foot tower, 106,000 square feet of meeting space, 5,360 square feet of retail space, a 23,082 square-foot health club, 1,200 private rooms, a 14,000

[91] San Diego Unified Port District, JPA/NEVP Presentation on Cruise Terminals (PowerPoint), July 26, 2007; Press Release: Port of San Diego to go Mediterranean with Moorings for Mega Yachts. July 18, 2007; Press Release: Broadway Pier to Close Temporarily for Improvement Project. March 29, 2007.

[92] San Diego Unified Port District; Port of San Diego website. http://www.portofsandiego.org/. Accessed on August 6, 2007.

[93] San Diego Unified Port District, Island Palms West Hotel Notice of Determination. As referenced on CEQAnet (http://www.ceqanet.ca.gov). October 12.

square-foot restaurant, and a 4.3-acre public park. This project is currently under construction, with completion targeted for December 2008.[94, 95]

- Redevelopment of Old Police Headquarters and Harbor Seafood Mart. The planned redevelopment of the old police headquarters site includes retention and adaptive reuse of the old police headquarters for a mix of specialty retail, entertainment and restaurant uses; demolition of Harbor Seafood Mart and development of a smaller facility to incorporate commercial fishing uses, a waterfront fish restaurant and retail spaces; reconfiguration of parking lots; and new public park and plaza areas. Construction is expected to be complete in 2008.[96]

- East Harbor Island Redevelopment. The Port District is evaluating redevelopment of approximately 17.8 acres of east Harbor Island with a 600-room hotel, over 21,000 square feet of meeting space, restaurants, retail, public plazas and promenades and associated public infrastructure. The proposed site includes approximately 2.10 acres of water area and 15.70 acres of land area currently developed with two restaurants (one of which would be incorporated as part of the project), a 600-slip marina (which would remain, albeit with new marina buildings and other improvements), and a surface parking lot for airport employees.

- Woodfin Suites Hotel Project. The proposed Woodfin Suites Hotel Project involves the demolition of all existing structures on the 3.79-acre filled tidelands portion of the project site on West Harbor Island, and the construction and operation of a 165,000-foot structure, to include an eight-story (maximum 140-suite) hotel, and a 12,500-square-foot clubhouse (including spa and restaurant). In addition, 401 parking spaces would be provided (including 59 underground spaces within the hotel structure), as well as a two-story, approximately 11,200-square-foot marina services building, and an approximately 1,120-linear-foot seawall topped by a public promenade, along the northern limit of tidelands within the property. The Final EIR for the Woodfin Project was approved in July 2006.

Sunroad Harbor Island Hotel & Port Master Plan Amendment

The Port of San Diego is evaluating a proposal to redevelop approximately 17.80 acres of east Harbor Island with a 600-room hotel, over 21,000 square feet of meeting space, restaurants, retail, public plazas and promenades and associated public infrastructure. The Port of San Diego completed a staff report on the proposed redevelopment in December 2005 and issued a Notice of Preparation of a DEIR on February 6, 2006.

The proposed site includes approximately 2.10 acres of water area and 15.70 acres of land area currently developed with two restaurants (one of which would be incorporated as part of the project), a 600-slip marina (which would remain, albeit with new marina buildings and other improvements), and a surface parking lot for airport employees.

The Port's proposed project would consist of a phased development, ultimately including the following elements:

- Demolition of all existing structures on site except the Island Prime Restaurant and the Reuben E. Less Sternwheeler (which would eventually be dismantled or relocated);
- Hotel space totaling 600 rooms, including two hotel towers up to 280 feet tall, a full-service restaurant, pool terrace and approximately 15,000-square-foot spa, and 53,000 square feet of flexible indoor meeting and function space;
- Three additional restaurants, dock and dine as well as water taxi facilities within the existing marina, and retail uses at various locations in the proposed development;
- New marina buildings to replace existing marina structures;
- Up to 1,500 surface and structured parking spaces to be built in phases;
- Landscaping improvements, including a 1.75-acre central square surrounded by the retail and

[94] San Diego Unified Port District; Port of San Diego website. http://www.portofsandiego.org/. Accessed on August 6, 2007.
[95] Hensel Phelps Construction, Hilton San Diego Convention Center Hotel project website. http://www.destinationwebcam.com/HenselPhelps/. Accessed on August 6, 2007.
[96] San Diego Unified Port District; Port of San Diego website. http://www.portofsandiego.org/. Accessed on August 6, 2007.

restaurant plaza, meandering landscaped pathways and an improved promenade along the bay;

- Narrowing of Harbor Island Drive from four lanes to three lanes; and
- Replacement and relocation of the existing traffic circle at the end of Harbor Island Drive with a smaller turnaround.

As noted above, the Port is currently preparing a DEIR to address the proposed project. If approved, construction could potentially begin late in 2007, with completion of the first phase of the project in 2009.

Shelter Island/America's Cup Harbor Redevelopment

The Port Master Plan was amended in 2003 to include a redevelopment plan for the America's Cup Harbor portion of the Shelter Island planning area. The plan includes both physical modifications and land use changes intended to promote the redevelopment of the America's Cup Harbor and enhance public access linkages, waterfront promenades and recreational opportunities throughout the area. It proposes redevelopment of the former Tarantino's Restaurant site, Sun Harbor Marina, the Kettenburg Boatyard, and the former Bay City Marine site. The plan also includes consolidation of buildings and redistribution of parking and added shoreline walkway in the Shelter Island Drive corridor; street enhancement to North Harbor Drive; development of a continuous public promenade, additional park acreage, public parking; and associated land use changes.

North Embarcadero Alliance Visionary Plan

The North Embarcadero Alliance Visionary Plan, dated December 1998, is intended to guide development along the City's North Embarcadero (including a portion of the Port of San Diego's City Centre/Embarcadero Planning District). This document is the outcome of an alliance among five government agencies with significant ownership and/or jurisdictional interests in the area; these include, in addition to the Port of San Diego, the Centre City Development Corporation, the City of San Diego, the County of San Diego and the United States Navy. The plan envisions a mix of hotel, retail, office, residential and entertainment uses, as well as public parks and cultural facilities, all encouraging a water orientation. Water uses include specific areas for commercial fishing berthing, public boat docking and the ferry landing, ship anchorage, marine terminal berthing, and boat/ship navigation corridors. Eventually, the full build-out of the North Embarcadero area could culminate in up to 3.0 million square feet of office space, 175,000 square feet of restaurant, retail and entertainment uses, 3,500 hotel rooms, 100,00 square feet of cultural facilities, 800 residential units, a home port cruise ship terminal with associated customs and immigration facilities, and over 12,000 parking spaces.

Chapter Five: Environmental Consequences Introduction

This chapter describes the significance criteria, methodology, and potential impacts associated with each of the environmental impact categories identified in FAA Orders 5050.4B and 1050.1E. In addition, the following sections examine potential construction impacts, potential cumulative impacts, and if necessary, potential mitigation measures for reducing impacts in each of the environmental impact categories.

This EA considers the years 2015 and 2020 for environmental analysis. The year 2015 represents one of the first full implementation years for the Proposed Action. Additionally this EA analyzes potential environmental impacts 5 years beyond the implementation analysis year, specifically 2020. The following alternatives are evaluated for potential impacts in 2015 and 2020.

- No Action Alternative
- West Terminal Alternative (with Parking Structure) (Preferred Alternative)
- West Terminal Alternative (without Parking Structure)
- East Terminal Alternative (with Parking Structure)
- East Terminal Alternative (without Parking Structure)

Due to the fact that an Environmental Impact Report (EIR) was prepared and certified for the same Proposed Action in accordance with the State's California Environmental Quality Act (CEQA), the significance criteria used for impact analysis in this EA may use State and local standards as a guide if the standards are at least as stringent as Federal standards.

The San Diego County Regional Airport Authority (SDCRAA) adopted the CEQA guidelines, *Title 14 California Code of Regulations, Division 6 Chapter 3 Guidelines for Implementing the California Environmental Quality Act*, and the Environmental Checklist questions from Appendix G for impact criteria on February 2, 2004. The SDCRAA has used these guidelines as their own since adoption. Where other agencies have differing or additional criteria those criteria are specifically defined within the introduction of each resource category in this chapter.

Although the environmental analysis for potential impact considers operational growth for the Airport through 2020, no additional improvements are proposed beyond those needed to accommodate growth through 2015. The SDIA Master Plan considers improvements through 2030 at a conceptual level which informs the overall land use plan; however, an implementation plan for specific improvements is developed only through 2015. Future planning efforts for SDIA will focus on specific improvements beyond 2015. As these future improvements are proposed, defined, and analyzed, additional environmental review will be required and undertaken by the SDCRAA.

5.1 Noise

This section provides the potential noise impacts associated with the Proposed Action and its alternatives. It is noted that the variations of the West Terminal Alternative and the East Terminal Alternative to include or not include a Parking Structure does not affect the noise analysis. Additional information on the noise modeling analysis is available in Appendix B – *Noise and Its Effects on People*.

5.1.1 Methodology

5.1.1.1 Aviation Noise

Aircraft-induced noise exposure level contours with the CNEL metric were prepared using the latest version (7.0 released April 2007) of the Federal Aviation Administration's (FAA's) Integrated Noise Model (INM) for each alternative and year of analysis. INM uses annual average daily operations to compute existing and forecast noise exposure. Annual average daily operations are representative of all aircraft operations that occur over the course of a year, including variations in runway and flight track usage. The total annual operations are divided by 365 days to determine the number of operations on the average day. Runway use, flight track location and use, and aircraft profiles define the paths that aircraft traverse as they fly to and from the Airport.

INM calculates the overall annual average daily noise exposure (i.e., CNEL) at points on the ground around San Diego International Airport (SDIA). From the grid of points, contours of equal daily sound level are calculated for overlay onto land use maps and subsequent analyses. As a computer-based noise model, the use of INM allows for the projection of forecast noise exposure.

The Federal Interagency Committee on Noise (FICON) has established guidelines to address the compatibility of various land uses within an aircraft operation's induced noise environment. These guidelines provide a means to describe the potential effect of the proposed action on land areas within the vicinity of the Sponsor's Preferred Alternative. The FAA has informally adopted the FICON guidelines regarding land use compatibility with various levels of noise. The FAA has defined a DNL of 65 dB as the threshold of noise compatibility with residential and other noise-sensitive land uses.

FAA Orders 1050.1E and 5050.4B establish that a change of 1.5 DNL that results in a 65+ DNL at noise sensitive land uses, due to the Proposed Action as compared to the No Action Alternative, is considered a significant impact. Examination of noise levels below 65 DNL is necessary if there is a significant noise impact within the 65 DNL contour.[1]

Noise exposure levels for aircraft and other sources are expressed in terms of cumulative, or total, noise effects. The State of California has adopted the Community Noise Equivalent Level (CNEL) metric as the standard for assessing community noise impact. CNEL is the average noise level over a 24-hour period with a 3 dB increase attributed to evening operations (i.e., operations between 7 PM to 10 PM) and a 10 dB increase attributed to nighttime operations (i.e., operations between 10 PM and 7 AM). The 3 dB and 10 dB increases during evening and nighttime hours, respectively, are intended to account for the added intrusiveness of aircraft noise during time periods when ambient noise due to vehicle traffic and other sources is typically less than during the daytime. See Appendix B for additional information on noise metrics. Appendix B also provides detailed information on the noise modeling assumptions used in this analysis, including average weather conditions, fleet mix, runway use, and flight tracks.

5.1.1.2 Construction Noise

Construction noise sources do not always correspond to 24-hour community noise standards because they occur only during selected times and the source strength varies with the type of equipment in use. As a result, the San Diego City municipal code regulates construction noise in terms of time of day and maximum noise levels. This analysis evaluates construction noise in this context.

[1] U.S. Department of Transportation, Federal Aviation Administration, Office of Environment and Energy, March 2006, "Environmental Impacts: Policies and Procedures," FAA Order 1050.1E, Change 1, and U.S. Department of Transportation, Federal Aviation Administration, Office of Airport Planning and Programming, April 2006, "National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions," FAA Order 5050.4B.

Based upon the loudest noise typically produced by construction equipment, the resulting noise levels at various distances from the construction zone were calculated in reference to spherical spreading, ground attenuation, and atmospheric absorption. The maximum noise levels for different equipment types were used in this analysis in order to provide a "worst-case" example. In fact, there are makes and models of construction equipment that are substantially quieter than the loudest types that are used in this analysis. **Table 5-1.1** shows the range in noise levels produced by various construction equipment types. For example, a concrete mixer is assumed to produce noise levels of 90 dB at 50 feet; however, there are models of concrete mixers that produce 72 dB at 50 feet.

Table 5-1.1

Construction Noise Levels (dB) by Equipment Type and Distance at 50 feet

	A-weighted Sound Level (dB) at 50 feet	
Equipment	**Minimum**	**Maximum**
Compacter/Roller	72	88
Front Loader	72	97
Backhoe	72	93
Scraper/Grader	76	96
Paver	82	92
Truck	70	97
Concrete Mixer	72	90
Concrete Pump	75	85
Crane (Movable)	76	96
Crane (Derrick)	85	88
Pump	70	80
Generator	70	83
Compressor	68	88
Jackhammer/Drill	76	99
Pile Drivers @ Peak	90	105

Source: Cyril Harris, Handbook of Noise Control, 1979.

Next, the effects of spherical spreading, ground attenuation, and atmospheric absorption due to distance from the source (i.e., the location of the construction equipment) to receiver (e.g., homes) were calculated based upon typical conditions (e.g., temperature and humidity) in the area. Spherical spreading occurs as noise spreads out from the source, in a circular pattern. Ground attenuation is the reflection of sound waves on the surface; soft ground and vegetation absorbs some sound, versus hard surfaces such as highways and water reflect sound. Atmospheric adsorption occurs due to the interaction of sound waves with the air molecules. These effects reduce and absorb the noise energy, with decreased noise energy as distance from the source increases. Therefore, the quantitative effects of spherical spreading, ground attenuation, and atmospheric adsorption were subtracted from the noise level at the source in order to determine the resulting noise level at the receiver.

Variances in atmospheric conditions, ground condition (i.e., soft versus hard), and blocking from buildings do affect the resulting noise level that would be heard at homes. Because variances do occur, the loudest noise level from construction equipment was used in this analysis in order to provide a conservative analysis.

Construction Noise impacts are explained in Section 5.18.1, *Construction Impacts.*

5.1.2 West Terminal Alternative (with and without Parking Structure)

The variations of the West Terminal Alternative, to include or not include a Parking Structure, do not affect the aviation noise analysis.

Figures 5.1-1 and **5.1-2** provide a comparison of the West Terminal Alternative (Preferred Alternative) and No Action Alternative for the 2015 and 2020 years of analysis. **Table 5-1.2** provides a comparison of the population and housing units within the CNEL contours.

As would be expected, the differences between the contours for the West Terminal (Preferred Alternative) versus the No Action Alternative are small, as both alternatives have a similar number of operations and a similar flight schedule for a given year of analysis. The primary differences in the noise contours for the same year of analysis are due to small variations in the time of day (i.e., daytime, evening, and nighttime periods in CNEL) of aircraft operations that result from delay levels estimated with the SIMMOD analysis. As discussed in **Appendix C**, *SIMMOD* is a SIMulation MODel that simulates the movement of each aircraft operation on the airfield and in the airspace, in order to calculate aggregate delay and travel time.

According to a detailed grid analysis of points spaced at 0.1 nautical mile intervals within the 60 CNEL, including noise sensitive uses such as schools, hospitals, places of worship, and historic sites, there are no locations that would experience a change of 1.5 CNEL or more within the 65 CNEL, or 3.0 or more within the 60 CNEL, due to the West Terminal Alternative (Preferred Alternative) as compared to the No Action Alternative for 2015 and 2020. Therefore, the West Terminal Alternative (Preferred Alternative) would have a less than significant impact in terms of cumulative aircraft-induced noise exposure.

Table 5-1.2
Population and Housing Units within the West Terminal Alternative (Preferred Alternative) CNEL Contours

	2015 West Terminal Alternative (Preferred Alternative) CNEL		**2015 No Action CNEL**	
	Population	Housing Units	Population	Housing Units
60dB	39,812	17,457	39,869	17,514
65dB	28,380	11,306	28,350	11,266
70dB	3,395	1,616	3,329	1,604
75dB	174	111	177	113
	2020 West Terminal Alternative (Preferred Alternative) CNEL		**2020 No Action CNEL**	
	Population	Housing Units	Population	Housing Units
60dB	42,052	17,876	41,997	17,873
65dB	30,460	12,692	30,462	12,700
70dB	4,555	1,815	4,564	1,820
75dB	429	286	422	281

Source: HNTB analysis using SANDAG GIS land use coverage and 2000 Census Block Demographics.

5.1.3 East Terminal Alternative (with and without Parking Structure)

It is noted that the variations of the East Terminal Alternative to include or not include a Parking Structure does not affect the noise analysis.

Figures 5.1-3 and **5.1-4** provide a comparison of the East Terminal Alternative and No Action Alternative for the 2015 and 2020 years of analysis. **Table 5-1.3** provides a comparison of the population and housing units within the CNEL contours.

Table 5-1.3
Population and Housing Units within the East Terminal Alternative CNEL Contours

Decibel Level	2015 East Terminal CNEL		2015 No Action CNEL	
	Population	Housing Units	Population	Housing Units
60dB	39,666	17,388	39,869	17,514
65dB	28,552	11,439	28,350	11,266
70dB	3,513	1,636	3,329	1,604
75dB	175	111	177	113
	2020 East Terminal CNEL		**2020 No Action CNEL**	
	Population	Housing Units	Population	Housing Units
60dB	42,028	17,872	41,997	17,873
65dB	30,473	12,698	30,462	12,700
70dB	4,550	1,181	4,564	1,820
75dB	426	284	422	281

Source: HNTB analysis using SANDAG GIS land use coverage and 2000 Census Block Demographics.

As would be expected, the differences between the contours for the East Terminal Alternative versus the No Action Alternative are small, as both alternatives have a similar number of operations and a similar flight schedule for a given year of analysis. The primary differences in the noise contours for the same year of analysis are due to small variations in the time of day (i.e., daytime, evening, and nighttime periods in CNEL) of aircraft operations that result from delay levels estimated with the SIMMOD analysis. Appendix C provides the description of the SIMMOD analysis and results.

According to a detailed grid analysis of points spaced at 0.1 nautical mile intervals within the 60 CNEL, including noise sensitive uses such as schools, hospitals, places of worship, and historic sites, there are no locations that would experience a change of 1.5 CNEL or more within the 65 CNEL, or 3.0 or more within the 60 CNEL, due to the East Terminal Alternative as compared to the No Action Alternative for both 2015 and 2020. Therefore, the East Terminal Alternative would have a less than significant impact in terms of cumulative aircraft-induced noise exposure.

5.1.4 No Action Alternative

Figure 5.1-5 provides a comparison of the 2015 and 2020 No Action Alternative CNEL contours with the Baseline 2005 conditions. **Table 5-1.4** provides a comparison of the population and housing units within the 2015 and 2020 No Action Alternative CNEL contours.

The growth in the CNEL contours from 2005 through 2020 is a result of the natural growth in aircraft operations that is forecast to occur.

Table 5-1.4

Population and Housing Units within the No Action Alternative CNEL Contours

Decibel Level	2015 No Action CNEL		2020 No Action CNEL	
	Population	Population	Population	Housing Units
60dB	39,869	17,514	41,997	17,873
65dB	28,350	11,266	30,462	12,700
70dB	3,329	1,604	4,564	1,820
75dB	177	113	422	281

Source: HNTB analysis using SANDAG GIS land use coverage and 2000 Census Block Demographics.

5.1.5 Mitigation Measures

With no significant cumulative and supplemental noise impacts identified for the West Terminal Alternative (Preferred Alternative), the East Terminal Alternative, or the No Action Alternative, no project mitigation measures are necessary.

5.2 Compatible Land Use

Impacts to existing and planned land uses in the vicinity of an airport are usually associated with the extent of noise impacts related to that airport.

This section presents a summary of existing land use plans and policies that affect development of the project site and surrounding area. Land use plans that apply to the area surrounding the project site include City of San Diego Community and Redevelopment Plans, Navy Redevelopment/Reuse Plans, and the Port Master Plan. Each alternative is discussed and the potential land use impacts are identified in relation to each of the on-site and surrounding land use plans described in the previous Land Use Planning sections.

5.2.1 Methodology

This analysis documents the existing onsite and offsite land uses and the surrounding area land use plans and policies. The offsite land uses consist of the adjacent military facility, nearby communities, and visitor-serving recreation areas. The relevant offsite land use plans consist of the City of San Diego General Plan, Community Plans, Land Development Code, and Port Master Plan. Additionally, the analysis is based on a site reconnaissance of the project area and the surrounding communities and aerial photographs. The significance criteria used in assessing the impact of the Proposed Action (Preferred Alternative) and the alternatives related to land use is provided below.

In accordance with FAA Order 1050.1E the Proposed Action is compatible with existing and future land uses if the following applies:

- If the noise analysis conducted for the Proposed Action concludes that there is no significant impact;
- Documentation is provided within the EA to support the airport sponsor's assurance under 49 USC 47107(a)(10) of the 1982 Airport Act that appropriate action is being taken to the extent reasonable to restrict the use of land adjacent to or in the immediate vicinity of the airport to activities and purposes compatible with normal airport operations (see Appendix H for SDCRAA Assurance letter) ; and
- The Proposed Action is consistent with plans (existing at the time the project is approved) of public agencies for development of the area in which the airport is located 49 USC 47106(a)(10).

5.2.2 West Terminal Alternative (with Parking Structure) (Preferred Alternative)

As described in Section 5.1.2, *West Terminal Alternative (with and without Parking Structure)*, there will be no significant noise impact for this alternative.

Since its creation in 2003, the SDCRAA has engaged in numerous federal and state measures to assure compatible land uses surrounding SDIA. These measures have included:

- **Part 150 Study.** The SDCRAA is in the process of completing a Part 150 Study for SDIA. This study supports the fact that the SDCRAA is taking appropriate action to consider and control land uses adjacent to or in the immediate vicinity of the Airport. The Part 150 is anticipated to be complete and accepted by the FAA in 2010. Until FAA acceptance of the Part 150 currently underway, SDCRAA will continue to implement the Noise Compatibility Program contained within the previous Part 150 study for SDIA.
- **Airport Land Use Compatibility Plan.** As the Airport Land Use Commission for San Diego County, the SDCRAA has been in the process of updating the Airport Land Use Compatibility Plan (ALUCP) for SDIA since it was first adopted in 2004. The SDCRAA is in the process of updating the Airport Land Use Compatibility Plan (ALUCP) for SDIA. A draft ALUCP and Environmental Impact Report (EIR) were produced in 2005. Due to concerns about incorporating the City of San Diego and other local stakeholders in the land use compatibility process, an extensive public outreach process has begun. A subcommittee to evaluate SDIA

land use compatibility has been formed and expects to resume their work in early 2009. Another draft ALUCP and appropriate environmental document is expected by late 2009 or early 2010.

- **Airport Land Use Commission.** SDCRAA also promotes land use compatibility in their role as San Diego County's Airport Land Use Commission. Charged with protecting public health and safety around the airport, the Commission reviews development projects around SDIA for land use compatibility and provides recommendations to the City of San Diego.
- **State Variance.** Since the late 1970s, the owner and operator of SDIA has received multiple variances to the California Noise Standards that allow SDIA to continue to operate while working toward compliance with California Noise Standards. SDIA currently holds a variance from CALTRANS to certain provisions to certain provisions of the California Noise Standards. The variance is available on the SDCRAA website at: www.san.org/airport_authority/airport_noise/variance.asp.

A copy of a land use assurance letter in compliance 49 USC Section 47107(a)(10) of the Airport and Airway Improvement Act of 1982 is included in Appendix H, Land Use.

The following discussion identifies the potential land use planning impacts associated with the West Terminal Alternative (with Parking Structure) (Preferred Alternative) as it relates to consistency with public agency plans for development within the airport surrounds. The base materials for on-site and surrounding land use plans are described in Section 4.5, *Compatible Land Use*. More specifically it reviews the Airport Land Use Compatibility Plan, the Port Master Plan/California Coastal Act, and the City of San Diego Community and Redevelopment plans.

Surrounding Land Use Plan and Policies

Port Master Plan/California Coastal Act

The Port Master Plan (PMP) of the Unified Port District of San Diego serves as the equivalent of Local Coastal Program for the lands under the jurisdiction of the Port District per the California Coastal Act. Any actions within the Port District must comply with the PMP and, since the PMP must comply with and be approved by the Coastal Commission, would also be in compliance with the California Coastal Act. The Port Master Plan no longer governs SDIA, but does govern a significant portion of the area surrounding SDIA. Because of this, the plans and policies of the PMP are reviewed here in relation to the West Terminal Alternative (with Parking Structure) (Preferred Alternative). The planning goals of the PMP relevant to Coastal Act compliance and the project, followed by the project consistency analysis for each, include the following:

- *Provide for the present use and enjoyment of the bay and tidelands in such a way as to maintain options and opportunities for future use and enjoyment.*

The Study Area is currently being used for airport-related uses (terminals, parking, and air cargo facilities). Development of the West Terminal Alternative (with Parking Structure) (Preferred Alternative) would not preclude alteration of area use in the future. The development of an expanded terminal, new parking, taxi-lane, aprons, and air cargo facilities would not alter the existing use of the Study Area. As such, the West Terminal Alternative (with Parking Structure) (Preferred Alternative) would not conflict with the PMP goal to provide for the present use and enjoyment of the Bay and tidelands area adjacent to and surrounding the SDIA Proposed Study Area in such a way as to maintain options and opportunities for future use and enjoyment.

- *The District, as trustee for the people of the State of California, will administer the tidelands to provide the greatest economic, social, and aesthetic benefits to current and future generations.*

The West Terminal Alternative (with Parking Structure) (Preferred Alternative) would result in significant economic gains to the entire San Diego region.[2] The project would not result in significant adverse aesthetic impacts to surrounding regions (Section 16, *Light Emissions and Aesthetics*). By creating economic advantages for the region and avoiding negative aesthetic impacts, the West Terminal Alternative (with Parking Structure) (Preferred Alternative) would be

[2] San Diego Association of Governments. Airport Economic Analysis. Fall 2000.

consistent with the PMP goal to administer the tidelands area adjacent to and surrounding the SDIA Study Area to provide the greatest economic, social, and aesthetic benefits to present and future generations.

- *District will integrate the tidelands into a functional regional transportation network.*

The West Terminal Alternative (with Parking Structure) (Preferred Alternative) would provide an important transportation improvement to the area surrounding the Proposed Study Area and to the greater San Diego region. By improving area transportation, with such elements as the addition of an intermodal center that is connected with a pedestrian bridge to a transit station that is a part of the regional mass transit system, the West Terminal Alternative (with Parking Structure) (Preferred Alternative) would be consistent with the PMP goal to integrate the tidelands area adjacent to and surrounding the SDIA Proposed Study Area into a functional regional transportation network.

- *The District will enhance and maintain the Bay and tidelands as an attractive physical and biological entity.*

The West Terminal Alternative (with Parking Structure) (Preferred Alternative) would be the development of an architecturally attractive airport terminal consistent with existing Terminal 2 West on a previously developed area. The West Terminal Alternative (with Parking Structure) (Preferred Alternative) would result in no significant adverse biological impacts. By planning a visually appealing project that would not result in significant adverse biological impacts, the West Terminal Alternative (with Parking Structure) (Preferred Alternative) would be consistent with the PMP goal to enhance and maintain the Bay and tidelands area adjacent to and surrounding the SDIA Proposed Study Area as an attractive physical and biological entity.

- *The District will ensure physical access to the Bay except as necessary to provide for the safety and security, or to avoid interference with waterfront activities.*

The West Terminal Alternative (with Parking Structure) (Preferred Alternative) would be constructed on a previously developed area that is not used as a Bay access point. Therefore, the West Terminal Alternative (with Parking Structure) (Preferred Alternative) would be consistent with the PMP goal to ensure physical access to the Bay except as necessary to provide for the safety and security or to avoid interference with waterfront activities.

- *The quality of water in San Diego Bay will be maintained at such a level as will permit human water contact activities.*

The West Terminal Alternative (with Parking Structure) (Preferred Alternative) would not result in significant water quality impacts (see Section 5.6, *Water Quality*). Therefore, the West Terminal Alternative (with Parking Structure) (Preferred Alternative) would be consistent with the PMP goal to maintain San Diego Bay water quality at such a level as will permit human water-contact activities.

- *The District will protect, preserve, and enhance natural resources, including natural plant and animal life in the Bay, as a desirable amenity, an ecological necessity, and a valuable and usable resource.*

The West Terminal Alternative (with Parking Structure) (Preferred Alternative) would be located on a previously developed area and would not significantly impact any biological resources. Therefore, the West Terminal Alternative (with Parking Structure) (Preferred Alternative) would be consistent with the PMP goal to protect, preserve, and enhance natural resources, including natural plant and animal life in the Bay as a desirable amenity, an ecological necessity, and a valuable and usable resource.

Although the proposed improvements of the West Terminal Alternative (with Parking Structure) (Preferred Alternative) are located outside of the PMP jurisdiction, the above review demonstrates the consistencies of the West Terminal Alternative with many of the PMP goals and policies. As such, the impacts of the West Terminal Alternative related to the goals and policy of the PMP would be considered less than significant.

City of San Diego Land Use Plans and Policies

This section discusses the compatibility of the West Terminal Alternative (with Parking Structure) (Preferred Alternative) with the City of San Diego Land Use Plans and Policies. More specifically the City's General Plans, Community and Precise Plans and Redevelopment Plans are reviewed.

City of San Diego General Plan

The West Terminal Alternative (with Parking Structure) (Preferred Alternative) would be located on land contiguous to and included within the existing airport, including a parcel of land from the former NTC property that is now part of SDIA. The West Terminal Alternative (with Parking Structure) (Preferred Alternative) would involve improvements on the former General Dynamics facility. These improvements include additions to airfield, air support, and ground transportation facilities. Current and historic land uses of the land in the Proposed Study Area would continue to be on those areas noted for airport related uses. Use of this land for the West Terminal Alternative (with Parking Structure) (Preferred Alternative) would be generally consistent with the highly disturbed current and past uses of the land.

The development outlined in the West Terminal Alternative (with Parking Structure) (Preferred Alternative) would not extend into surrounding communities. Improvements to surrounding roadways to mitigate traffic impacts would be the only activities that would occur outside the immediate area of the Airport. Neither the West Terminal Alternative (with Parking Structure) (Preferred Alternative) nor these traffic mitigation measures would physically divide existing communities. There would be no significant disruption or division of the established communities. Therefore, neither the West Terminal Alternative (with Parking Structure) (Preferred Alternative) nor its mitigation measures would cause significant offsite disruption impacts to the City of San Diego or its communities.

There is no significant change in the noise contours to the surrounding communities of the general plan based on the Proposed Action. As a result there are no significant impacts to these communities related to noise. See Section 5.1, *Noise*, for a full discussion of the noise issues associated with the West Terminal Alternative (with Parking Structure) (Preferred Alternative).

City of San Diego Community and Precise Plans

The compatibility of the West Terminal Alternative (with Parking Structure) (Preferred Alternative) with the City of San Diego's Community and Precise Plans for communities adjacent to and surrounding SDIA and the Proposed Study Area are discussed in this section.

Midway-Pacific Highway Corridor Community Plan

The Midway-Pacific Highway Corridor Community Plan is not consistent with the adopted ALUCP. However, the West Terminal Alternative (with Parking Structure) (Preferred Alternative) does not cause the inconsistency with the ALUCP.

Uptown Community Plan

The policies in the Uptown Community Plan recommending the protection of views on the western slopes are addressed in Section 5.16, *Light Emissions and Aesthetics*. The Uptown Community Plan is not consistent with the adopted ALUCP. However, the West Terminal Alternative (with Parking Structure) (Preferred Alternative) does not cause the inconsistency with the ALUCP.

Peninsula Community Plan

The Peninsula Community Plan defines the major views of the area to be those to *"the San Diego Bay, the downtown, Coronado, Mission Bay and Pacific Beach."* Section 5.16, *Light Emissions and Aesthetics,* presents an evaluation of the potential impacts to key views, neighborhood character, and aesthetics in the nearby CPAs. Peninsula CPA views would not be significantly impacted by the improvements visible to a viewer in the Peninsula area.

As discussed in Section 5.16, *Light Emissions and Aesthetics*, lighting and glare would be similar to existing airport lighting and would exist along with the lighting of the highly urbanized area. Therefore, the light emissions would not significantly impact the surrounding neighborhood views to San Diego Bay, downtown, Coronado, Mission Bay, or Pacific Beach.

The Peninsula Community Plan is not consistent with the adopted ALUCP. However, the West Terminal Alternative (with Parking Structure) (Preferred Alternative) does not cause the inconsistency with the ALUCP.

San Diego Downtown Community Plan

The San Diego Downtown Community Plan has been determined to be conditionally consistent with the existing SDIA ALUCP. The West Terminal Alternative (with Parking Structure) (Preferred Alternative) would be consistent with the ALUCP.

NTC Precise Plan

Some of the proposed improvements associated with the West Terminal Alternative (with Parking Structure) (Preferred Alternative) would be located on former NTC land recently acquired by SDIA. On June 12, 2001, the Port District incorporated the former NTC land designated for "Airport Expansion" (approximately 52-acres), which was transferred from the City of San Diego. The development proposed in the West Terminal Alternative would not have a significant land use impact on this parcel.

City of San Diego Redevelopment Plans

This section discusses the compatibility of the West Terminal Alternative (with Parking Structure) (Preferred Alternative) with the City of San Diego Redevelopment Plans and Policies.

North Bay Redevelopment Plan

The North Bay Redevelopment Plan is not consistent with the adopted ALUCP. However, the West Terminal Alternative (with Parking Structure) (Preferred Alternative) does not cause the inconsistency with the ALUCP.

Naval Training Center (NTC) Redevelopment /Re-use Plan

Some of the proposed improvements associated with the West Terminal Alternative (with Parking Structure) (Preferred Alternative) would be located on former Naval Training Center land recently acquired by SDIA. On June 12, 2001, the Port District incorporated the former NTC land designated for "Airport Expansion" (approximately 52-acres), which was transferred from the City of San Diego. The development of the West Terminal Alternative (with Parking Structure) (Preferred Alternative) would not have a significant land use impact under the NTC Redevelopment Plan as the NTC Precise Plan has replaced it as the planning document for the transferred parcel.

City of San Diego Airport Plans and Policies

This section discusses the compatibility of the West Terminal Alternative (with Parking Structure) (Preferred Alternative) with the City of San Diego Airport Plans and Policies.

City of San Diego Airport Approach Overlay Zone

The proposed expansion of the terminal buildings and the proposed parking structure (five levels) in the West Terminal Alternative (with Parking Structure) (Preferred Alternative) would not exceed height limits identified by FAA regulations. Ultimately, the FAA would review building plans to ensure the terminal does not obstruct navigable airspace or affect safety of aircraft and passengers. As such, the West Terminal Alternative (with Parking Structure) (Preferred Alternative) would not have a significant land use impact.

City of San Diego Airport Environs Overlay Zone

Review of the City of San Diego AEOZ, which aims to protect the public from noise or hazards associated with airport operations at SDIA, indicates that the West Terminal Alternative (with Parking Structure) (Preferred Alternative) would be consistent with the stated purpose of the AEOZ. The implementation of the West Terminal Alternative (with Parking Structure) (Preferred Alternative) would not significantly change noise exposure within the Airport Influence Area (see Section 5.1, *Noise*). The noise impact of the West Terminal Alternative (with Parking Structure) (Preferred Alternative) would be less than or equal to the impact assumed in the adopted ALUCP, which is the standard of review under the AEOZ for projects submitted to the City of San Diego for. As such, impact would be less than significant.

Existing land uses in the area immediately adjacent to the Proposed Study Area include Liberty Station (the former NTC), MCRD, and airport-related facilities. The greater area outside the Proposed Study

Area is developed with residential, urban commercial, recreational open space, and military industrial uses.

Immediately west of Liberty Station (the former NTC), approximately 1.5 miles from Terminal 2 West, is the residential core of the Peninsula Community Planning Area. Urban commercial uses are located approximately 1 to 1.5 miles southwest of Terminal 2 West along the San Diego Bay waterfront. Military industrial uses comprise the southernmost portion of the Point Loma peninsula, approximately 2.5 miles south of the proposed terminal improvements.

The West Terminal Alternative (with Parking Structure) (Preferred Alternative) would be compatible with the existing terminal buildings, ground transportation and air support facilities already on the project site. Therefore, the West Terminal Alternative (with Parking Structure) (Preferred Alternative) would not have any significant land use compatibility impacts.

5.2.3 West Terminal Alternative (without Parking Structure)

The West Terminal Alternative (without Parking Structure) proposes that excess parking demand would be served by off-property parking facilities and alternate modes of transportation, and as such the West Terminal Alternative (without Parking Structure) would not have any significant land use compatibility impacts. Due to substantial conformance of this project with the West Terminal Alternative (with Parking Structure) (Preferred Alternative), the previous section describing the analysis applies to the West Terminal Alternative (without Parking Structure) as well.

5.2.4 East Terminal Alternative (with and without Parking Structure)

Due to the similar nature of the East Terminal Alternative with the West Terminal Alternative (with Parking Structure), the analysis for West Terminal Alternative (with Parking Structure) also applies to this alternative. As such, the East Terminal Alternative impacts would also be considered less than significant.

5.2.5 No Action Alternative

This section evaluates the potential effects of maintaining the existing condition of the SDIA Study Area at SDIA. Under the No Action Alternative, there would be no changes to the existing terminals, airside facilities, cargo facilities, or landside access facilities.

The No Action Alternative would not develop a terminal or related airside or landside facilities that would improve airport operations. The No Action Alternative would not result in any changes that would cause a significant noise impact, or defer appropriate action that is being taken to consider and control the use of land adjacent to or in the immediate vicinity of the airport to activities and purposes compatible with normal airport operations, or be inconsistent with existing land use plans; therefore, this alternative would not have any significant land use impacts.

5.2.6 Mitigation Measures

With no significant land use impacts identified for the alternatives considered, no mitigation measures are necessary. However, to ensure that land use compatibility is considered for adjacent development, future land uses surrounding the Proposed Study Area shall follow the allowable land uses and policies as defined in the approved ALUCP and Part 150 for SDIA.

5.3 Socioeconomic Impacts, Environmental Justice, and Children's Environmental Health and Safety Risks

The West Terminal Alternative, the East Terminal Alternative, and the No Action Alternative were evaluated for the potential to result in the relocation of residences and businesses as well as the potential to alter surface transportation patterns, divide established communities, disrupt orderly planned development, or to create an appreciable change in employment.

5.3.1 Methodology

This analysis incorporates existing data sources including U.S. Census data, community plans and the SDCRAA's recently adopted SDIA 2005 ALUCP Draft EIR. Because the alternatives would not increase the CNEL under aircraft approach and departure paths (see Section 5.1, *Noise*), this section focuses on populations in the vicinity of the airport. The potential effect of the project alternatives to cause social impacts or community disruption was evaluated qualitatively. Potential conflicts with Executive Orders addressing Environmental Justice and the Protection of Children were evaluated based on the requirements of those orders and implementing guidance published by the federal government.

5.3.1.1 Socioeconomic Impacts

Due to the fact that an Environmental Impact Report (EIR) was issued and certified for the same Proposed Action in accordance with the State's California Environmental Quality Act (CEQA), the potential significant population and housing impacts were evaluated based on the CEQA Environmental Checklist Appendix G of *CEQA State Guidelines*. These guidelines also reflect FAA guidance within FAA Order 1050.1E (Appendix A, Section 16) for analysis of socioeconomic impacts and are therefore used for this EA. The Proposed Action would have a significant population and housing impact if it would:

- Displace a substantial number of people;
- Displace a substantial amount of residential units;
- Substantially reduce the levels of service of roads serving the airport and its surrounding communities;
- Create a substantial loss in community tax base; and/or
- Induce substantial population growth that would affect the population/housing balance.

Based on these guidelines, an alternative would have a significant socioeconomic impact if its social effects would lead to substantial, adverse physical changes in the environment.

5.3.1.2 Environmental Justice

Environmental Justice significance was assessed with regard to whether the proposed project or one of its components would conflict with the requirements of Executive Order 12898, (59 FR 7629 (1994)), "Environmental Justice for Low Income and Minority Populations." This Executive Order directs federal agencies "to make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States." Based on this guidance, the proposed project would have a significant Environmental Justice impact if it would cause high and adverse human health or environmental effects that disproportionately affect minority or low-income populations.

5.3.1.3 Protection of Children

Impact significance with regard to the protection of children was assessed with regard to whether the proposed project or one of its components would conflict with the requirements of Executive Order 13045

(62 FR 19883 (1997)), "Protection of Children from Environmental Health Risks and Safety Risks." Under this Executive Order, each federal agency:

(a) shall make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children; and

(b) shall ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks.

5.3.2 West Terminal Alternative (with and without Parking Structure)

5.3.2.1 Socioeconomic Impacts

Implementing the West Terminal Alternative (with and without Parking Structure) would not significantly affect population or housing in the region. The West Terminal Alternative (with and without Parking Structure) would not displace any residences or people because there are no residences or people living on or adjacent to the site. The construction involved in the West Terminal Alternative would not be on a large enough scale to draw new residents into the area, nor would the addition of new gates at SDIA be expected to induce growth within the region (see Section 5.4, *Secondary Impacts*). Accordingly, the West Terminal Alternative would not have a significant impact on population or housing.

Additionally, the West Terminal Alternative would not generate enough new employment opportunities at SDIA to affect the job/housing balance, or induce growth that would affect this balance (see also Section 5.4, *Secondary Impacts*). The level of proposed improvements would not be such to entice new residents to the San Diego area, thereby creating a need for new housing.

The West Terminal Alternative does not induce vehicular traffic and only includes on-Airport surface transportation actions (new second-level road/curb and vehicular circulation and new parking structure and vehicular circulation serving Terminal 2). The West Terminal Alternative would not require traffic re-routing, changes to street configurations or dimensions, and changes to land use patterns resulting from the effects of traffic systems. Specifically all surface roadway improvements included as part of the West Terminal Alternative are contained on Airport property. In support of this statement, the Airport Master Plan Final EIR (May 2008) completed prior to initiation of the EA extensively considered potential traffic impact. The Airport Master Plan Final EIR analysis was completed for vehicular traffic as required by CEQA in compliance with City of San Diego and FHWA criteria for impact analysis. The Final EIR indicated that there are two streets in the immediate vicinity of SDIA that are currently operating at Level of Service (LOS) F (e.g. North Harbor Drive between Rental Car Road and Laurel Street and Rosecrans Street between Nimitz Boulevard and Barnett Avenue) the LOS for these street segments is expected to remain at F with or without the West Terminal Alternative.

The availability of improved parking on-Airport may reduce employment opportunities at off-Airport commercial parking facilities.[3] Overall, however, the West Terminal Alternative would result in both short- and long-term increases in employment (e.g., construction workers, airline personnel, on-Airport parking lot attendants). Within the context of the San Diego area's large labor pool, the number of new jobs would be nominal and would not cause a noticeable change in the regional jobs/housing balance or (un)employment figures.

Additionally, guidelines from the City of San Diego on significance criteria for schools deal mainly with residential developments that could influence school enrollment. Because the West Terminal Alternative (with and without Parking Structure) does not include (and should not induce) any new residential development, this alternative would not directly impact any schools. That is, all improvements would be physically on existing Airport property. The West Terminal Alternative is not growth inducing as detailed in Section 5.4, *Secondary Impacts,* and therefore, would not impact schools or school enrollment.

[3] Currently, general aviation services are provided by a single fixed-base operator, Jimsair. Jimsair has been operating at SDIA for more than 50 years. Jimsair occupies about 11.4 acres under a number of leases and permits, all of which expire not later than December 2012. In early 2006, SDCRAA released a Request for Qualifications to determine if there were interested qualified parities interested in providing general aviation facilities and services at SDIA. Shortly thereafter, Jimsair filed a Part 16 complaint with the FAA, a lawsuit against SDCRAA in California state court, and a formal claim with SDCRAA under the California Government Code. Each alleges a variety of claims relating to the Jimsair operations at SDIA.

5.3.2.2 Environmental Justice

As described in Section 5.1, *Noise*, the West Terminal Alternative (with and without Parking Structure) would not result in noticeable noise increases off-Airport. Accordingly, the West Terminal Alternative (with and without Parking Structure) is not expected to alter the quality of life at neighborhoods near SDIA and/or under its approach and departure flight paths. Surrounding neighborhoods and communities would not incur a physical change as a result of the project's social effects, and the project alternatives would not cause high and adverse human health or environmental affects that disproportionately affect low-income or minority populations.

5.3.2.3 Protection of Children

As described in Section 5.1, *Noise*, the West Terminal Alternative (with and without Parking Structure) would not result in noticeable noise increases off-Airport when compared to the No Action Alternative. Quality of life in areas surrounding SDIA will not be altered by the West Terminal Alternative (with or without Parking Structure), and therefore the project components do not create environmental health or safety risks that may disproportionately affect children.

Additionally, ongoing research is evaluating impacts to the learning ability of children due to aircraft noise exposure. However, none of the research has resulted in an accepted methodology or threshold of significance. A 1992 Federal Interagency Committee on Noise (FICON) study assessed the degree of speech interference (such as in a classroom) at various noise levels. Specifically, the FICON report acknowledged that learning would be decreased if classroom communication was disrupted by aircraft noise and that "some degree of indoor speech interference would be expected whenever exterior noise levels exceed 75 dB to 85 dB (windows open and windows closed).[4] Additional information on speech interference is included in Appendix B.

Table B-11 in Appendix B provides a comparison of time above exterior noise levels for schools with the West Terminal Alternative (with and without Parking Structure), as compared future conditions with the No Action Alternative. There is not a substantial change in noise at schools at the time above levels between the West Terminal Alternative (with and without Parking Structure) and No Action alternative in 2015 or 2020. Therefore, there is not a substantial change in noise at schools and there is a less than significant impact.

For the above-described reasons, the West Terminal Alternative (with and without Parking Structure) would not have socioeconomic impacts, environmental justice, and children's environmental health and safety risks that would lead to significant impacts.

5.3.3 East Terminal Alternative (with and without Parking Structure)

The East Terminal Alternative (with and without Parking Structure) would have the same impacts as described in Section 5.3.2, *West Terminal Alternative (with and without Parking Structure).*

5.3.4 No Action Alternative

The No Action Alternative does not include any property acquisition or construction and therefore does not result in the relocation of residences or businesses, alteration of traffic patterns, division of communities, disruption of planned development, or appreciable changes in employment. The quality of life and noise levels in surrounding areas would not be impacted, and no impacts to low-income populations, minority populations, or impacts to children would occur.

5.3.5 Mitigation Measures

For the above-described reasons, the West Terminal, East Terminal, and the No Action alternatives would have no significant impact to socioeconomic impacts, environmental justice, nor children's environmental health and safety risks, and therefore no mitigation is required.

[4] Federal Interagency Committee on Noise (FICON). 1992. Federal Agency Review of Selected Airport Noise Analysis Issues. August.

5.4 Secondary Impacts

The Sponsor's Preferred Alternative was evaluated for its potential to impose secondary effects on the surrounding communities as a result of airport development. This includes any shifts in patterns of population movement and growth, the demand for public services, and changes in business and economic activity that are influenced by airport development.

According to Order 1050.1E secondary impacts would not normally be significant except where there is also a significant impact to another category particularly noise, compatible land use, or social impact. Since the Sponsor's Preferred Alternative would not result in impacts exceeding the threshold of significance in any impact category, secondary impacts would not be expected.

The development of the Proposed Action (or East Terminal Alternative) projects would occur on existing SDIA property or on State Tideland leaseholds that contain vacant former aviation industrial facilities. As noted in Section 5.3, *Socioeconomic Impacts, Environmental Justice, Children's Environmental Health and Safety Risks*, there would be no displacement of homes or residents during construction. Also, as discussed below, the Proposed Action is not expected to induce population growth within the region that would lead to the demand for new public services or facilities.

5.4.1 Methodology

Due to the fact that an Environmental Impact Report (EIR) was issued and certified for the same Proposed Action in accordance with the State's California Environmental Quality Act (CEQA), the potential significant secondary impacts were evaluated based on CEQA Guidelines (Section 15126.2[d]) and the City of San Diego's Significance Determination Thresholds for projects that may produce growth-inducing impacts. Additionally, FAA has no specific guidance for assessing secondary impacts therefore the CEQA guidelines are used in this EA.

The potential for growth inducement from a project (as part of the Secondary Impacts) is evaluated according to the following CEQA Guidelines (Section 15126.2[d]) and the City of San Diego[5]:

1. Would the proposed project induce substantial population growth in the area?
2. Would the proposed project have an effect on undeveloped land that may not be designated on any general plan for urban development, but would nonetheless experience increased growth pressure due to the presence of the project?
3. Would the proposed project substantially alter the planned location distribution, density, or growth rate of the population of an area?
4. Would the proposed project have an affect by removing constraints, thereby facilitating the construction of previously approved projects?
5. Would the proposed project influence redevelopment of areas at a higher intensity than already exists?
6. Would the project foster growth at the Airport?

5.4.2 West Terminal Alternative (with and without Parking Structure)

As indicated in Chapter 2, *Purpose and Need*, the need for additional airport capacity in the San Diego region is widely acknowledged. CEQA Guidelines, Section 15126.2(d) requires the *discussion of the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment.* Examples of growth-inducing actions include establishing a major new employment opportunity. Projects that may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively, would also be considered growth inducing.

[5] Significance Determination Thresholds California Environmental Quality Act, City of San Diego, Development Services Department, Land Development Review Division, Environmental Analysis Section, May 1999 (Draft Revisions May 2004).

Growth Impacts

As stated in Section 5.3, *Socioeconomic Impacts*, the West Terminal Alternative would not induce substantial population growth in the area. The West Terminal Alternative accommodates forecast growth at the Airport through 2015. With or without the proposed improvements, operations will grow at SDIA and additional employees will be necessary to accommodate the additional operations. However, the additional employee levels needed to accommodate the forecast growth at SDIA are less than significant.

As discussed previously in Section 5.3, *Socioeconomic Impacts,* the proposed projects at SDIA are not expected to have an impact on housing or population in the area. The West Terminal Alternative occurs within existing Airport property and is consistent with the Proposed Airport Land Use Plan. The land uses surrounding the Airport are in conformance with the Airport Land use Compatibility Plan (ALUCP). Therefore, the West Terminal Alternative would not impact the planned location distribution, density, or population growth rate in the area.

The West Terminal Alternative at SDIA is not expected to exert growth pressure on City of San Diego undeveloped land. The West Terminal Alternative would not have an effect on undeveloped land in the vicinity that is not designated for urban development in general plans or community plans that consider land uses. The area surrounding SDIA is governed by the City of San Diego General Plan and Community Plans, and the Port Master Plan. An adopted ALUCP for SDIA guides off-airport land use to ensure that new development and redevelopment is implemented consistent with uses surrounding the Airport. All areas are designated with land uses, including open space and parklands that are offered additional protections in the General Plan. As depicted in Section 5.3, *Compatible Land Use,* the city is redeveloping the former naval training center that is not associated with or reliant upon the Proposed Action. The remainder of the City of San Diego is developed and there is limited undeveloped but developable land.

Impacts to Airport Growth

There are no projects in San Diego or surrounding cities that have been approved but are conditioned or dependent on additional airport improvements at SDIA. The West Terminal Alternative would not eliminate a constraint for development of an approved project. The ALUCP for SDIA guides land uses surrounding the Airport to insure compatibility between SDIA operations and adjacent surrounding development. Additionally, the West Terminal Alternative would not add capacity to urban services or infrastructure that would be utilized by other project proponents in the surrounding area.

The West Terminal Alternative would not result in any significant pressure to redevelop the area around SDIA at a higher density. In the past, the former Teledyne Ryan and General Dynamics areas were major employment areas for the San Diego region. The loss of jobs and the closing of the former Teledyne Ryan and General Dynamics facilities, both land areas now a part of SDIA, has resulted in substantially lower employment than in the past. The designation and use of both sites for airport use would not result in redevelopment of these sites at a higher intensity.

The West Terminal Alternative would not add passengers or flights at the Airport, as discussed in Chapter 2, *Purpose and Need*. However, the existing noise ordinance does allow the airlines to add additional flight operations as long as flight hour restrictions are not exceeded. Additional flights are allowed and would be accommodated regardless of whether the West Terminal Alternative is approved or built. Additional flights could result from air carrier decisions regarding market forces and unmet demand, rather than the availability of specific SDIA facilities.

The potential for inducing flights can exist only when that capacity exceeds existing or future demand for air transportation. According to aviation demand models, SDIA has historically provided for only a portion of the air travel demand generated in San Diego County. The region's international and long-haul demand will continue to be accommodated and served by other regional airports such as Los Angeles and Ontario International Airports. These airports will continue to draw from additional traveling populations in the greater Southern California area and offer competition for lower airfares to travelers and more efficient use of aircraft to allow airlines to profit. Given the increasing prices of fuel and the competitive downward pressures on the price of airfare, airlines that serve SDIA will not add additional flights unless they are assured that demand for air travel will allow for increased yield to cover airline costs and to produce profit.

Based on this evaluation, the West Terminal Alternative (Preferred Alternative) is determined not to be growth-inducing.

Summary of Impacts

Overall, the West Terminal Alternative projects would result in both short- and long-term increases in employment (e.g., construction workers, airline personnel, on-Airport parking lot attendants). Within the context of the San Diego area's large labor pool, the number of new jobs would be nominal and would not cause a noticeable change in the regional jobs/housing balance or (un)employment figures.

As described in Section 5.1, *Noise*, the West Terminal Alternative (Preferred Alternative) would not result in noticeable noise increases off-Airport. Accordingly, the West Terminal Alternative (Preferred Alternative) is not expected to alter the quality of life at neighborhoods near SDIA and/or under its approach and departure flight paths; these communities would not incur a physical change as a result of the project's social effects.

5.4.3 East Terminal Alternative (with and without Parking Structure)

The East Terminal Alternative (with and without Parking Structure) would have the same impacts as described in Section 5.4.2, *West Terminal Alternative.*

5.4.4 No Action Alternative

The No Action Alternative does not include any construction, demolition, or changes to Airport property or the area around SDIA, and therefore would not produce any Secondary Impacts.

5.4.5 Mitigation Measures

Because the West Terminal Alternative, the East Terminal Alternative, and the No Action Alternative would not cause significant secondary impacts, no mitigation is required.

5.5 Air Quality

Air quality impacts associated with the West Terminal Alternative, the East Terminal Alternative, and the No Action Alternative are presented in this section and are based on emission inventories and dispersion modeling results.

As discussed previously in Section 4.6, *Affected Environment, Air Quality*, the emissions inventories provide an overall measure of the types and total amounts of emissions generated by airport-related sources and enable comparisons to the federal CAA General Conformity Rule *de minimis* levels. The dispersion modeling converts the emission inventory results to predicted ambient ("outdoor") concentrations of pollutants that are compared to the National Ambient Air Quality Standards (NAAQS).

Assessments of HAPs and GHGs associated with the planned improvements to SAN are also included in this section. Air quality mitigation measures designed to reduce the potential impacts to air quality are also identified and discussed.

5.5.1 Regulatory Standards and Criteria

Under NEPA and the federal CAA, both qualitative and quantitative criteria are used to evaluate air quality conditions associated with future development projects. Based upon these regulations and the emission characteristics of the proposed improvements to SAN, the following criteria are used to evaluate the potential air quality impacts associated with these proposed improvements (See **Table 5-5.1**).

Table 5-5.1

NEPA & Federal CAA Air Quality Criteria[a]

Qualitative	
Basis	**Criteria**
Based on demonstrating that the project(s) will not:	a.) Cause or contribute to a new violation of any air quality standard in any area. b.) Increase the frequency or severity of any existing violation of any air quality standard in any area. c.) Delay timely attainment of any standard or any required interim emission reductions or other milestones in any area.

Quantitative		
Pollutant	**Emissions[b]**	**Concentrations[c]**
CO	100 t/y	1-Hr. – 40 mg/m^3; 8-Hr – 10 mg/m3
NO_x/NO_2	50 t/y	Annual Avg. – 100 ug/m^3
VOCs	50 t/y	n/a
$PM_{10/2.5}$	n/a	24-Hr. 150 ug/m^3 24-Hr. – 35 ug/m^3; Annual Avg. – 15 ug/m^3

[a] Criteria taken from FAA Order 1050.1E, *Environmental Impacts: Policies and Procedures*, Section 2. Air Quality,
[b] Emission values based on applicable "de-minimis" levels established under the Federal Clean Air Act (CAA) General Conformity Rule. The emissions must also not be "regionally significant" (i.e., >10 percent of regional total emissions).
[c] Concentrations of pollutants in the outside air based on the National Ambient Air Quality Standards (NAAQS).
CAA = Clean Air Act, NEPA = National Environmental Policy Act, CO = carbon monoxide, PM = particulate matter, VOCs = volatile organic compounds, NOx/NO_2 = nitrogen oxides / nitrogen dioxide, t/y = tons/year, mg/m^3 = milligrams per cubic meter, ug/m^3 = micrograms per cubic meter.

5.5.2 Assessment Methodology

Consistent with FAA guidelines, the potential impacts to air quality associated with the West Terminal Alternative (Preferred Alternative) and the East Terminal Alternative, as well as the No Action Alternative are evaluated by using appropriate and up-to-date analytical methods and computer models. To avoid repetition, Section 4.6 (*Affected Environment, Air Quality*) and Appendix E, *Air Quality*, contain detailed

discussions of the methodologies, models, data sources, and assumptions used. For analysis of construction emissions, see Section 5.18.2, *Air Quality / Construction Emissions*.

Importantly, the methodology, models, assumptions and the supporting data used to conduct the air quality assessment were summarized in an Air Quality Assessment Protocol prior to conducting the analyses [FAA, SDCRAA, 2006].

5.5.3 West Terminal Alternative (with Parking Structure) (Preferred Alternative)

The results of the West Terminal Alternative (with Parking Structure) (Preferred Alternative) air quality impact analyses are summarized below. To avoid repetition, Appendix E, *Air Quality*, contains further and more detailed discussions of the methodologies, models, data sources, and assumptions used.

5.5.3.1 Emissions Inventory

The emissions inventory for the West Terminal Alternative (with Parking) is summarized in **Tables 5-5.2** and **5-5.3** for the years 2015 and 2020, respectively. For comparative purposes, the No Action Alternative results are also shown along with the differences between the two conditions (i.e., West Terminal Alternative (with Parking Structure) - No Action). These differences represent "project-related" emissions and are compared to the appropriate federal CAA General Conformity Rule *de minimis* values. Project-related emissions below the *de minimis* values are presumed to conform to the SIP.

Table 5-5.2

2015 West Terminal Alternative (with Parking Structure) (Preferred Alternative)
Air Emissions Inventory (tons per year)

Source	CO	VOC	NO_x	SO_x	PM_{10}	$PM_{2.5}$
Aircraft[a]	412	132	1,002	91	22	22
GSE/APU[b]	194	7.4	31	2.3	1.0	0.9
Stationary Sources[c]	4.1	3.5	13	4.0	0.7	0.7
Motor Vehicles (On-site)[d]	36	1.7	3.8	0.0	0.8	0.6
Motor Vehicles (Off-site)[e]	142	5.4	34	0.3	3.2	2.0
Construction[f]	0	0	0	0	0	0
2015 Airport Total	**788.1**	**150**	**1,083.8**	**97.6**	**27.7**	**26.2**
2015 No Action Total	**777.7**	**149.8**	**1,081.4**	**97.6**	**27.4**	**26.1**
Differences(+/-)[g]	10.4	<1	2.4	0	<1	<1
De Minimis Threshold[g]	100	50	50	n/a	n/a	n/a
Conforms with SIP?[i]	**Yes**	**Yes**	**Yes**	**n/a**	**n/a**	**n/a**

CO = Carbon monoxide; VOC = Volatile organic compounds; NO_x = Nitrogen oxides; SIP = State Implementation Plan, SO_x = Sulfur oxides; $PM_{10/2.5}$ = Particulate matter (10 and 2.5 microns, respectively); GSE = ground support equipment; APU = auxiliary power units

[a] Aircraft emissions comprise those from the entire LTO cycle (i.e., approach, landing, taxi-in, taxi-out, take-off and climbout).

[b] GSE and APU emissions based upon observed operating times from on-site surveys conducted at SDIA.

[c] Stationary source emissions include those associated with boilers, emergency generators, and fuel storage facilities.

[d] On-site motor vehicles are airport-related traffic operating on airport roadway and parking facilities.

[e] Off-site motor vehicles are airport-related traffic operating on public roadways/freeways.

[f] Construction of the Proposed Action is expected to be completed by the year 2013 and therefore there will be no known construction emissions in 2015 or 2020.

[g] Differences = Airport Total – No Action Total and are considered to be "Project-related" emissions.

[h] *De minimis* threshold s are described and listed in Section 4.6 (Affected Environment, Air Quality).

[i] According to the federal CAA, the project-related emissions conform to the SIP if the values are less than the General Conformity Rule de-minimis levels and are not considered "regionally significant" (i.e., >10 percent of regional total emissions).

Note: Values may be rounded.

Source: KB Environmental Sciences, Inc. 2008.

Table 5-5.3

2020 West Terminal Alternative (with Parking Structure) (Preferred Alternative)
Air Emissions Inventory (tons per year) [a]

Source	CO	VOC	NO_x	SO_x	PM_{10}	$PM_{2.5}$
Aircraft	433	150	1,171	103	26	26
GSE/APU	117	4.9	22	2.5	0.6	0.6
Stationary Sources	4.1	3.6	13	4.0	0.7	0.7
Motor Vehicles (On-site)	26	1.1	2.7	0.0	1.0	0.7
Motor Vehicles (Off-site)	119	4.7	27	0.3	3.4	2.1
Construction	0	0	0	0	0	0
2020 Airport Total	**699.1**	**164.3**	**1,235.7**	**109.8**	**31.7**	**30.1**
2020 No Action Total	**691.7**	**163.1**	**1,234.4**	**109.8**	**31.4**	**29.8**
Differences(+/-)	7.4	1.2	1.3	0	<1	<1
De Minimis Threshold	100	50	50	n/a	n/a	n/a
Conforms to SIP?	**Yes**	**Yes**	**Yes**	**n/a**	**n/a**	**n/a**

[a] See Table 5-5.2 for explanatory notes and abbreviations.

As shown, the project-related emissions are all well below the *de mimimis* thresholds and thus the project is automatically presumed to conform to the SIP. Construction emissions for the years of construction are provided in Section 5.18.2, *Air Quality/Construction Emissions*.

5.5.3.2 Ambient Concentrations

The dispersion modeling results for the West Terminal Alternative (with Parking Structure) (Preferred Alternative) are contained in **Tables 5-5.4 and 5-5.5** for the years 2015 and 2020, respectively. For comparative purposes, NAAQS are also shown.

Table 5-5.4

2015 West Terminal Alternative (with Parking Structure) (Preferred Alternative)
Dispersion Modeling Results ($\mu g/m^3$) [a]

Pollutant	Averaging Time	Maximum Concentration[b]	NAAQS[c]	Above NAAQS (Yes/No)[d]
CO	1 hour	15,963	40,000	No
	8-hour	6,090	10,000	No
NO_2	Annual	55	100	No
SO_2	3-hour	96	1,300	No
	24-hour	42	365	No
	Annual	17	80	No
PM_{10}	24-hour	84	150	No
$PM_{2.5}$	24-hour	67	35	**Yes**
	Annual	18	15	**Yes**

CO = Carbon monoxide; NO_2 = Nitrogen dioxide; SO_2 = Sulfur dioxide; $PM_{10/2.5}$ = Particulate matter (10 and 2.5 microns, respectively).

[a] See Figure 4.6-2 for map of receptor locations.

[b] Maximum Concentration means highest predicted concentration using EDMS at all of the receptors analyzed with conservatively high background concentrations added.

[c] NAAQS = National Ambient Air Quality Standards.

[d] The maximum concentrations were compared to the NAAQS and determined whether that the concentration is above the standard (yes) or that the concentration is equal to or below the standard (no).

Source: KB Environmental Sciences, Inc. 2008.

Table 5-5.5
2020 West Terminal Alternative (with Parking Structure) (Preferred Alternative)
Dispersion Modeling Results[a] (µg/m^3)

Pollutant	Averaging Time	Maximum Concentration	NAAQS	Above NAAQS (Yes/No)
CO	1 hour	14,589	40,000	No
	8-hour	5,725	10,000	No
NO_2	Annual	58	100	No
SO_2	3-hour	168	1,300	No
	24-hour	43	365	No
	Annual	18	80	No
PM_{10}	24-hour	84	150	No
	Annual	67	50	No
$PM_{2.5}$	24-hour	18	35	**Yes**
	Annual	58	15	**Yes**

[a] See Table 5-5.4 for explanatory notes and abbreviations.

Source: KB Environmental Sciences, Inc. 2008.

As shown, the dispersion modeling results are well within the NAAQS for CO, NO_2, SO_2, and PM_{10}. However, similar to the Existing Conditions (i.e., 2005) assessment, the modeling results predict exceedances of the $PM_{2.5}$ NAAQS. For $PM_{2.5}$ these results are to be expected as monitoring data from the San Diego area reveal violations of the NAAQS for these parameters.

5.5.4 West Terminal Alternative (without Parking Structure)

The results of the West Terminal Alternative (without Parking Structure) air quality impact analyses are contained in this section.

5.5.4.1 Emissions Inventory

The emissions inventories for this alternative are summarized in **Tables 5-5.6** and **5-5.7** for the years 2015 and 2020, respectively.

Table 5-5.6
2015 West Terminal Alternative (without Parking Structure)
Air Emissions Inventory (tons per year)[a]

Source	CO	VOC	NO_x	SO_x	PM_{10}	$PM_{2.5}$
Aircraft	412	132	1,002	91	22	22
GSE/APU	193	7.4	31	2.3	1.0	0.9
Stationary Sources	4.1	3.5	13	4.0	0.7	0.7
Motor Vehicles (On-site)	33	1.5	3.5	0.0	0.8	0.6
Motor Vehicles (Off-site)	141	5.4	34	0.3	3.1	2.0
Construction	0	0	0	0	0	0
2015 Airport Total	783.3	149.8	1,083.5	97.6	27.6	26.2
2015 No Action Total	777.7	149.8	1,081.4	97.6	27.4	26.1
Differences(+/-)	5.6	0	2.1	0	<1	<1
De Minimis Threshold	100	50	50	n/a	n/a	n/a
Conforms to SIP?	**Yes**	**Yes**	**Yes**	**n/a**	**n/a**	**n/a**

[a] See Table 5-5.2 for explanatory footnotes and abbreviations.

Source: KB Environmental Sciences, Inc. 2008.

Table 5-5.7

2020 West Terminal Alternative (without Parking Structure)
Air Emissions Inventory (tons per year) [a]

Source	CO	VOC	NO_x	SO_x	PM_{10}	$PM_{2.5}$
Aircraft	433	150	1,171	103	26	26
GSE/APU	117	4.9	22	2.5	0.6	0.6
Stationary Sources	4.1	3.6	13	4.0	0.7	0.7
Motor Vehicles (On-site)	24	1.0	2.5	0.0	0.9	0.7
Motor Vehicles (Off-site)	118	4.6	27	0.3	3.4	2.0
Construction	0	0	0	0	0	0
2020 Airport Total	696.1	164.1	1,235.5	109.8	31.6	30
2020 No Action Total	691.7	163.1	1,234.4	109.8	31.4	29.8
Differences(+/-)	4.4	1	1.1	0	<1	<1
De Minimis Threshold	100	50	50	n/a	n/a	n/a
Conforms to SIP?	**Yes**	**Yes**	**Yes**	**n/a**	**n/a**	**n/a**

[a] See Table 5-5.2 for explanatory footnotes and abbreviations.

Source: KB Environmental Sciences, Inc. 2008.

As shown, the total estimated emissions for this alternative do not exceed the federal CAA General Conformity Rule *de minimis* thresholds for CO, VOC, NO_x, SO_x, and $PM_{10/2.5}$ in 2015 and 2020. Thus, the project is automatically presumed to conform to the SIP.

5.5.4.2 Ambient Concentrations

As discussed above, the outcomes of the emission inventories for the West Terminal Alternative (with Parking Structure) reveal that total emissions are slightly higher (or equal to) the "Without Parking Structure" condition. Similarly, the outcomes of the dispersion modeling analyses are also expected to be comparable and therefore not repeated for the West Terminal Alternative (without Parking Structure) conditions.

5.5.5 East Terminal Alternative (with Parking Structure)

The results of the East Terminal Alternative (with Parking Structure) air quality impact analyses are contained in this section. Notably, this alternative is very similar to the Proposed Action in terms of the types, locations and emission characteristics of the primary emission sources (i.e., aircraft, GSE, motor vehicles, etc.) at the airport. The only exception to this is the surface traffic patterns and volumes on airport roadways in the vicinity of the Main Terminal Area, North Area and the former Teledyne Ryan area.

5.5.5.1 Emissions Inventory

The emissions inventories for this alternative are summarized in **Tables 5-5.8** and **5-5.9** for the years 2015 and 2020, respectively.

Table 5-5.8
2015 East Terminal Alternative (with Parking Structure)
Air Emissions Inventory[a] (tons per year)

Source	CO	VOC	NO_x	SO_x	PM_{10}	$PM_{2.5}$
Aircraft	426	133	1,004	92	22	22
GSE/APU	193	7.4	31	2.3	1.0	0.9
Stationary Sources	4.1	3.5	13	4.0	0.7	0.7
Motor Vehicles (On-site)	35	1.6	3.7	0.0	0.8	0.6
Motor Vehicles (Off-site)	141	5.4	34	0.3	3.1	2.0
Construction	0	0	0	0	0	0
2015 Airport Total	799.1	150.9	1,085.7	98.6	27.6	26.2
2015 No Action Total	777.7	149.8	1,081.4	97.6	27.4	26.1
Differences(+/-)	21.4	1.1	4.3	1	<1	<1
De Minimis Threshold	100	50	50	n/a	n/a	n/a
Conforms to SIP?	**Yes**	**Yes**	**Yes**	**n/a**	**n/a**	**n/a**

[a] See Table 5-5.2 for explanatory notes and abbreviations.

Source: KB Environmental Sciences, Inc. 2008.

Table 5-5.9
2020 East Terminal Alternative (with Parking Structure)
Air Emissions Inventory[a] (tons per year)

Source	CO	VOC	NO_x	SO_x	PM_{10}	$PM_{2.5}$
Aircraft	448	151	1,173	104	26	26
GSE/APU	117	4.9	22	2.5	0.6	0.6
Stationary Sources	4.1	3.6	13	4.0	0.7	0.7
Motor Vehicles (On-site)	26	1.1	2.6	0.0	0.9	0.7
Motor Vehicles (Off-site)	118	4.6	27	0.3	3.4	2.0
Construction	0	0	0	0	0	0
2020 Airport Total	713.1	165.2	1,237.6	110.8	31.6	30
2020 No Action Total	691.7	163.1	1,234.4	109.8	31.4	29.8
Differences(+/-)	21.4	2.1	3.2	1	<1	<1
De Minimis Threshold	100	50	50	n/a	n/a	n/a
Conforms to SIP?	**Yes**	**Yes**	**Yes**	**n/a**	**n/a**	**n/a**

[a] See Table 5-5.2 for explanatory notes and abbreviations.

Source: KB Environmental Sciences, Inc. 2008.

As shown, the total estimated emissions for this alternative do not exceed the federal CAA General Conformity Rule de minimis thresholds for CO, VOC, NOx, SOx, and $PM_{10/2.5}$ in 2015 and 2020. Thus, the project is automatically presumed to conform to the SIP.

5.5.5.2 Ambient Concentrations

The dispersion modeling results for this alternative are summarized in **Tables 5-5.10** and **5-5.11** for the years 2015 and 2020, respectively.

Table 5-5.10
2015 East Terminal Alternative (with Parking Structure)
Dispersion Modeling Results[a] (µg/m^3)

Pollutant	Averaging Time	Maximum Concentration	NAAQS	Above NAAQS (Yes/No)[d]
CO	1 hour	15,913	40,000	No
	8-hour	6,049	10,000	No
NO_2	Annual	55	100	No
SO_2	3-hour	55	1,300	No
	24-hour	140	365	No
	Annual	41	80	No
PM_{10}	24-hour	17	150	No
$PM_{2.5}$	24-hour	67	35	**Yes**
	Annual	18	15	**Yes**

[a] See Table 5-5.4 for explanatory notes and abbreviations.

Source: KB Environmental Sciences, Inc. 2008.

Table 5-5.11
2020 East Terminal Alternative (with Parking Structure)
Dispersion Modeling Results[a] (µg/m^3)

Pollutant	Averaging Time	Maximum Concentration	NAAQS	Above NAAQS (Yes/No)[d]
CO	1 hour	14,659	40,000	No
	8-hour	5,734	10,000	No
NO_2	Annual	58	100	No
SO_2	3-hour	159	1,300	No
	24-hour	42	365	No
	Annual	18	80	No
PM_{10}	24-hour	84	150	No
$PM_{2.5}$	24-hour	67	35	**Yes**
	Annual	18	15	**Yes**

[a] See Table 5-5.4 for explanatory notes and abbreviations.

Source: KB Environmental Sciences, Inc. 2008.

As shown, the results are within the NAAQS for all of the criteria pollutants except for $PM_{2.5}$, which exceeds NAAQS. Again, for $PM_{2.5}$ these results are to be expected as monitoring data from the San Diego area reveal violations of the NAAQS for these parameters.

5.5.6 East Terminal Alternative (without Parking Structure)

The results of the East Terminal Alternative (without Parking Structure) air quality impact analyses are contained in this section. Again, this alternative is very similar to the East Terminal Alternative (with Parking Structure) in terms of the types, locations and emission characteristics of the primary emission

sources (i.e., aircraft, GSE, motor vehicles, etc.) at the Airport. The only exception is the surface traffic patterns and volumes on both on-site and off-site roadways and the location and size of on-site parking facilities.

5.5.6.1 Emissions Inventory

The emissions inventories for this alternative are summarized in **Tables 5-5.12** and **5-5.13** for the years 2015 and 2020, respectively.

Table 5-5.12
2015 East Terminal Alternative (without Parking Structure)
Air Emissions Inventory[a] (tons per year)

Source	CO	VOC	NO_x	SO_x	PM_{10}	$PM_{2.5}$
Aircraft	426	133	1,004	92	22	22
GSE/APU	193	7.4	31	2.3	1.0	0.9
Stationary Sources	4.1	3.5	13	4.0	0.7	0.7
Motor Vehicles (On-site)	34	1.6	3.6	0.0	0.8	0.6
Motor Vehicles (Off-site)	140	5.4	34	0.3	3.1	2.0
Construction	0	0	0	0	0	0
2015 Airport Total	797.1	150.9	1,085.6	98.6	27.6	26.2
2015 No Action Total	777.7	149.8	1,081.4	97.6	27.4	26.1
Differences (+/-)	19.4	1.1	4.2	1	<1	<1
De Minimis Threshold	100	50	50	n/a	n/a	n/a
Conforms to SIP?	**Yes**	**Yes**	**Yes**	**n/a**	**n/a**	**n/a**

[a] See Table 5-5.2 for explanatory footnotes and abbreviations.

Source: KB Environmental Sciences, Inc. 2008.

Table 5-5.13
2020 East Terminal Alternative (without Parking Structure)
Air Emissions Inventory[a] (tons per year)

Source	CO	VOC	NO_x	SO_x	PM_{10}	$PM_{2.5}$
Aircraft	448	151	1,173	104	26	26
GSE/APU	117	4.9	22	2.5	0.6	0.6
Stationary Sources	4.1	3.6	13	4.0	0.7	0.7
Motor Vehicles (On-site)	25	1.0	2.5	0.0	0.9	0.7
Motor Vehicles (Off-site)	118	4.6	27	0.3	3.3	2.0
Construction	0	0	0	0	0	0
2020 Airport Total	712.1	165.1	1,237.5	110.8	31.5	30
2020 No Action Total	691.7	163.1	1,234.4	109.8	31.4	29.8
Differences (+/-)	20.4	2	3.1	1	<1	<1
De Minimis Threshold	100	50	50[f]	n/a	n/a	n/a
Conforms to SIP?	**Yes**	**Yes**	**Yes**	**n/a**	**n/a**	**n/a**

[a] See Table 5-5.2 for explanatory footnotes and abbreviations.

As shown, the total estimated emissions for this alternative do not exceed the federal CAA General Conformity Rule *de minimis* thresholds for CO, VOC, NO_x, SO_x, and $PM_{10/2.5}$ in 2015 and 2020. Thus, the project is automatically presumed to conform to the SIP.

5.5.6.2 Ambient Concentrations

As discussed above, the outcomes of the emission inventories reveal that total emissions for the East Terminal Alternative (with Parking Structure) are slightly higher (or equal to) the "without Parking Structure" scenario. Similarly, the outcomes of the dispersion modeling analyses are also expected to be comparable and, therefore, not repeated for the "without Parking Structure" conditions.

5.5.7 No Action Alternative

The results of the No Action Alternative air quality impact analysis are contained in this section.

5.5.7.1 Emissions Inventory

The emissions inventory for the No Action Alternative is summarized in **Tables 5-5.14** and **5-5.15** for the years 2015 and 2020, respectively. These results are used for comparative purposes against the Proposed Action (with and without Parking Structure), the East Terminal Alternative (with and without Parking Structure) presented previously.

Table 5-5.14
2015 No Action Alternative
Air Emissions Inventory[a] (tons per year)

Source	CO	VOC	NO_x	SO_x	PM_{10}	$PM_{2.5}$
Aircraft	408	132	1,001	91	22	22
GSE/APU	193	7.4	31	2.3	1.0	0.9
Stationary Sources	3.7	3.5	12	4.0	0.6	0.6
Motor Vehicles (On-site)	32	1.5	3.4	0.0	0.7	0.6
Motor Vehicles (Off-site)	141	5.4	34	0.3	3.1	2.0
2015 No Action Total	777.7	149.8	1,081.4	97.6	27.4	26.1

[a] See Table 5-5.2 for explanatory notes and abbreviations.

Source: KB Environmental Sciences, Inc. 2008.

Table 5-5.15a
2020 No Action Alternative
Air Emissions Inventory[a] (tons per year)

Source	CO	VOC	NO_x	SO_x	PM_{10}	$PM_{2.5}$
Aircraft	430	149	1,171	103	26	26
GSE/APU	117	4.9	22	2.5	0.6	0.6
Stationary Sources	3.7	3.6	12	4.0	0.6	0.6
Motor Vehicles (On-site)	23	1.0	2.4	0.0	0.8	0.6
Motor Vehicles (Off-site)	118	4.6	27	0.3	3.4	2.0
2020 No Action Total	691.7	163.1	1,234.4	109.8	31.4	29.8

[a] See Table 5-5.2 for explanatory notes and abbreviations.

5.5.7.2 Ambient Concentrations

The dispersion modeling results for the No Action Alternative are summarized in **Tables 5-5.15** and **5-5.16** for the years 2015 and 2020, respectively.

Table 5-5.15b

2015 No Action Alternative
Dispersion Modeling Results[a] (µg/m^3)

Pollutant	Averaging Time	Maximum Concentration	NAAQS	Above NAAQS (Yes/No)[d]
CO	1 hour	15,554	40,000	No
	8-hour	6,066	10,000	No
NO_2	Annual	55	100	No
SO_2	3-hour	138	1,300	No
	24-hour	41	365	No
	Annual	17	80	No
PM_{10}	24-hour	84	150	No
$PM_{2.5}$	24-hour	67	35	**Yes**
	Annual	18	15	**Yes**

[a] See Table 5-5.4 for explanatory notes and abbreviations.

Source: KB Environmental Sciences, Inc. 2008.

Table 5-5.16

2020 No Action Alternative
Dispersion Modeling Results[a] (µg/m^3)

Pollutant	Averaging Time	Maximum Concentration	NAAQS	Above NAAQS (Yes/No)[d]
CO	1 hour	14,452	40,000	No
	8-hour	5,694	10,000	No
NO_2	Annual	63	100	No
SO_2	3-hour	58	1,300	No
	24-hour	167	365	No
	Annual	43	80	No
PM_{10}	24-hour	18	150	No
$PM_{2.5}$	24-hour	67	35	**Yes**
	Annual	18	15	**Yes**

[a] See Table 5-5.4 for explanatory notes and abbreviations.

Source: KB Environmental Sciences, Inc. 2008.

As shown, the dispersion modeling results for the No Action Alternative are well within the NAAQS for CO, NO_2, SO_2, and PM_{10}. However, the results for $PM_{2.5}$ are above the NAAQS and are therefore considered potentially significant under NEPA. Again, for $PM_{2.5}$ these results are to be expected as monitoring data from the San Diego area reveal violations of the NAAQS for these parameters.

5.5.8 CO Hot-Spots Modeling

Dispersion modeling of potential CO "hot-spots" was also conducted as part of this air quality impact assessment.[6] For this analysis, the Hawthorn Street/North Harbor Drive intersection represents the area

[6] CO is a localized pollutant and tends to become elevated in areas (i.e., "hot-spots") near high surface traffic volumes. Analyzing intersections with these characteristics reveals potential "worst-case" conditions and it is assumed that CO levels near other intersections are lower, by comparison.

of highest traffic volumes in the immediate vicinity of SDIA.[7] Traffic volumes prepared in support of the Final EIR (May 2008) were used along with background CO levels obtained from the downtown San Diego air monitoring station.

The results of the CO hot-spot modeling are summarized in **Table 5-5.17** and values reported are the highest CO levels at any of the receptors analyzed.

Table 5-5.17

CO Hot-Spot Modeling Results[a] (µg/m^3)

Roadway Intersection	Year/Condition	1 Hour[b,d]	8-Hour[b,c,d]	Above NAAQS?
Hawthorn Street/North Harbor Drive	2015 (AM)	7,142	3,011	No
	2020 (PM)	7,017	2,930	No

[a] Receptors are about 3 m (10 ft.) from roadway edge-of-pavement and the results are the highest concentrations at all receptors analyzed.

[b] Includes 1-hour background concentration of 12,420 µg/m^3 and 8-hour background concentration of 5,222 µg/m^3

[c] A persistence factor of 0.7 was used to calculate the 8-hour concentrations from the 1 hour concentrations.

[d] National Ambient Air Quality Standards (NAAQS) for CO = 23,000 (1-hour) and 10,000 ug/m^3 (8-hour).

Source: KB Environmental Sciences, Inc., 2007.

As shown, these predicted CO levels are well within this NAAQS pollutant. Because of this wide margin between the highest predicted levels and the NAAQS, it is assumed that these findings apply to the West Terminal Alternative (with and without Parking Structure), the East Terminal Alternative (with and without Parking Structure), and the No Action Alternative.

5.5.9 Cumulative Impacts and Regional Significance

The air emissions inventory prepared for the proposed improvements to SDIA are inclusive of all airport-related sources of emissions (i.e., aircraft, GSE, on- and off-site motor vehicles, etc.) under Baseline (existing) conditions as well as the West Terminal Alternative (with and without Parking Structure) and the East Terminal Alternative (with and without Parking Structure), and the No Action Alternative.

For the dispersion modeling analyses, the same comprehensive set of input data used for the emissions inventory was also used. In addition, non-airport traffic operating on the adjoining roadway/freeway networks were included. Conservatively high "background" levels were also added to the modeling results to account for air emission sources located outside the study area. In this way, the outcome is reflective of the combined impacts from both airport and non-airport sources of air emissions on existing and future-year ambient air quality conditions.

Emissions associated with the closure of the former NTC Landfill were not included as this project will be completed before the construction and operation of the planned improvements to SDIA begin.

Finally, the estimated amounts of NO_x, VOC, and CO emissions from aircraft and GSE associated with SDIA under both 2005 and future year conditions are well within the amounts contained in the current *Ozone SIP* and *CO Maintenance Plan* for San Diego County (see Table 5-5.1) and the Master Plan projects are not considered to be "regionally significant (i.e., >10 percent of total regional emissions). Therefore, the emissions associated with the planned improvements to SDIA, in combination with all the emissions from other sources in the area, are fully accounted for and are not expected to impede the area's progress to attaining the NAAQS for these pollutants.

Tables **5-5.18 through 5-5.20** compare the total project related emissions to the regional emissions. These tables clearly indicate that project and construction related emissions at SDIA are not regionally significant. For detail on development of construction emissions see Appendix E and Section 5.18.2, Air Quality / Construction Emissions of this EA.

[7] Appendix E provides additional information regarding the CO intersection analysis including emission factors, receptors, and determination of roadway intersection to be analyzed.

Table 5-5.18

2015 Project-Related Emissions Compared to Regional Emissions (tons per year)

Source	CO	VOC	NO_x
Maximum Project-Related Emissions	10.4	0.7	2.4
County-Wide Emissions	231,483.0	51,830.0	56,429.0
Percent of Regional Total	0.004%	0.001%	0.004%

CO = Carbon monoxide; VOC = Volatile organic compounds; NO_x = Nitrogen oxides

Notes: Maximum construction-related emissions occur in 2011.

County-wide emissions are man-made emissions for San Diego County based on California Air Resources Board CARB) data bases.

Emissions totals of less than 10 percent are not considered to be regionally significant.

Source: KB Environmental Sciences, Inc. 2009.

Table 5-5.19

2020 Project-Related Emissions Compared to Regional Emissions (tons per year)

Source	CO	VOC	NO_x
Maximum Project-Related Emissions	7.4	1.2	1.3
County-Wide Emissions	207,685.0	50,917.5	53,034.5
Percent of Regional Total	0.004%	0.002%	0.002%

See Table 5-5.18 for notes.

Source: KB Environmental Sciences, Inc. 2009.

Table 5-5.20

Construction-Related Emissions Compared to Regional Emissions (tons per year)

Source	CO	VOC	NO_x
Maximum Construction-Related Emissions Between 2009-2013	19.6	4.7	36.6
County-Wide Emissions for 2010	276,414.5	55,297.5	66,101.5
Percent of Regional Total	0.007%	0.008%	0.055%

See Table 5-5.18 for notes.

Source: KB Environmental Sciences, Inc. 2009.

5.5.10 Actions Taken by SDCRAA to Reduce Air Pollutant Emissions

The findings of the air quality impact assessment show that airport-related emission totals are comparable (e.g., within 2 percent) to the No Action Alternative. This is because the proposed improvements to SDIA will help to reduce delays and conflicts on both the airside and landsides of the airport and also serve to mitigate air quality impacts. These benefits include the following:

- By improving taxiways, the number of runway crossings by aircraft can be reduced to increase the overall efficiency of the airfield system.
- Reconstructing taxiways and hold aprons to better meet the current and future fleets of aircraft will improve operational performance of the airfield (i.e., large aircraft will be able to taxi unimpeded past other aircraft, ground vehicles and ground obstructions).
- Adding new apron hold pads and a new taxiway east of Taxiway D allows aircraft to bypass those on the existing aprons and provide more efficient access to new GA facilities.
- The new access/egress roadway configurations and expanded curbsides in the main terminal area will help to improve surface traffic circulation, lessen stop-and-go driving and reduce excess motor vehicle idling.
- The new multi-level parking structure will also include dedicated departure curbs and a transit plaza accommodating high-occupancy shuttles, buses and vans. New access roadways from

Harbor Drive directly into the structure also eliminate the need for vehicles to utilize the curbside roadways. Combined with the elevated pedestrian walkways connecting the parking structure with the terminal, all these improvements will also help to enhance surface traffic circulation, lessen stop-and-go driving and reduce excess motor vehicle idling.

As a means of further reducing this potential impact, the following actions will be implemented as part of the construction plans and process:

- Prevent construction equipment and delivery trucks from excess idling during periods of inactivity.
- Substitute low- and zero-emitting equipment whenever feasible.
- Implement a construction-employee shuttle service, rideshare program and/or on-site food service to reduce vehicle trips.
- Use electrical drops in place of temporary electrical generators wherever feasible.

Other construction-related air quality actions are aimed at reducing the occurrence and potential impacts from "fugitive" dust. These measures include (but are not necessarily limited to) the following:

- Apply non-toxic soil stabilizers to all inactive construction areas including areas with disturbed soils and stockpiles of raw materials.
- Stabilize on-site truck haul routes and staging areas with dust-prevention materials.
- Reduce truck speeds on haul routes to minimize dust entrainment.
- Remove mud and dirt from haul truck wheels and cover truck bodies before leaving the construction site(s).
- Permanently cover all ground surfaces with vegetation or impervious materials as soon as practicable.
- Curtail and/or modify construction activities on extremely windy days.
- Post a publicly visible sign with the contact information for reporting dust complaints.

5.5.11 Hazardous Air Pollutants

Hazardous air pollutants (HAPs) are pollutants that do not have established NAAQS, but present potential adverse human health risks from short-term (acute) or long-term (chronic) exposures. Because the analysis of HAPs is not an FAA requirement, the approach described herein is designed to address state and local agency concerns as well as those of the general public. (For the purposes of this discussion, the terms HAPs, toxic air pollutants and air toxics are considered to be synonymous.)

For this analysis, the same emissions sources (i.e. aircraft, GSE, etc.) evaluated for the EPA "criteria pollutants" were assessed for HAPs. The tools and techniques used to accomplish this analysis are discussed in Appendix E.

The HAPs emissions inventory for the Existing Conditions, No Action, West Terminal Alternative, and East Terminal Alternative are presented in **Tables 5-5.21** through **5-5.23** and present the HAP emissions by source category. Generally, aircraft tend to be the greatest contributor of acetaldehyde, acrolein, 1,3-butadiene, and formaldehyde. Motor vehicles tend to be the greatest contributor of acetaldehyde, benzene, and diesel particulate matter. The West Terminal Alternative tends to be slightly greater than the No Action but the East Alternative tends to be greater than the West Terminal Alternative. However, these differences are minor and not considered to be significant.

Table 5.5.21

Baseline 2005 Emissions of HAPs (tons/year)

HAP Species	Total
Acetaldehyde	3.16
Acrolein	1.03
Benzene	4.79
1,3-butadiene	1.96
Formaldehyde	14.60
DPM	4.74

HAPs = Hazardous air pollutants
DPM = Diesel particulate matter

Source: KB Environmental Sciences, 2008.

Table 5.5.22

2015 Emissions of HAPs (tons/year)

HAP Species	No-Action	West Terminal	East Terminal
Acetaldehyde	2.94	2.95	2.97
Acrolein	1.10	1.10	1.11
Benzene	3.41	3.41	3.43
1,3-butadiene	1.89	1.89	1.91
Formaldehyde	15.08	15.13	15.23
DPM	3.62	3.63	3.62

HAPs = Hazardous air pollutants
DPM = Diesel particulate matter

Source: KB Environmental Sciences, 2008.

Table 5.5.23

2020 Emissions of HAPs (tons/year)

HAP Species	No-Action	West Terminal	East Terminal
Acetaldehyde	3.07	3.08	3.10
Acrolein	1.21	1.22	1.22
Benzene	3.40	3.41	3.43
1,3-butadiene	2.05	2.06	2.07
Formaldehyde	16.42	16.46	16.57
DPM	3.14	3.15	3.14

HAPs = Hazardous Air Pollutants
DPM – Diesel particulate matter

Source: KB Environmental Sciences, 2008.

5.5.12 Greenhouse Gases

Of growing concern is the impact of proposed projects on climate change. Greenhouse gases are those that trap heat in the earth's atmosphere. Both naturally occurring and anthropogenic (man-made)

greenhouse gases include water vapor (H_2O), carbon dioxide (CO_2),[8] methane (CH_4), nitrous oxide (N_2O), and O_3.[9]

Research has shown that there is a direct link between fuel combustion and greenhouse gas emissions. Therefore, sources that require fuel or power at an airport are the primary sources that would generate greenhouse gases. Aircraft are probably the most often cited air pollutant source, but they produce the same types of emissions as cars. Aircraft jet engines, like many other vehicle engines, produce CO_2, H_2O, NO_x, CO, SO_x, unburned or partially combusted hydrocarbons (also known as VOCs, particulates, and other trace compounds.

According to most international reviews, aviation emissions comprise a small but potentially important percentage of anthropogenic (human-made) greenhouse gases and other emissions that contribute to global warming. The Intergovernmental Panel on Climate Change (IPCC) estimates that global aircraft emissions account for about 3.5 percent of the total quantity of greenhouse gas from human activities.[10] In terms of U.S. contribution, the U.S. General Accounting Office (GAO) reports that aviation accounts "for about 3 percent of total U.S. greenhouse gas emissions from human sources" compared with other industrial sources, including the remainder of the transportation sector (23 percent) and industry (41 percent).[11]

The scientific community is developing areas of further study to enable them to more precisely estimate aviation's effects on the global atmosphere. The FAA is currently leading or participating in several efforts intended to clarify the role that commercial aviation plays in greenhouse gases and climate change. The most comprehensive and multi-year program geared towards quantifying climate change effects of aviation is the Aviation Climate Change Research Initiative (ACCRI) funded by FAA and NASA.

ACCRI will reduce key scientific uncertainties in quantifying aviation-related climate impacts and provide timely scientific input to inform policy-making decisions. FAA also funds Project 12 of the Partnership for AiR Transportation Noise & Emissions Reduction (PARTNER) Center of Excellence research initiative to quantify the effects of aircraft exhaust and contrails on global and U.S. climate and atmospheric composition. Finally, the Transportation Research Board's (TRB) Airport Cooperative Research Program (ACRP) Project 02-06 is preparing a guidebook on preparing airport greenhouse gas emission inventories. The results of this effort are expected to be released in early 2009.

Based on FAA data, operations activity at SAN represents less than two percent of U.S. aviation activity. Therefore, assuming that greenhouse gases occur in proportion to the level of activity, greenhouse gas emissions associated with existing and future aviation activity at SAN would be expected to represent far less than 0.001 percent of U.S.-based greenhouse gases.

In a Memorandum of Understanding (MOU) with the Attorney General of the State of California dated May 9, 2008[12] steps were outlined to reduce GHG emissions that might otherwise occur with future growth of air travel to and from SDIA. The MOU outlined the terms of compliance with specific measures included in Exhibit A, which included the airport agreeing to implement:

- Reduction in Aircraft On-the-Ground-Energy Usage
- Reduction of Landside Energy Usage
- Use of Green Materials and Sustainable Design
- Use of Green Construction Methods and Equipment
- Coordination and Encouragement of Tenants to Address GHG

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[8] All greenhouse gas inventories measure carbon dioxide emissions, but beyond carbon dioxide different inventories include different greenhouse gases (GHGs).

[9] Several classes of halogenated substances that contain fluorine, chlorine, or bromine are also greenhouse gases, but they are, for the most part, solely a product of industrial activities. For example, chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs) are halocarbons that contain chlorine, while halocarbons that contain bromine are referred to as bromofluorocarbons (i.e., halons) or sulfur (sulfur hexafluoride: SF6).

[10] IPCC Report as referenced in U.S. General Accounting Office (GAO) Environment: Aviation's Effects on the Global Atmosphere Are Potentially Significant and Expected to Grow; GAO/RCED-00-57, February 2000, p. 4.

[11] Ibid, p. 14; GAO cites available EPA data from 1997.

[12] Memorandum of Understanding, San Diego Airport and State of California Justice Department. <http://www.san.org/documents/airport_authority/MOU_SDCRAA_AG_Master_Plan_2008.pdf> May 9, 2008.

This memorandum of agreement represents SDIA's goal of minimizing the potential impacts of GHG on the environment.

5.5.13 Summary of Air Quality Impacts

Table 5-5.1 (*NEPA and Federal CAA Air Quality Criteria*) in Section 5.1.1 (*Regulatory Standards and Criteria*) contains a summary listing of the federal criteria applicable to this air quality assessment of the planned improvements to SAN. These criteria (both qualitative and quantitative) are combined elements of the federal CAA and FAA NEPA guidelines for airport air quality. Compared to these criteria, the results of this assessment indicate that the proposed projects:

- *Will not cause or contribute to a new violation of any air quality standard in any area.* Predicted violations of the $PM_{2.5}$ NAAQS are shown for 2005 as well as the future years, but this is to be expected as monitoring data from the San Diego area reveals similar findings. No other violations of any NAAQS are predicted.
- *Will not increase the frequency or severity of any existing violation of any air quality standard in any area.* Again, predicted violations of the $PM_{2.5}$ NAAQS are shown, but this is consistent with monitoring data from the San Diego area which reveals similar findings and the No Action Alternative presents similar results for the future.
- *Will not delay timely attainment of any standard or any required interim emission reductions or other milestones in any area.* Both operational- and construction-related emissions are well below the federal CAA *de minimis* levels for CO, NOx and VOCs and are not "regionally significant" (i.e., > 10 percent) so they are automatically presumed to conform to the SIP.

5.6 Water Quality

The analysis of potential impacts to water quality within the Study Area of the Proposed Action was prepared in accordance with the principal objectives of the Federal Water Pollution Control Act, as amended, by the CWA.

The purpose of this section is to describe the existing hydrologic and water quality environment and analyze potential project impacts from the Proposed Action. The following hydrology and water quality assessment relies on previous evaluations and reports, specifically:

- San Diego County Regional Airport Authority Fiscal Year 2004-2005 Municipal Stormwater Permit Annual Report, January 2006.
- San Diego County Regional Airport Authority Storm Water Management Plan, Revised January 2005.
- Hydrology Report for Storm Drainage System BMP Program, at San Diego International Airport, MACTEC, April 2005.
- Hydraulic Modeling and Tidal Surge Study Final Report for Storm Drainage System BMP Program at San Diego International Airport, MACTEC, November 2005.

5.6.1 Methodology

The potential hydrology and water quality of the Proposed Action and its alternatives were determined by reviewing the Municipal Stormwater Permit Annual Report (January 2006) and applying basic hydrology and water quality engineering principals to assess potential impact. Because the Proposed Action and its alternatives are developed to a conceptual level, the analysis is mostly qualitative rather than quantitative. This analysis assumes that SDCRAA will design all improvements to meet water quality permitting requirements.

5.6.2 West Terminal Alternative (with and without Parking Structure)

5.6.2.1 Hydrology

Virtually all of SDIA is outside the 100-year floodplain and none of the West Terminal Alternative (with and without Parking Structure) projects are within the mapped 100-year floodplain. Therefore, the Proposed Action would not impact flood plains.

The West Terminal Alternative (with and without Parking Structure) development includes approximately 39 acres of newly created impervious area associated with surface parking, aircraft parking, and additional terminal roof expansion. However, 85-90 percent of the existing Airport property is already considered impervious surface; as such, an increase of approximately 6 percent in total impervious area would be a less than significant impact to aquifer recharge and existing drainage patterns. The West Terminal Alternative (with and without Parking Structure)would require extensive grading on the former NTC site; however, standard construction practices would require erosion and sediment control thereby reducing potential for sedimentation in San Diego Bay (See Section 5.18, *Construction Impacts*).

5.6.2.2 Water Quality

All future development is subject to the Airport Stormwater Management Plan (SWMP). The SWMP requires that all municipal activities provide for Best Management Practices (BMPs); therefore, impacts relative to construction and grading and erosion and sedimentation would be less than significant. In order to seek a General NPDES Permit for Storm Water Discharges Associated with Construction Activities, the SDCRAA must include all construction activities (including monitoring, etc.) within their SWMP.

5.6.2.3 Urban Runoff

The West Terminal Alternative (with and without Parking Structure) would be implemented by the SDCRAA and, therefore, would include provisions to meet the requirements of the SDIA SWMP and thereby would have a less than significant impact on urban runoff.

5.6.3 East Terminal Alternative (with and without Parking Structure)

5.6.3.1 Hydrology

Virtually all of SDIA is outside the 100-year floodplain, and none of the East Terminal Alternative projects are within the mapped 100-year floodplain. Therefore, the East Terminal Alternative would not impact flood plains.

Like the West Terminal Alternative, the East Terminal Alternative development also includes approximately 39 acres of newly created impervious area associated with surface parking, aircraft parking, and minimal terminal roof expansion. Eighty-five to ninety percent of the existing Airport property is already considered impervious surface. As such, an increase of approximately 6% in impervious area would be less than significant impact to aquifer recharge and existing drainage patterns. The East Terminal Alternative would require extensive grading on the former NTC site; however, standard construction practices would require erosion and sediment control, thereby reducing potential for sedimentation in San Diego Bay.

5.6.3.2 Water Quality

All future development is subject to the Airport SWMP. The SWMP requires that all municipal activities provide for BMPs; therefore, impacts relative to construction and grading and erosion and sedimentation would be less than significant. In order to seek a General NPDES Permit for Storm Water Discharges Associated with Construction Activities the SDCRAA must include all construction activities (including monitoring, etc.) within their SWMP.

5.6.3.3 Urban Runoff

The East Terminal Alternative would be implemented by the SDCRAA and, therefore, would include provisions to meet the requirements of the SDIA SWMP and thereby would have a less than significant impact on urban runoff.

5.6.4 No Action Alternative

5.6.4.1 Hydrology

Since most of SDIA is outside of the 100-year flood plain there would be no increased potential for floodplain impacts under the No Action Alternative. Under the No Action Alternative there would be no change to the impervious surface area and, therefore, no potential for additional impact to aquifer recharge. The No Action Alternative would not involve grading; therefore, there is no potential for downstream erosion or sedimentation or modified drainage patterns.

5.6.4.2 Water Quality

There is no earthwork associated with the No Action Alternative and accordingly no potential for pollution and contamination impacts nor need for sediment and erosion control.

5.6.4.3 Urban Runoff

The No Action Alternative would not impact any of the SDIA SWMP provisions.

5.6.5 Mitigation Measures

No mitigation measures are required beyond those mandated by provisions in the SDIA SWMP. The SWMP meets the requirements of the NPDES permit program of the CWA and serves as the Airport's SWPPP to meet the General Industrial Storm Water Permit and Jurisdictional Urban Runoff Management Plan (JURMP) to meet the San Diego Municipal Permit.[13] Conformance with the SWMP does not represent mitigation as they are considered a component of project design. No mitigation measures are required beyond those mandated by provisions in the SDIA SWMP and the General Construction Storm Water Permit.

[13] San Diego County Regional Airport Authority, Storm Water Management Plan, January 2005.

5.7 Department of Transportation Act: Section 4(f) and Land and Water Conservation Fund Act Section 6(f)

49 U.S.C. Section 303(c), commonly referred to as Section 4(f) of the DOT Act, states that it is federal policy that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites. Under Section 4(f), FAA may approve a program or project requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance, or land of a historic site of national, State, or local significance only if: (1) there is no prudent and feasible alternative to using that land; and (2) the program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use. Section 6(f) properties are considered in the same manner as 4(f) properties, per section 4.15, *Department of Transportation Act: Section 4(f) and Land Conservation Fund Act Section 6(f)*, there are no 6(f) properties in the vicinity of SDIA.

Both direct and indirect adverse impacts to Section 4(f) properties are considered. Direct impacts include any physical taking of the property. Indirect adverse impacts, such as noise, which conflict with the public use of Section 4(f) properties or adversely affect the context of historic sites, are considered a constructive use, or taking of the property, if normal activities of the property are incompatible with FAA guidelines on noise and land use.

Parks, recreational areas, wildlife refuges, and historic sites are classes of land use which may be noise sensitive depending upon the specific use of the site. Sites that might be substantially impaired by excessive noise are amphitheaters, campgrounds, or other areas where a quiet setting is a significant attribute of the resource.

5.7.1 Methodology

Existing recreation resources near SDIA were documented through review of applicable plans (e.g., *Port of San Diego Port Master Plan*) and maps, and through field reconnaissance. According to FAA Order 1050.1E a significant impact would occur to 4(f) or 6(f) areas "when a proposed action involves more than a minimal physical use of a section 4(f) property or is deemed a "constructive use" substantially impairing the 4(f) property, and mitigation measures do not eliminate or reduce the effects of the use below the threshold of significance." As described in Section 5.1, *Noise*, the West Terminal Alternative (Preferred Alternative) and its alternatives would not noticeably affect off-Airport noise levels, meaning that there would not be indirect noise impacts at parks or other recreational areas located under the SDIA flight paths (such as at Balboa Park or Ocean Beach). Based on these factors, the assessment of recreational resources focused on those resources located in the immediate vicinity of the Airport.

Impacts to historic resources, which are also considered Section 4(f) properties, are addressed in Section 5.8, *Historic, Architectural, Archaeological, and Cultural Resources.*

5.7.2 West Terminal Alternative (with and without Parking Structure)

As described in Section 5.1, *Noise*, the West Terminal Alternative (with and without Parking Structure) would not generate noticeable changes in noise contours off Airport property. Accordingly, there would be no noise-related effects to the recreational facilities near the Airport or under its approach and departure flight paths. Similarly, for the reasons described in Section 5.16, *Light Emissions and Visual Impacts*, the West Terminal Alternative (with and without Parking Structure) would not significantly affect views at Spanish Landing Park, Harbor Island or other areas where scenic views contribute substantially to the recreational experience.

Accordingly, the West Terminal Alternative (with and without Parking Structure) would have a less than significant impact on recreational resources.

Impacts to historic resources resulting from the West Terminal Alternative (with and without Parking Structure), which are also considered Section 4(f) properties, are addressed in Section 5.8.2, *West Terminal Alternative (with and without Parking Structure),* and would be less than significant.

5.7.3 East Terminal Alternative (with and without Parking Structure)

Similar to the West Terminal Alternative (with and without Parking Structure), this alternative would not directly affect recreational resources or cause indirect effects, such as increased noise levels, that would degrade the recreational experience at nearby parks or recreational areas. Accordingly, this alternative's impact on recreational resources would be less than significant. See Section 5.8.3, *East Terminal Alternative (with and without Parking Structure)*, for discussion of potential significant impact on historic resources.

5.7.4 No Action Alternative

Under the No Action Alternative, there would be no actions at SDIA that would induce growth or otherwise affect the demand for recreational resources. Similarly, because there would be no expansion of SDIA facilities, there would be no potential for such expansion to directly or indirectly affect parks or other recreational resources. Accordingly, the No Action Alternative would have no effect on recreational or historic resources.

5.7.5 Mitigation Measures

Because the West Terminal Alternative (with and without Parking Structure), East Terminal Alternative, and the No Action Alternative would not have a significant impact on Section 4(f) resources, no mitigation for Section 4(f) impacts would be required.

5.8 Historic, Architectural, Archaeological, and Cultural Resources

To comply with the National Historic Preservation Act of 1966 and Archaeological and Historic Preservation Act of 1974, cultural resources which have the potential to be affected by a Proposed Action site must be identified.

5.8.1 Methodology

5.8.1.1 Historic Architectural Resources

Prior to undertaking field studies, the National Register of Historic Place's database, the California Inventory of Historic Resources, and California Historical Landmarks were reviewed through a record search obtained from the South Coastal Information Center at San Diego State University to determine the presence of previously identified resources within the study area. In addition, SDCRAA provided historic survey information for the former Teledyne Ryan Aeronautical Complex. Research was conducted at the archives of the San Diego Aerospace Museum and the San Diego Historical Society, to prepare a historical overview that would identify important themes and contexts against which to evaluate buildings and structures located in the study area. These included: (1) early airport development, (2) development of the airline industry, (3) development of the aircraft manufacturing industry at Lindbergh Field, and (4) contributions of Lindbergh Field aircraft manufacturers to World War II and the early Cold War.

SDCRAA provided dates of construction for buildings and structures in the study area. This information was augmented by research conducted for the historic background study. All buildings older than 45 years old or that would be 50 years old by 2015 were recorded and assessed for significance as historic resources based on their potential eligibility for listing on the National Register of Historic Places, California Register of Historical Resources, or local City of San Diego Historic Resources Board List. A qualified historian inspected each potentially significant historic resource within the study area and took field notes and photographs. State of California Department of Parks and Recreation Primary and District, or Building, Structure, and Object Record forms were completed for each of the buildings evaluated.

The Historic Architectural Survey Report is included in **Appendix F**, *Historic Resources*. Consultation with the State Historic Preservation Office (SHPO) is included in Appendix A.

5.8.1.2 Archaeological Resources

Records searches were conducted at the South Coastal Information Center at San Diego State University for the SDIA Master Plan Area and its immediate vicinity. The senior archaeologist reviewed archaeological reports for other projects in the vicinity, including the former Naval Training Center (NTC). The location of SDIA was originally mudflats and bay. Decades of dredging and placement of fill soils have built up the airport area to its current topography. Due to this history of reclamation of the area from bay and mudflats, as well as the developed nature of the project area, a full pedestrian survey was not warranted. The senior archaeologist did a driving tour of the airport grounds with airport personnel.

The Archaeological Survey Report is included in Appendix F, *Historic Resources*.

5.8.1.3 Cultural Resources

The senior archaeologist contacted the State Native American Heritage Commission (NAHC) to request a check of their sacred lands files. That check indicated that no Native American sacred lands are recorded within or in proximity to the Master Plan area. Letters were also sent to the Native American entities (Bands and individuals) identified by the NAHC as interested parties, in order to solicit their comments and potential concerns regarding the project.

5.8.2 West Terminal Alternative (with and without Parking Structure)

As discussed in Chapter Four, *Affected Environment*, there are five historic-age resources in the APE that were determined to be eligible for listing in the NRHP, as well as a complex of buildings at the Teledyne Ryan complex. The buildings include the Southwest Airlines Cargo/US Airways Building, the two former Sky Chefs Buildings, the Aircraft Service International Group (ASIG) Building, and the Allied Aerospace Building. These historic resources are not in the area to be disturbed and the Sponsor's Preferred Alternative would not cause any adverse effect to these resources.

No specific project element is proposed for the ASIG Building (the original United Airlines Hangar and Terminal) under the West Terminal Alternative (with and without Parking Structure). Therefore, the West Terminal Alternative would have no adverse effect to this significant resource and no mitigation measures are required.

Under the West Terminal Alternative no specific project component is proposed to be implemented that would affect the Allied Aerospace Building. Based on this, the West Terminal Alternative would have no adverse effect to this significant resource and no mitigation measures are required. The SHPO concurred with this finding, see Appendix A.

The West Terminal Alternative does not include any project components proposed for the Teledyne Ryan complex and the Ryan Aeronautical Company Historic District. If future actions are proposed for this area, appropriate project-specific mitigation measures must be developed and implemented.

No archaeological resources have been identified within the SDIA Master Plan area, so the West Terminal Alternative (with and without Parking Structure) would have no adverse effect on archaeological resources. However due to comments received on the Draft EA about fill sources for the eastern part of the Airport and to ensure that no archaeological resources are within the eastern end of the Airport, monitoring during geotechnical boring and grading activities in the eastern end of the Airport will be included as conclusive evidence is not available to determine the source of fill in the east most area of the proposed project.

5.8.3 East Terminal Alternative (with and without Parking Structure)

Under the East Terminal Alternative (with and without Parking Structure), the ASIG Building is designated for Terminal Uses. If the ASIG Building was removed as part of the East Terminal Alternative, it would have adverse effect, as this is a significant historic resource. Project-specific evaluation of impacts must be conducted when a project is proposed for this area and mitigation measures would be developed and implemented at that time.

No specific project components are proposed for the Allied Aerospace Building under East Terminal Alternative. Based on this, the East Terminal Alternative would have no adverse effect on this significant resource and no mitigation measures are required.

No project components are proposed for the former Teledyne Ryan complex under the East Terminal Alternative. Therefore, there would be no adverse effect on the Ryan Aeronautical Company Historic District from this alternative. If specific actions are proposed at a future date, appropriate project-specific mitigation measures must be developed and implemented.

As with the West Terminal Alternative due to comments received on the Draft EA about fill sources for the eastern part of the Airport and to ensure that no archaeological resources are within the eastern end of the Airport, monitoring during geotechnical boring and grading activities in the eastern end of the Airport will be included to as conclusive evidence is not available to determine the source of fill in the east most area of the proposed project.

5.8.4 No Action Alternative

Under the No Action Alternative, ongoing land uses would continue. There would be no adverse effect to any of the identified significant historic resources and no adverse effect to archaeology.

5.8.5 Mitigation Measures

5.8.5.1 Historic Architectural Resources

No specific project element is proposed for the ASIG Building (the original United Airlines Hangar and Terminal) under the West Terminal Alternative (with and without Parking Structure). Therefore, the West Terminal Alternative would have no adverse effect on this significant resource and no mitigation measures are required at this time. However, under the East Terminal Alternative, the ASIG Building would require mitigation and would require that a Memorandum of Agreement be developed with the California State Historic Preservation Office for mitigation of adverse effect.

No land uses are designated for the Allied Aerospace Building under the West Terminal Alternative. Based on this, the West Terminal Alternative would have no adverse effect on this significant resource and no mitigation measures are required.

No specific projects are proposed for the Teledyne Ryan complex and the Ryan Aeronautical Company Historic District under the West Terminal Alternative or East Terminal Alternatives. Therefore, no mitigation measures are required at this time for these historic resources.

No archaeological resources have been identified within the SDIA Master Plan area. However due to comments received on the Draft EA and to ensure that no archaeological resources are within the eastern end of the Airport, monitoring during geotechnical boring and grading activities in the eastern end of the Airport will be included as conclusive evidence is not available to determine the source of fill in the east most area of the proposed project.

5.9 Fish, Wildlife, and Plants

This section focuses on the potential for the project alternatives to jeopardize the continued existence of a listed species or destroy or adversely modify critical habitat. In addition, the potential to introduce invasive species as a result of the alternatives is reviewed.

5.9.1 Methodology

Impacts to biotic communities and threatened and endangered species were assessed through a review of previous documents (e.g., least tern nesting records, Biological Opinion [BO]) and assessment of the potential for SDIA to support vegetation communities/habitat). Because the vast majority of SDIA is developed or highly disturbed, this effort focused on two areas: (1) the least tern nesting areas ("ovals") at the southeast portion of SDIA and (2) the undeveloped portion (approximately 34 acres) of the 52-acre parcel transferred from the former Naval Training Center (NTC). Within the former NTC Parcel, vegetation communities were mapped using aerial interpretation combined with direct observation.

For the purposes of this analysis, potential jeopardy to biotic communities/endangered and threatened species impacts were evaluated based on the potential for the USFWS to determine that the Proposed Action would result in the destruction or adverse modification of Federally-designated critical habitat within the affected area. Coordination with USFWS is included in Appendix A.

5.9.2 West Terminal Alternative (with and without Parking Structure)

5.9.2.1 Direct Impacts that Would Destroy or Adversely Modify Federally-Designated Critical Habitat

Biotic Communities

The West Terminal Alternative (with and without Parking Structure) projects would not likely jeopardize biotic communities. As noted previously, the former NTC parcel that would be developed for the Terminal 2 West expansion supports nonnative and/or disturbed habitat that is isolated from other areas of native habitat by urban development. Virtually all of the remaining areas that would be developed under the West Terminal Alternative consist of bare earth, paved surfaces, structures or ornamental (low habitat value) landscaping.

Endangered and Threatened Species

The West Terminal Alternative (with and without Parking Structure) projects would have no direct effects on designated critical habitat for endangered or threatened or other sensitive species except potentially during construction of the new apron, hold pads, new Taxiway east of Taxiway D, and demolition of the existing general aviation facilities in the north area of the Airport. This potential impact is based upon a 1993 USFW&S Biological Opinion on the California least tern as described in Section 4.9.2, *Endangered and Threatened Species: Flora & Fauna*. Within this opinion the USFW&S included a 1,200 foot buffer from all California least tern ovals during nesting season (April 1 through September 15). These proposed airport improvements once constructed are not located at or adjacent to least tern nesting sites or other areas of sensitive habitat for threatened, endangered or other species.

Informal consultation with USFW&S was undertaken to determine necessary construction mitigation for the California least tern should the SDCRAA determine that construction must take place within the 1,200 buffer area during the nesting season due to operational requirements of the Airport. See Appendix A for informal consultation correspondence. The SDCRAA has a long history of protecting the California least tern and has negotiated construction mitigation strategies to accommodate the California least tern during nesting season during previous construction projects and will employ previous mitigation measures as agreed to by the USFW&S and described in Section 5.9.5, *Mitigation Measures*, to protect the California least tern during construction of the West Terminal Alternative. Should the SDCRAA determine that construction within the 1,200 foot buffer is not necessary during California least tern nesting season there would be no averse affect on the California least tern and no construction mitigation would be required.

5.9.2.2 Indirect Impacts that Would Destroy or Adversely Modify Federally-Designated Critical Habitat

The indirect impacts of the West Terminal Alternative (with and without Parking Structure) projects would not likely jeopardize biotic communities because these projects would not be built adjacent to sensitive habitat, would not substantively affect air traffic levels at SDIA, and would not cause a significant change in the volume or location of sediment or other pollutants that are carried off site in storm flows. Specifically with regard to the least tern nests, the West Terminal Alternative projects would be north of the runway or separated from the nests by the former Teledyne Ryan leasehold, which would not be developed under the West Terminal Alternative.

Additionally, because the West Terminal Alternative (with and without Parking Structure) projects would not increase operations when compared to the No Action Alternative, there would be no increased risk of collisions due to the West Terminal Alternative projects.

5.9.3 East Terminal Alternative (with and without Parking Structure)

As with the West Terminal Alternative (with and without Parking Structure), this alternative would require consultation with USFW&S for construction mitigation measures should the SDCRAA determine that construction during California least tern nesting season is necessary.

5.9.4 No Action Alternative

Under the No Action Alternative, there would be no change to the least tern ovals and, except for expected growth in (non-project-related) aircraft operations at SDIA, no increase in indirect effects compared to baseline conditions. The Airport would continue to operate in compliance with the terms of the BO issued by the USFWS, no potential predator perches would be constructed near the ovals, there would not be additional lighting near the ovals, and there would be no change to the former Teledyne Ryan leasehold that would increase use of the existing Ryan Taxiway.

5.9.5 Mitigation Measures

The No Action Alternative would not likely jeopardize biotic communities or threatened or endangered species and would not require mitigation. The West Terminal Alternative and East Terminal Alternative would require construction mitigation if construction within the California least tern oval 1,200 foot buffer is undertaken within the California least tern nesting season.

The following measures would be implemented to avoid effects to CLT during construction within 1,200 feet (but not closer than 800 feet) of ovals 0-3S and/or 0-2S during the CLT nesting season (April 1 through September 15).

1. The Projects will be phased so that all project construction within 800 feet of tern nesting Oval O-3-S will occur from September 15 to March 31 to avoid the tern nesting season. The Airport Master Plan Near Term Improvements do not occur within 800 feet of tern nesting Oval O-3-S.

2. The Projects' staging area will be located on the north side of the Airport runway at least 1,200 feet from tern nesting Oval O-3-S. Construction vehicles will approach the staging area and construction area from the north side of the Airport runway and will not use roads that pass through the tern nesting areas located on the south side of the Airport runway. Any construction vehicles will be parked on paved areas on the north side of the Airport runway during work hours.

3. Beginning April 1, the Authority will hire a qualified tern biologist to monitor daily for the arrival of the tern into San Diego Bay and to nesting sites at the Airport, and immediately notify the Federal Aviation Administration (FAA) and Service (collectively, Agencies) upon their arrival. The biological monitor will coordinate with other tern monitors in San Diego Bay (e.g., Brian Collins (Service), Robert Patton and/or Elizabeth Copper). The Authority will notify the Agencies via email on a daily basis as

to the presence or absence of the least tern in San Diego Bay and at nesting sites at the Airport. The notifications will be sent to Victor Globa (FAA) and Lauren White (Service: Lauren_White@fws.gov).

4. The Authority will hire a qualified biological monitor with least tern experience (e.g., can identify the tern and can recognize their vocalization) to be on site on all days when construction activities are conducted within 1,200 feet of ovals 0-3S and/or 0-2S and the tern is present on the airport after the tern arrives to San Diego Bay to ensure that activities and personnel do not disrupt the tern. The biological monitor will monitor the tern during construction and will immediately notify the Resident Engineer (RE; or acting RE) of any construction activity that may lead to, or likely result in, the disruption of the tern, its young, or its eggs. The biological monitor will immediately notify the RE of all construction-related events that result in the tern showing agitated or stressed behavior. The RE will immediately modify the activity or incorporate protective measures to avoid disruption of the tern so the potential to have to stop construction activities is reduced. Construction activities can be carried out that do not result in individual terns or groups of terns displaying agitated or stressed behavior and/or suddenly leaving their nest(s) and not resettling on the nest(s) for more than 5 minutes. The biological monitor may or may not remain on site during each entire construction day depending on whether or not, in his/her expert opinion and based upon direct observations, the construction activities to be conducted during the day may adversely affect the tern. If the biological monitor determines that adverse effects to the tern have occurred, the Resident Engineer will be notified and all project construction activities will cease immediately, except those activities necessary to make the airport safe and operational. The biological monitor, in coordination with the Resident Engineer, will contact the Agencies immediately after construction has been stopped. Construction will not resume until approved by the Agencies. The biological monitor will submit daily field reports to the Agencies on the status of the nesting activity, any construction-related incidents that disrupted tern nesting, and any action taken by the RE to avoid further incidents, within 24 hours of each monitoring date. The biological monitoring will also submit a final summary report of monitoring to the Agencies by October 1.

5. Covered trash dumpsters or other suitable containers will be provided for construction personnel. All food items or containers that previously held food items will be immediately disposed of in these dumpsters or containers so as not to attract avian or mammalian predators of the tern.

6. Construction personnel will not be permitted to feed cats, gulls, ravens, etc. as this may result in an increase in the numbers of these potential predators in the vicinity of tern chicks and eggs.

7. Crane booms or similar equipment that have heights of 25 feet or greater will be lowered at the close of each construction day if possible.

8. A pre-construction meeting will be held to make all contractor personnel, including all construction staff, aware of the tern nesting issue and the specific conditions of construction. Project status meetings will be regularly held to remind all involved personnel of the measures required to protect the tern as well as any modifications made to ensure their effectiveness. The Service will be notified of the date and time of the pre-construction and status meetings in order to attend should it so desire.

9. Nighttime construction will be limited to those activities that are necessary to maintain airfield operations during normal operational times. Should nighttime construction be required, the biological monitor will be onsite and perform the duties specified in measure 4.

5.10 Wetlands

Executive Order 11990 requires Federal agencies to minimize the destruction, loss, or degradation of wetlands resulting from their actions. Section 404 of the Clean Water Act, as amended, requires regulation of discharges or fill matter into Water of the United States. The USACE has primary responsibility for implementing, permitting and enforcing the provisions of Section 404.

Wetlands are defined as those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar special aquatic habitats.[14]

5.10.1 Methodology

Recent aerial photographs (1"=150' scale), USGS topographic maps, and the County of San Diego soil survey were reviewed to determine the location of potential jurisdictional wetland areas that may be affected by the project. Jurisdictional wetlands may fall under U.S. Army Corps of Engineers (Corps) jurisdiction pursuant to Section 404 of the Clean Water Act (33 U.S.C. 1344), wetland and streambed habitats under California Department of Fish and Game (CDFG) jurisdiction pursuant to Section 1600 of the Fish and Game Code, and wetland habitat under California Coastal Commission (CCC) jurisdiction pursuant to Section 30121 of the California Coastal Act. It was determined that there were no wetlands within the area that would be potentially affected by the Proposed Action.

5.10.2 Significance Criteria

The Proposed Action would have a significant impact if it would result in the loss or degradation of wetland habitat considered jurisdictional under Clean Water Act, California Fish and Game Code, or California Coastal Act regulations.

5.10.3 West Terminal Alternative (with and without Parking Structure)

The proposed sites for the West Terminal Alternative projects are, under construction, heavily developed and disturbed, and do not support wetlands. Accordingly, the West Terminal Alternative would not affect wetlands.

5.10.4 East Terminal Alternative (with and without Parking Structure)

The proposed sites for the East Terminal Alternative projects are heavily developed and disturbed and do not support wetlands. Accordingly, the East Terminal Alternative would not affect wetlands.

5.10.5 No Action Alternative

Under the No Action Alternative, there would be less ground disturbance than under the Proposed Action, and no impacts to wetlands due to the lack of on-site wetland resources.

5.10.6 Mitigation Measures

Because there are no wetland impacts for all project alternatives, no wetland mitigation is required.

[14] 33 CFR 328.3(c), 1996.

5.11 Floodplains

Executive Order No. 11988 was enacted in order to avoid, to the extent possible, the long and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct and indirect support of floodplain development wherever there is a practical alternative. The order was issued in furtherance of NEPA, the National Flood Insurance Act of 1968, and the Flood Disaster Act of 1973.

Floodplains are defined as lowland and flat areas adjoining waters that are subject to a one percent or greater chance of in any given year, i.e. a 100 year flood event.

5.11.1 Methodology

Potential floodplain impacts were evaluated by comparing the location of Proposed Action elements with floodplain mapping prepared by the Federal Emergency Management Agency (FEMA).

The proposed project or an alternative would cause a significant floodplain impact if it would impose a flood hazard on other properties, or place development wholly or partially within a FEMA-mapped 100-year floodplain such that substantial flood hazards would result. Impact significance also is assessed with regard to Executive Order 11988, Floodplain Management (42 Fed. Reg. 26951 (1977)). Under this Executive Order, federal agencies must take action to avoid development in the 100-year floodplain unless it is the only practicable alternative; to reduce hazard and risk associated with floods; to minimize the impact of floods on human safety, health, and welfare; and to restore and preserve the natural and beneficial value of the base floodplain.

5.11.2 West Terminal Alternative (with and without Parking Structure)

SDIA and its vicinity are included on Panels 1877 and 1881 of Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map, San Diego County, California and Incorporated Areas.[15] **Figure 5.11-1** illustrates the mapped floodplain at SDIA. The map shows that virtually all of SDIA, including the 52-acre former Naval Training Center property and the North Area Proposed Action, is mapped as Zone X, "areas determined to be outside the 500-year floodplain." An approximately 2.9-acre portion of SDIA, located near the southeastern edge of the Airport and adjacent to the former Teledyne Ryan property, is within an area mapped as Zone X and designated "areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood." The former Teledyne Ryan portion of SDIA Master Plan study area also is predominately outside the 500-year floodplain, but it also includes approximately 8.9 acres mapped as Zone X, "areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood", which is contiguous with the portion of SDIA having the same Zone X designation (see **Figure 5.11-2**). The West Terminal Alternative (with and without Parking Structure) is not within the 100-year mapped floodplain.

Tsunamis, associated with seismic activity, are a potential flood hazard; however, the highest recorded tsunami in San Diego Bay was approximately 5 feet from peak to trough, which would not affect SDIA.[16]

Virtually all of SDIA is outside the 100-year floodplain and the West Terminal Alternative (with and without Parking Structure) is not within the mapped 100-year floodplain. Therefore, the West Terminal Alternative (with and without Parking Structure) would not impact flood plains.

5.11.3 East Terminal Alternative (with and without Parking Structure)

As is the case with the West Terminal Alternative (with and without Parking Structure), virtually all of SDIA is outside the 100-year floodplain, and none of the East Terminal Alternative projects are within the mapped 100-year floodplain. Therefore, the East Terminal Alternative would not impact flood plains.

[15] Panel 1877, Map Number 06073C1877 F, FEMA, 6/19/1997. Panel 1881, Map Number 06073C1881 F, FEMA, 6/19/1997.
[16] Redevelopment Agency of the City of San Diego, 1999. Naval Training Center Redevelopment Project. Draft Environmental Impact Report, SCH #99081140. Prepared by Ogden Environmental and Energy Services Co., Inc. November.

5.11.4 No Action Alternative

Since most of SDIA is outside of the 100-year floodplain there would be no increased potential for floodplain impacts under the No Action Alternative.

5.11.5 Mitigation Measures

Because there are no floodplain impacts for the West Terminal Alternative, East Terminal Alternative, and the No Action Alternative, no floodplain mitigation is required.

5.12 Wild and Scenic Rivers

The Wild and Scenic Rivers Act, (16 USC 1271 et seq.) includes river areas eligible for protection under the legislation as those that are free-flowing and have "outstandingly remarkable scenic, recreational, geological, fish and wildlife, historic, cultural and other similar values." Wild rivers are those that exist in a free-flowing state with excellent water quality and with adjacent lands that are essentially primitive. Scenic rivers are those rivers that exist in a free-flowing state and with adjacent lands that are largely undeveloped (i.e., adjacent lands still present an overall natural character, but in places that may have been developed for agricultural, residential, or other uses). Recreational rivers are those rivers that may have undergone some impoundment or diversion in the past and that may have adjacent lands which are considerably developed, but that are still capable of being managed so as to further the purposes of the Wild and Scenic Rivers Act.

5.12.1 Methodology

The list of designated Wild and Scenic Rivers in California was reviewed to determine the closest designated Wild and Scenic River to SDIA—this was determined to be Sespe Creek, located approximately 330 miles to the north.[17]

The proposed project would have a significant impact if it would alter a river designated as wild and Scenic pursuant to the federal *Wild and Scenic Rivers Act.*

5.12.2 West Terminal Alternative (with and without Parking Structure)

Because there are no designated wild and scenic rivers near the Airport, the West Terminal Alternative (with and without Parking Structure) alternative would have no impact on wild and scenic rivers.

5.12.3 East Terminal Alternative (with and without Parking Structure)

As with the West Terminal Alternative (with and without Parking Structure), there are no designated Wild and scenic rivers near the Airport, therefore this alternative would have no impact on wild and scenic rivers.

5.12.4 No Action Alternative

Because there are no designated wild and scenic rivers near the Airport, this alternative would have no impact on wild and scenic rivers.

5.12.5 Mitigation Measures

Because there are no wild and scenic rivers in the study area there is no impact to this resource, no mitigation is necessary.

[17] 16 USC §§1271-1287 [WILD AND SCENIC RIVERS ACT: TITLE 16—CONSERVATION; CHAPTER 28—WILD AND SCENIC RIVERS; SECTIONS 1271-1287= 16 USC §§1271-1287]

5.13 Farmlands

The Farmland Protection Policy Acts (FPPA) of 1980 and 1995 require identification of proposed projects that would affect any soils classified as prime and unique. Prime farmland soil is soil that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and, is also available for other uses. Unique farmland is land other than prime farmland that is used for the production of specific high value food and fiber crops.

5.13.1 Methodology

Prime and unique farmland impacts were assessed through a review of applicable soil and farmland mapping.[18] The proposed project would have a significant impact on prime and unique farmlands if it would directly or indirectly convert a substantial amount of these farmlands to non-farm use.

5.13.2 West Terminal Alternative (with and without Parking Structure)

SDIA is underlain by artificial fill and bay deposits, neither of which is identified in the Soil Candidate Listing for prime farmland and farmland of statewide importance by the United States Department of Agriculture.

Further, SDIA is designated as 'Urban Land' and 'Made Land' by the United States Department of Agriculture. Urban Land is land that is primarily covered by buildings, streets, and sidewalks, and, hence, it is unavailable for agricultural activity. Made Land consists of smooth, level areas that have been filled with excavated and transported soil material, paving material, and soil material dredged from lagoons, bays, and harbors, which is also unavailable for agricultural activity.

Accordingly, the West Terminal Alternative (with and without Parking Structure) would not have a significant impact on agricultural lands (e.g., prime farmland, unique farmland, or farmland of state importance).

5.13.3 East Terminal Alternative (with and without Parking Structure)

As is the case with the West Terminal Alternative (with and without Parking Structure) (see Section 5.13.2), the East Terminal Alternative would not have a significant impact on agricultural lands (e.g., prime farmland, unique farmland, or farmland of state importance).

5.13.4 No Action Alternative

The No Action Alternative would not affect prime or unique farmland.

5.13.5 Mitigation Measures

Because there are no farmlands in the study area there is no impact to this resource, no mitigation is necessary.

[18] United States Department of Agriculture (USDA). 1973. Soil Candidate Listing for Prime Farmland and Farmland of Statewide Importance, San Diego County. Soil Survey of San Diego Area, California. U.S. Department of Agriculture, Natural Resources Conservation Service. December.

5.14 Coastal Resources

The Coastal Zone Management Act (CZMA) of 1972 ensures the effective management, beneficial use, protection, and development of the coastal zone. Coastal Zone Management Programs (CZMPs), prepared by states according to guidelines issued by the National Oceanic and Atmospheric Administration (NOAA), are designed to address issues affecting coastal areas. The Airport is not within a coastal area defined by the federal government; consequently, analysis of alternatives with respect to an approved CZMP is not required.

The Coastal Barriers Resources Act of 1982 prohibits federal financing for development within the Coastal Barrier Resources System, which consists of undeveloped coastal barriers along the Atlantic and Gulf coasts. The legislation was amended by the Coastal Barrier Improvement Act of 1990 to include undeveloped coastal barriers along the shores of the Great Lakes.

5.14.1 Methodology

The FAA has no specific established thresholds for coastal resources but indicates that a Proposed Action can not be approved if a State with an approved coastal zone management program raises an objection unless other specified actions are taken. Due to the fact that an EIR was prepared and certified for the same Proposed Action in accordance with the State's California Environmental Quality Act (CEQA), the potential significant coastal resources are addressed with regard to consistency with the California Coastal Act of 1976 ("Coastal Act"; California Public Resources Code Sections 30,000 et seq.). This act, which is consistent with the Federal Coastal Zone Management Act, contains the State's adopted policies with regard to the protection of coastal resources.

The Proposed Action would have a significant impact to coastal resources if it would be inconsistent with applicable coastal zone management and planning policies in Chapter 3 of the Coastal Act, including the following:

1. Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.
2. Upland areas necessary to support coastal recreational uses shall be reserved for such uses, where feasible.
3. Marine resources shall be maintained, enhanced, and, where feasible, restored.
4. The biological productivity and the quality of coastal waters appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.
5. Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.
6. Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.
7. New commercial or industrial development, except as otherwise provided in the Coastal Act, shall be located within, contiguous with, or in close proximity to, existing developed areas able to accommodate it.
8. The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas.

9. The location and amount of new development should maintain and enhance public access to the coast by providing adequate parking facilities or providing substitute means of serving the development with public transportation.

10. New development shall minimize risks to life and property in areas of high geologic, flood, and fire hazard.

11. New development shall be consistent with requirements imposed by an air pollution control district or the State Air Resources Control Board as to each particular development.

Note that these are not the only coastal zone management and planning policies contained in Chapter 3 of the Coastal Act; rather, these are the policies that SDCRAA considers potentially applicable to the proposed project. These policies also are considered in light of Coastal Act guidance that existing developed uses are essential to the economic and social well-being of the people of California. That is, although the Airport is not a coastal dependent use, it is an existing facility that cannot feasibly be relocated to a non-coastal location within the timeframes addressed by the Proposed Action. Also note that, because the topic of "coastal resources" encompasses a broad spectrum of resources and issue areas, much of the discussion of impacts provided below refers to analyses elsewhere in this EA. For the purposes of assessing coastal resource impact significance, this section assumes that the provisions identified in other Sections (e.g., 5.6 *Water Quality*, 5.17 *Hazardous Materials and Solid Waste*) would be implemented.

5.14.2 West Terminal Alternative (with and without Parking Structure)

Adoption of the West Terminal Alternative (with and without Parking Structure) would not conflict with the applicable coastal zone management and planning policies contained in Chapter 3 of the Coastal Act for the following reasons (number correspond to the significance criteria listed above):

1. The developments that would occur under the West Terminal Alternative (with and without Parking Structure) would not preclude or restrict public access to the coast. For aviation security reasons, much of the study area is currently closed to the public or limited to persons with legitimate Airport business. In the broader sense, improvements to SDIA would make arriving at San Diego more pleasant for visitors, which could be considered an improvement to coastal access.

2. SDIA and its study area are not necessary to support coastal recreation and have not historically been used for such a purpose. Recreation would not be consistent with current and proposed use of the subject property as a busy international airport.

3. The specific developments included in the West Terminal Alternative would not adversely affect the marine environment. There would be no construction in marine areas and, as described in Sections 5.6, *Water Quality*, and 5.17, *Hazardous Materials and Solid Waste*, the West Terminal Alternative would not increase pollutant discharges to the marine environment.

4. The West Terminal Alternative (with and without Parking Structure) would not degrade the biological productivity or the quality of coastal waters because it would incorporate measures to address potential runoff during construction and operation of the proposed new facilities (see Section 5.6, *Water Quality*), wastewater flows generated at the Airport (including those from Proposed Action facilities) would be treated by the City of San Diego prior to discharge in the Ocean, reclaimed water would be used were appropriate (such as for certain landscaping irrigation applications), and Airport facilities would not be constructed in the 100-year floodplain or in streambeds or other natural water bodies.

5. The vast majority of SDIA and the associated Port Tideland leaseholds are paved or highly disturbed. As described in Sections 5.9 *Fish, Wildlife, and Plants* and 5.10 *Wetlands*, the proposed Terminal 2 West expansion area contains disturbed, low quality habitat that is isolated from other vegetation. No Clean Water Act or California Fish and Game Code wetlands exist on site. The taxiway ovals in the southwest sector of SDIA represent important nesting habitat for the California least tern; however, impacts to least terns during construction would be not significant or able to be mitigated to a May Effect but with Mitigation Measures May Not Adversely Effect level for the reasons described in Section 5.9, *Fish, Wildlife, and Plants*. Accordingly, the

West Terminal Alternative (with and without Parking Structure) would not cause a significant disruption to, or loss of habitat value in, environmentally sensitive habitat areas.

6. With the exception of marine habitat (see item no. 3), SDIA is not adjacent to environmentally sensitive habitat areas. As described in Section 5.1, *Noise*, the West Terminal Alternative (with and without Parking Structure) would not result in a noticeable increase in noise levels off-Airport, and as described in Section 5.6, *Water Quality*, the West Terminal Alternative (with and without Parking Structure) would not increase pollutant emissions in stormwater runoff. Accordingly, the West Terminal Alternative would not have indirect effects on off-Airport habitat. Similarly, the West Terminal Alternative would not substantively affect nearby Spanish Landing Park or recreational boaters in San Diego Bay.
7. The proposed expansion of SDIA facilities would occur within the existing Airport property or within areas previously used for aviation commercial and industrial purposes. Accordingly, the West Terminal Alternative (with and without Parking Structure) would be consistent with Coastal Act guidance calling for new development to be within, contiguous with, or in close proximity to existing developed areas.
8. As described in Section 5.16, *Light Emissions and Visual Impacts,* the West Terminal Alternative (with and without Parking Structure) would not significantly affect views to and along scenic coastal areas (e.g., views to the Bay from inland of the Airport), and it would result in development that is visually compatible with the character of surrounding areas.
9. Development at SDIA would occur outside the 100-year floodplain and would not be in a wildland fire or other high-fire hazard area. Potential geological stability issues would be addressed during project design and construction, as addressed in Section 5.18, *Construction Impacts*.
10. SDIA is a public transportation facility that provides coastal access (e.g., access to San Diego County and its coastal resources) for visitors from throughout California and the nation. Locally, the Airport is served by several forms of public transit including buses, taxis and shuttles, and commuter and inter-city rail (via the Metropolitan Transit System Flyer Bus Route No. 992 from Santa Fe Station). These services would continue under the West Terminal Alternative (with and without Parking Structure). Specifically with regard to parking, the West Terminal Alternative (with Parking Structure) (Preferred Alternative) includes the provision of additional parking at Terminal 2. Based on these factors, the Proposed Action (Preferred Alternative) is consistent with applicable Coastal Act guidance on transportation and parking in the coastal zone.
11. As described in Section 5.5, *Air Quality*, the Proposed Action (Preferred Alternative) would be consistent with requirements imposed by the San Diego County Air Pollution Control District and the State Air Resources Control Board.

Because the West Terminal Alternative (with and without Parking Structure) would be consistent with the planning and land use policies adopted by the State to protect coastal resources, its effect on coastal resources would be less than significant.

5.14.3 East Terminal Alternative (with and without Parking Structure)

From the perspective of coastal resources and Coastal Act consistency, this alternative would have virtually identical effects as those described in the previous section for the West Terminal Alternative (with and without Parking Structure) (i.e., less than significant coastal resources impact).

5.14.4 No Action Alternative

Under the No Action Alternative, there would be no change in the existing use of coastal resources at SDIA and the former Teledyne Ryan leasehold. Similarly, there would be no proposed Airport developments requiring certification and/or approval from the California Coastal Commission.

5.14.5 Mitigation Measures

This assessment of coastal resource impacts assumes that the mitigation measures identified elsewhere in this EA would be implemented for each alternative. Specifically, this includes implementation of water

quality best management practices (BMPs) and other stormwater pollution measures identified in the SWPPP and mitigation if necessary during construction for the California least tern. With conformance to the SWPPP and the implementation of these mitigation measures, no additional measures would be required to reduce coastal resource impacts to less-than-significant levels for any of the alternatives considered in this EA.

5.15 Natural Resources and Energy Supply

In accordance with Order 1050.1E, the West Terminal Alternative, the East Terminal Alternative, and the No Action Alternative were all examined to identify any resulting measurable effect on local supplies of energy or natural resources. Increased energy consumption could result from the modified movement of aircraft or vehicles and changes to stationary facilities. Resources other than fuel are of concern only if the proposed action involves using unusual materials or those in short supply.

5.15.1 Methodology

This analysis focuses on the capacities and capabilities of existing public utilities and service systems and examines how the Proposed Action would affect them. This study incorporates information obtained during preparation of the Airport Master Plan, the adopted Airport Master Plan is available for review at http://www.sanplan.com/docs/SAN_AMP_08Apr24/.

Water service demand was assessed using the water demand factors established by the City of San Diego Water Department, which provides water service to SDIA.[19] Water supply availability was assessed in compliance with California Water Code requirements[20] in a City of San Diego-prepared Water Supply Assessment. The Water Supply Assessment addressed the demand estimates for the Proposed Action in comparison to anticipated water supply requirements, incorporating applicable elements of the *2005 City of San Diego Urban Water Management Plan* (UWMP),[21] *The Metropolitan Water District of Southern California 2005 Regional Urban Water Management Plan*[22] (RUWMP) and the City's *Long-Range Water Resources Plan (2002-2030)*.[23]

Other utility providers' facilities were identified through review of maps, available studies, and other documents; field reconnaissance; and communications with personnel at San Diego Gas and Electric Company (SDG&E), City of San Diego and SDIA. Potential impacts to public utilities and service systems were evaluated by (a) assessing the potential for the Proposed Action to increase demand and (b) comparing the ability of the service provider/public facility to serve the Proposed Action developments and accommodate the associated increase in demand, and (c) addressing whether existing utility lines would need to be relocated or otherwise directly affected by construction/operation of project elements (see also "Thresholds of Significance").

5.15.2 West Terminal Alternative (with and without Parking Structure)

Electrical Power

The West Terminal Alternative (with and without Parking Structure) would generate increased demand because it would result in new structures being built that would require electrical service. As discussed above, there are several 12kV lines near SDIA, which provide connections to two different substations. Also as noted above, SDG&E continually assesses projected demand and plans and operates accordingly. Although extension of on-Airport electrical power lines would be required, this would not exceed the capacity of SDG&E to provide service.

The proposed expansion of Terminal 2 West would affect buried utility lines. There are two 12kV feeder cables (in four-inch-diameter PVC concrete, which is encased in conduit ductbank) that pass through the area of the proposed Terminal 2 West buildout. The ductbank would, therefore, need to be moved prior to constructing of the proposed Terminal 2 West expansion. This relocation would be coordinated with SDG&E.

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[19] City of San Diego Water Department Capital Improvements Program. Guidelines and Standards. Book 2. July 1999.
[20] Specifically including those sections of the California Water Code beginning at Section 10910 and codifying Senate Bill 610.
[21] City of San Diego. The 2005 City of San Diego Urban Water Management Plan. 2005.
[22] The Metropolitan Water District of Southern California. The Metropolitan Water District of Southern California 2005 Regional Urban Water Management Plan. November 2005.
[23] City of San Diego. *Long-Range Water Resources Plan (2002-2030)*. Adopted by the City Council on December 9, 2002.

Natural Gas

A 10-inch-diameter 400 PSI natural gas line runs north/south near the west edge of Terminal 2. The proposed Terminal 2 West Expansion would require this line to be relocated. The engineering for moving the line would be done by SDG&E upon receipt of the finalized footprint for the Terminal 2 plan. The adjoining streets could have sufficient gas facilities to accommodate most SDIA proposed activities. Utility extensions would be required to serve new facilities.

Water Supply

As required by law, the 2005 UWMP identifies projected water supplies required to meet future water demands. The 2005 UWMP assesses demand and supply and concludes that the City has an adequate supply (relying mostly on imported water) to meet municipal, commercial and industrial demands throughout the City's service area through 2020. The 2005 UWMP does not contemplate specific projects, but rather is based on the overall anticipated growth rate within the City's water service area. In its Water Supply Assessment for the Proposed Action, the City of San Diego determined that:

> …there is a sufficient water supply to serve existing demand and projected demands of the [San Diego International Airport Master Plan] Project within the Water Department's service area in normal and dry year forecasts. An adequate supply is further confirmed by the *Report on Metropolitan's Water Supplies, A Blueprint for Water Reliability (March 2003 Report)* which states that Metropolitan will have adequate supplies to meet dry-year demand within its service area over the next 20 years.[24]

It is acknowledged that the above-cited Water Supply Assessment and the planning documents upon which it was based were prepared prior to an August 31, 2007 District Court ruling curtailing the pumping of San Francisco Bay Delta water into the State Water Project. That ruling, intended to protect the Delta smelt pursuant to the requirements of the federal Endangered Species Act, curtails pumping for one year until a new Biological Opinion is in place; however, it is probable that future pumping restrictions may be identified as part of the long-term recovery plan for the Delta smelt.

With regard to the effect of this ruling within San Diego, the SDCWA has indicated that

> The [San Diego County] Water Authority purchases its Bay-Delta water supplies from the Metropolitan Water District of Southern California (MWD), which stands to lose a significant portion of its supplies from Northern California next year and possibly longer as a result of the ruling. Officials from MWD are weighing the potential impact of the court action on its projected water supplies for 2008…. The final impact of the court action will not be known until the end of the upcoming 2007-2008 winter season, which will determine how much Sierra snow pack – and water supply – may be available next year, and how much of that supply will be curtailed because of the pumping restrictions.[25]

Metropolitan also acknowledges uncertainty with regard to how this ruling will affect water supplies, noting that actual water supply curtailments for Metropolitan will depend on fish, weather and flow conditions in the Delta and how curtailments are divided between the state and federal projects. In addition, actual impacts also will be contingent upon the formal, signed ruling.[26]

Over the long term, it is anticipated that reductions in Bay-Delta water supplies would be addressed through a combination of conservation and programs to import non-Bay-Delta water to the region. The SDCWA and Metropolitan have both recently invested in diversifying their water portfolios. The SDCWA has invested in maximizing storage, local supply development, the Coachella and All-American canal lining projects, a water transfer from Imperial Irrigation District, conservation, and recycling. By 2011, SDCWA projects that water transfer and canal lining projects will provide nearly 158,000 acre-feet of water and that by 2021, they will provide 277,700 acre-feet annually. The City of Carlsbad, a SDCWA member agency, is working on a seawater desalination plant, which the SDCWA is supporting. The SDCWA also projects that as a result of investments by its member agencies, groundwater production will triple from 14,956 acre-feet in 2006 to 52,300 acre-feet in 2020. Similarly, recycled water usage is

[24] City of San Diego Water Department. Water Supply Assessment Report. Airport Master Plan – Airport Improvements. Pg. 3. July 2006.

[25] San Diego County Water Authority, "News Release: Federal judge orders massive cut in water supply deliveries from the Bay Delta." August 31.

[26] The Metropolitan Water District of Southern California. "News Release: Metropolitan Board to Assess Water Management Options in 2008, After Judge Orders Historic Reductions in Supplies from Delta."

expected to triple from 14,828 acre-feet in 2006 to 52,300 acre-feet in 2020. The SDCWA is also exploring other potential short-term water transfers.[27]

Based on the preparation of a Water Supply Assessment by the City of San Diego Water Department that specifically finds that adequate water supply would be available for the Proposed Action, water supply impacts are assessed as less than significant. While it is acknowledged that reductions in water imports from the Bay-Delta could affect water supplies in the San Diego region, the long-term nature of any such reduction is unknown, and regional water suppliers (such as Metropolitan and SDCWA) have been and actively continue to pursue other water sources. Accordingly, the potential long-term effects of a reduction in Bay-Delta water imports to San Diego are considered speculative at this point, and the recent ruling regarding the Delta smelt is not considered sufficient basis negate the findings of the City-prepared Water Supply Assessment.

In terms of the water delivery or conveyance system, the land uses for each project component would result in an increased demand for water, which would require an extension of water conveyance facilities on the SDIA. There is an existing water line along the west edge of the existing Terminal 2. To construct the proposed Terminal 2 Expansion, the water line would be moved and the services it provides to the existing Terminal 2 maintained. New service would be established from the relocated line. In the North Area, the West Terminal Alternative (Preferred Alternative) would require extension of water utilities from Pacific Highway

Water conservation would be achieved through the incorporation of water conservation devices into project designs, such as the use of low- flush toilets, low-flow faucets, and timers on lawn sprinklers.

The West Terminal Alternative (Preferred Alternative) would require the relocation of major water supply lines. This assessment is based on the locations of the existing water lines in relationship to the West Terminal Alternative (Preferred Alternative).

Sewer

Development of the West Terminal Alternative (Preferred Alternative) at SDIA would result in additional wastewater-generating facilities (e.g., sinks, toilets). Because the number of passengers traveling through SDIA would not be substantively affected by the West Terminal Alternative (Preferred Alternative), the addition of new facilities would not cause a substantive increase in wastewater generation at SDIA. The development of the North Area and/or the reuse of the former TDY property could, however, generate new uses at SDIA with an associated (but unquantified) increase in wastewater generation. This increase in wastewater generation would not be significant, however, because of the wastewater treatment capacity available to SDIA and because of the Airport's location near large SDMWWD wastewater collection pipelines and Pump Station No. 2. As a result, little-to-no off-Airport infrastructure would be required to convey increased wastewater flows from SDIA to the SDMWWD sewer system and the Point Loma Treatment Plant. Capacity impacts to SDMWWD wastewater treatment facilities would be offset through payment of applicable sewer capacity fees, to the extent required by law.

Development in accordance with the West Terminal Alternative (Preferred Alternative) could require the relocation of minor on-airport sewer lines, and it also would require measures to address the 96- and 114-inch-diameter interceptor sewers located on the former NTC parcel. These two sewer lines pass under the area proposed for additional aircraft parking apron to the west of the proposed Terminal 2 West expansion. As constructed, the sewer pipelines may not be able to accommodate the weight of large jet aircraft taxing or parking on the surface, directly above the pipelines. Accordingly, as part of project implementation, roughly 1,500 linear feet of these pipelines would be protected through concrete armoring or the use of other underground protective structures. (Relocation of these extremely large, gravity sewer lines would not be practical.) A section of the proposed Terminal 2 West expansion would also span these two pipelines. Terminal design and construction would accommodate the pipelines by providing structural support and/or by avoiding increased loads on the pipelines where they would pass under the terminal. The specific measures that would be used to protect the pipelines would be developed in coordination with the SDMWWD.

[27] San Diego County Water Authority News Release: Federal judge orders massive cut in water supply deliveries from the Bay Delta. August 31.

Based on the available treatment capacity, the proximity of SDIA to major wastewater collection pipelines and the measures that would be used to avoid damage to the large sewer pipelines under the former NTC parcel, the West Terminal Alternative (Preferred Alternative) would have a less-than-significant impact on sewers.

Aviation Fuel

The West Terminal Alternative (Preferred Alternative) would not cause a substantive change in the number of aircraft arriving or departing SDIA or affect those aircrafts' approach, departure or flight routes as described in Section 5.1, *Noise*. Accordingly, the West Terminal Alternative (Preferred Alternative) would not cause aircraft en route to or from SDIA to burn more fuel than under the No Action Alternative. Aircraft taxiing would be affected by the Proposed Action (Preferred Alternative) because more airfield would be available for RON and hold positions and there would be more gates. In general, the provision of new gates would require less movement of aircraft at SDIA than under a No Action Alternative, because airlines would have less (or no) need to "shuffle" their planes in order to deal with a shortage of available gates. Thus, the new gates might nominally reduce the amount of aviation fuel burned while taxiing. In summary, the West Terminal Alternative (Preferred Alternative) would have elements that might increase or decrease aviation fuel consumption at SDIA, but it would not significantly affect the ability of the existing aviation fuel system to service aircraft at the Airport.

The West Terminal Alternative (Preferred Alternative) would not directly impact and/or require the relocation of existing aviation fuel lines or related facilities at SDIA.

5.15.3 East Terminal Alternative (with and without Parking Structure)

Electrical Power

The potential for direct impacts to utility lines would be different due to the different locations of the East Terminal Alternative. Under this alternative, there would be less aircraft parking apron on the former NTC parcel west of Terminal 2 West, requiring that only roughly 1,000 feet of the large sewer pipelines be given protection/structural support to accommodate the aircraft parked/taxiing above them.

Natural Gas

The new unit terminal would require the relocation of an on-airport eight-inch-diameter water pipeline and potentially the existing aviation fuel dispensing facility. The relocation of these on-airport utilities that serve only SDIA would be accommodated with only minor disruptions in service and would not represent a significant utility impact.

All other impacts to utilities, energy supply, and natural resources under the East Terminal Alternative would be similar to those described under the West Terminal Alternative (with and without Parking Structure), and are less than significant for the same reasons as discussed in Section 5.15.3, *Summary of Impacts*.

5.15.4 No Action Alternative

With the No Action alternative, existing utilities, energy supply, or natural resources would not be extended and/or relocated; therefore, there would be no disruption to any of the services on or off site.

5.15.5 Summary of Impacts

None of the alternatives would be expected to measurably change the amount of energy required for stationary facilities. Additionally, it is not anticipated that the alternatives would increase the net distances traveled by vehicles or aircraft. Therefore, neither alternative would result in additional energy consumption

No unusual materials or those in short supply are to be used as a result of the construction of the West Terminal Alternative (Preferred Alternative) or the East Terminal Alternative.

It is thus concluded that neither the West Terminal Alternative (Preferred Alternative) nor the East Terminal Alternative would measurably affect the local supplies of energy or natural resources.

Additionally, it not anticipated that either alternative would result in energy demand or natural resource consumption that would exceed supplies.

5.15.6 Mitigation Measures

Implementation of the Proposed Action would include coordination with the affected utility providers/service system operators with regard to extending services and/or relocating utility lines. Similarly, SDCRAA would pay necessary engineering or facility expansion fees to affected service providers (e.g., SDG&E reengineering fees). These measures are considered to be elements of the Proposed Action and not mitigation. Because the Proposed Action would not generate significant impacts, no utility or service system mitigation is required.

5.16 Light Emissions and Visual Impacts

The primary sources of light emissions from airports are the FAA required lighting for security, obstruction clearance, and navigation. An analysis of the impact of light emissions on the surrounding environment is required when proposed projects include the introduction of new lighting that may affect residential or other sensitive land uses.

Airport improvement activities involving potential disruption of the natural environment or aesthetic integrity of the area or any activities that may affect sensitive locations such as parks, historic sites, or other public use areas are relevant visually.

5.16.1 Light Emissions

5.16.1.1 Methodology

The purpose of this section is to analyze potential project impacts from the Proposed Action. Analysis in this section is based upon site reconnaissance, aerial photographs, and preliminary schematic designs.

The potential light emissions and impacts of the proposed build alternatives were determined by evaluating the current facility site plan and observing current airport light sources (i.e., parking lots, roadways, terminals, cargo areas), surveying and documenting lighting conditions and effects on sensitive receptors, and assessing future lighting effects based on the proposed site plans. Given the absence of precise development plans at this point in the planning process, conclusions regarding impacts take into account offsetting effects associated with existing airport commitments to the community and adherence to current airport lighting guidelines.

5.16.1.2 West Terminal Alternative (with and without Parking Structure)

Light and glare associated with the SDIA project site is presently generated by buildings and exterior sources to protect and secure people, property and the air transportation system. Implementation of the West Terminal Alternative (with and without Parking Structure) would increase the size of terminal facilities, aircraft parking, apron, aircraft taxilane, surface and structured parking and vehicle circulation, as well as reconfigure airfield, roadways, and parking facilities. Increased building and exterior sources would result in greater amounts of light emanating from interior and exterior sources. Inclusion of the following improvements as project components would reduce impacts to a less than significant level.

- The light fixtures specified for the Project design must comply with the standard of the Illuminating Engineering Society for full cutoff capability.
- Exterior lighting shall be designed and located as to avoid intrusive effect on runway operations, so as not to result in an air safety hazard. Lighting fixtures shall use shielding, if necessary, to prevent spill lighting on adjacent off-site uses.

5.16.1.3 East Terminal Alternative (with and without Parking Structure)

Light and glare associated with the SDIA project site is presently generated by buildings and exterior sources to protect and secure people, property and the air transportation system. Implementation of the East Terminal Alternative would increase the size of terminal facilities, aircraft parking, apron, aircraft taxilane, surface and structured parking and vehicle circulation, as well as reconfigure airfield, roadways and parking facilities. Increased building and exterior sources would result in greater amounts of light emanating from interior and exterior sources. Inclusion of the following improvements as project components would reduce impacts to a less than significant level.

- The light fixtures specified for the Project design must comply with the standard of the Illuminating Engineering Society for full cutoff capability.
- Exterior lighting shall be designed and located as to avoid intrusive effect on runway operations, so as not to result in an air safety hazard. Lighting fixtures shall use shielding, if necessary, to prevent spill lighting on adjacent off-site uses.

5.16.1.4 No Action Alternative

The No Action Alternative would not result in any modifications to SDIA facilities; therefore, there would be no light emissions impacts associated with this alternative.

5.16.2 Visual Impacts

5.16.2.1 Methodology

The purpose of this section is to analyze the project area's potential project impacts on its aesthetic character and the aesthetic character of the surrounding areas as a result of the implementation of the West Terminal Alternative (with and without Parking Structure) and its alternatives. The approach to analyzing potential visual impacts to aesthetic resources for each alternative includes: first, a review of the regulatory documents that govern the project area in regards to aesthetic resources; second, a review of the significance criteria that was used to evaluate potential impacts; third, a description of the environmental setting, both on-site, as well as the surrounding area; fourth a description of all three alternatives in terms of potential aesthetic impacts and the relevant plans and policies that regulate land use, both on-site and in the surrounding areas; fifth, potential construction impacts that could occur during construction of the alternatives; and lastly a discussion of cumulative potential impacts, mitigation measures, and the level of significance of the potential impacts after mitigation measures for each alternative.

This analysis is based on a review of the regulatory documents governing the project area and the areas adjacent to it. Additionally, the analysis included: 1) site reconnaissance of the project area and the surrounding communities, 2) review of aerial photographs, 3) identification and documentation of key views, and 4) review of the preliminary designs and project descriptions of the alternatives provided by SDCRAA. More specifically, in regards to views, consideration and assessment was given to defining public scenic resources, identifying major viewer groups, and selecting key views.

There are several planning areas located near or adjacent to SDIA that set policies within their own areas specific to aesthetic views of the Bay and the downtown area. Policies in the community plans that relate to aesthetics follow providing a description of the design policies from the community plans that form the basis for determining how aesthetics would impact the project.

5.16.2.2 Related Community Plans and Planning Areas

There are several planning areas located near or adjacent to SDIA that set policies within their own areas specific to aesthetic views of the Bay and the downtown area. Policies in the community plans that relate to aesthetics are discussed below in two categories: urban design guidelines and view corridor preservation. The discussion of urban design guidelines focuses on the policies that communities have in place that relate to the design of development near SDIA. The discussion of view corridor preservation concentrates on policies that identify view corridors and measures to preserve them.

Port Master Plan (PMP)

The Port Master Plan (PMP) is the land use document governing the land and water development within the Port District's jurisdiction. However, in January 2003, the San Diego Regional Airport Authority Act (SDCRAA Act) became effective. The SDCRAA Act grants to SDCRAA all land use and design related authority and jurisdiction over lands within the original SDIA leasehold, along with any other lands that might be acquired adjacent to the existing airport property and necessary to operate the airport. Although the Airport property, including the more recently acquired General Dynamics and Teledyne Ryan parcels, are still depicted in the certified Port Master Plan (PMP), the PMP and its associated design guidelines are no longer applicable to property now under the planning and design auspices of SDCRAA.

The Unified Port of San Diego's Port Master Plan (February 2004) still guides the land use designation and policies for lands adjacent to or adjoining SDIA. The Port Master Plan establishes precise plans for each of the planning districts located within the project area. The planning district most affected by the Proposed Action is Planning District 2 (Harbor Island/Lindbergh Field). This planning district identifies two scenic vistas that include:

- Views from Spanish Landing out toward the Bay, and
- Views from West and East Harbor Island to the Bay.

Both of these designated view areas are generally located to the south of SDIA and would not be affected by the Proposed Action improvements.

Section II Planning Goals of the Port Master Plan identifies general goals that are to be attained by implementing the policies set forth in the Precise Plans. These goals apply to the entire district and address the design and treatment of new development in the area under the Districts jurisdiction. The most relevant goals that address aesthetic issues include the following:

- "Goal VIII: The Port District will enhance and maintain the bay and tidelands as an attractive physical and biological entity."
- "Views should be enhanced through view corridors, the preservation of panoramas, accentuation of vistas, and shielding of the incongruous and inconsistent."
- "Establish guidelines and standards facilitating the retention and development of an aesthetically pleasing tideland environment free of noxious odors, excessive noise, and hazards to the health and welfare of the people of California."
- "Goal IX: The Port District will insure physical access to the bay except as necessary to provide for the safety and security, or to avoid interference with waterfront activities."
- "Provide 'windows to the water' at frequent and convenient locations around the entire periphery of the bay with public right-of-way, automobile parking and other appropriate facilities." It should be noted that these planning goals of the Port Master Plan apply only to the lands under the District's jurisdiction and do not apply to SDCRAA or SDIA.

California Coastal Act

Under the provisions of the Coastal Act, development projects located in the coastal zone must receive an additional level of review for potential impacts to coastal resources. Prior to the formation of SDCRAA, SDIA was governed by and considered part of the Port of San Diego and was included in the Port's certified PMP. Since January 1, 2003, however, the Port's PMP no longer serves as the coastal planning document for SDIA. Section 170060(c) of the SDCRAA Act states:

> The Authority shall be responsible for making any necessary application to the California Coastal Commission pursuant to the California Coastal Act of 1976 [Division 20 (commencing with Section 3000) of the Public Resources Code) and to other agencies in accordance with other applicable laws in effect on the effective date of the Act that added this section for improvements upon coastal lands under the control of the Authority through a lease.

Since the SDCRAA inception, all coastal permitting has been initiated by SDCRAA staff directly with the Coastal Commission. Since SDIA is no longer part of the Port, the standard of review for all development projects is Chapter 3 of the Act. The policies of the PMP and Chapter 8 of the Act are no longer applicable.

The California Coastal Act-Section 30251 Scenic and Visual Quality is the section that is applicable for reviewing the visual aesthetics of the Proposed Action. Section 30251 states:

- The scenic and visual qualities of the coastal areas should be protected as a public resource.
- Proposed projects in the Coastal Zone shall be sited and designed to protect views to and along the ocean, scenic coastal areas, to minimize the alteration of natural landforms, to be visually in character of the surrounding area and, wherever possible to restore and enhance the visual quality in visually degraded areas.

City of San Diego Community Plans and Policies

This section describes the following City of San Diego Plans related to the aesthetic and visual resources of the SDIA project site and the surrounding areas.

San Diego Downtown Community Plan

This section describes plans and policies related to aesthetic and visual resources for the southeastern area surrounding SDIA. More specifically, the review of policies about aesthetics includes such elements as neighborhood character, landform, and light and glare.

The San Diego Downtown Community Plan (SDDCP) and its two redevelopment plans (Horton Plaza Redevelopment Plan and the Centre City Redevelopment Plan) govern a project area that is immediately southeast of SDIA. The San Diego Downtown Community Planning Area is bounded by Laurel Street and Interstate 5 at its north side, Interstate 5 at its east side, and San Diego Bay at its south and west side. The SDDCP project area is 1,445 acres in size and is divided into eight urban, high-density, mixed-use districts. The district that is most relevant to this project is the Little Italy District, which is immediately adjacent to southeast corner of SDIA. It is a medium density residential and commercial neighborhood with mostly low- to mid-rise buildings.

The aesthetic resources objectives for the SDDCP Area are best expressed by the following statement from the SDDCP: "*Downtown has a magnificent setting, occupying a strategic location between the sparkling San Diego Bay and the green expanse of Balboa Park. The Community Plan capitalizes on these unique assets, creating an outdoor-focused, Mediterranean ambiance that emphasizes vitality and street life, and gathering places that reflect San Diego's natural setting*." More specifically, policies regarding aesthetic resources for the San Diego Downtown area bordering SDIA include:

- "*Restrict building heights as follows: throughout downtown, consistent with policies and regulations for airport operations established by the Federal Aviation Administration (FAA), the Airport Land Use Compatibility Plan (ALUCP), and the Airport Approach Overlay Zone.*"
- *"Work with the Port and the County to ensure a diversity of land uses along Harbor Drive."*
- *"Foster physical and visual linkages between downtown and surrounding neighborhoods, working together with adjacent communities."*
- *"Use airport-related development constraints as opportunities for unique land use and development patterns."*

Regarding visual resources, the SDDCP defines a general policy goal of "*protect[ing] public views of the San Diego Bay by establishing view corridors with appropriate development standards, and captur[ing] new public views where possible as waterfront sites are redeveloped.*" The Community Plan also has more specific policies directed towards view preservation that include the following:

- *"Protect public views of the water, and re-establish water views, in the corridors shown in Figure 5-1." This includes the views from Laurel Street towards the San Diego Bay."*
- *"Work with the Port to maintain open corridor to the water – that is, free of structures and landscaping that would restrict the views. Encourage the Port to create view corridors extending southward along Pacific Highway and Kettner Boulevard at such time that redevelopment of the Seaport Village site is undertaken."*
- *Preserve and create views by: Requiring all buildings to comply with view corridor stepbacks along existing streets and future view corridors to maintain visual and physical access to the Bay."*

Midway/Pacific Highway Corridor Community Plan

Urban Design Guidelines

The Midway/Pacific Highway Corridor Community Planning Area contains areas that are within the State Coastal Zone as defined by the California Coastal Act of 1976. As such, as part of the Midway/Pacific Highway Corridor Community Plan development process, it was required that a Local Coastal Program be developed and approved by the California Coastal Commission. Under the Local Coastal Program for the Midway/Pacific Highway Corridor Community Planning Area, the area within the Coastal Zone is subject to special coastal guidelines. Those that apply to this project include:

- *"Assure continuity and compatibility between the City and the Port District through the coordination of planning efforts."*

- *"Improve the quality of architectural styles and site design in and around the Coastal Zone Area."*
- *"Preserve and emphasize public views west and south to the waterfront."*
- "*Prevent the expansion or development of unsightly land use activities in the coastal strip."*

View Corridor Preservation

In regards to visual resources, the Midway/Pacific Highway Corridor Community Plan states the following policies:

- *"Commercial redevelopment projects located along Pacific Highway should not obstruct scenic vistas and/or should provide and maintain view corridors from all public right-of-ways."*
- *"Provide coastal and bayward view corridors through the community."*
- *"Application of the CPIOZ [Community Plan Implementation Overlay Zone] in conjunction with the [Commercial] C-1 zone will ensure maintenance of view corridors to the waterfront, incorporation of pedestrian-oriented features and landscaping of visible parking structures, while promoting airport-related uses."*

Peninsula Community Plan

Urban Design Guidelines

In regards to urban design and aesthetics, the Peninsula Community Plan contains policies that comply with the existing land uses and built conditions at the SDIA Project site.

View Corridor Preservation

In regards to visual resources, the Peninsula Community Plan describes major views in the area as those overlooking "the San Diego Bay, Downtown, Coronado, Mission Bay and Pacific Beach," and identifies "Preserv[ation] and enhance[ment] of significant views of the [San Diego] bay and ocean" as an objective. The Plan goes on to state, "Structures should be designed to protect views of Peninsula's natural scenic amenities, especially the ocean shoreline, and San Diego Bay."

Uptown Community Plan (February 2, 1988)

Urban Design Guidelines

In regards to urban design and aesthetics, the Uptown Community Plan contains policies that comply with the existing land uses and built conditions at the SDIA Project site.

View Corridor Preservation

In regard to visual resources, the Uptown Community Plan provides for the protection of public views of open space and water areas, particularly along the "western slopes" of the community.

North Bay Redevelopment Plan

A majority of the Midway/Pacific Highway community lies within the North Bay Redevelopment Project Area. A key development objective proposed in the 1999 amendment to the redevelopment plan is to create a Bay-to-Bay canal that would link the San Diego Bay to Mission Bay via the San Diego River. The north end of the San Diego Bay "Navy Boat Channel" is the point from San Diego Bay where the canal project enters from San Diego Bay. This channel is the western boundary of the SDIA project area.

The goal for the Bay-to-Bay amendment is for the development of the canal is to catalyze new development along its length and in the surrounding area. In April of 2004, San Diego City Council issued a directive to the Planning Department to remove the Bay-to-Bay concept from the Midway/Pacific Highway Corridor Community Plan and other related documents (i.e., North Bay Redevelopment Plan). The City of San Diego and the North Bay Redevelopment Project Area Committee commenced preparation of a Community Plan Amendment reflecting this directive. Currently, however, the City of San Diego is not moving forward on the amendment to remove the Bay-to-Bay canal and the 1999 amendment that includes the plan for the Bay-to-Bay canal remains existing policy.

Although unlikely, the City of San Diego could move forward with proposed development of the canal area and its associated open space and building development projects. If this were the case new projects proposed within the airport site affect aesthetic and visual resources for the proposed Bay-to-Bay canal plan.

The planned Bay-to-Bay link is located north of the SDIA Project Area, if implemented, would not be affected by the Proposed Action, with the exception of Navy Boat Channel portion of the canal at the canal's south entrance from San Diego Bay, which is currently controlled by the U.S. MCRD and the Federal Government.

NTC Precise Plan and Redevelopment Plan Area

Urban Design Guidelines

In regards to aesthetics and urban design guidelines, The NTC Precise Plan complies with the existing land uses and built conditions at the SDIA project site. The primary consideration outlined in the plan is the preservation of views to the waterfront and skyline by regulating building design in order to establish or maintain public view corridors. This would be achieved by, …"appropriate zoning, setbacks and design standards, including clustering of tall buildings, slender buildings, proper building orientation and floor area restriction and heights limits where necessary."

View Corridor Preservation

The NTC Precise Plan identifies several view corridors to scenic resources. Specifically these views are to the east towards the San Diego Bay "Navy Boat Channel." However, the views are intended to terminate on the east side of the channel with proposed screening. The screening is intended to block views to the development east of the channel.

In addition, off-site view corridors are identified in the Peninsula Community overlooking NTC.

Analysis Methodology

Because the FAA understands the subjectivity of defining visual impacts for the purposes of this analysis, visual impacts will be considered using aesthetics criteria for visual impact. Potential significant aesthetics impacts were evaluated based on the CEQA State Guidelines and the City of San Diego Environmental Analysis Section Significant Determination Guidelines for public policies regarding aesthetic/ urban design guidelines and visual resources, and the SANDAG "Impacts of Unconstrained Air Transportation Capacity on the San Diego Regional Economy" Report. Drawn from these documents is the evaluation criteria for the West Terminal Alternative (with and without Parking Structure) in regards to potential aesthetic and visual impacts and are as follows:

1) *"Substantially alter aesthetics in the area by:*
    - *Altering the natural or naturalized landform*
    - *Conflicting with adopted urban design and view preservation policies within the District*[28]
    - *Conflicting with related community plans*
    - *Altering lighting so as to create substantial glare at sensitive receptors"*
2) *"Severely contrast with the character of the surrounding neighborhood"*
3) *"Substantially block public views from designated open space, roads, or parks to visual landmarks or scenic vistas (Pacific Ocean, San Diego Bay, mountains or waterways) for a majority of viewers"*

In evaluating the potential impact of the Proposed Action on the quality of aesthetic resources, the analysis process begins with an evaluation of the potential for the SDIA Project to impact each of the key views presented in Section 5.16.2.2. The degree of potential impact at each key view is assessed by assigning low-, medium-, or high-value weighting factors to the three aesthetic impact categories: views,

[28] San Diego Association of Governments (SANDAG). Impacts of Unconstrained Air Transportation Capacity on the San Diego Regional Economy. 2001.

neighborhood character, and aesthetics. This approach is similar to the system used for many years by the Federal Highway Administration.[29] The characteristics of each weighting factor are described below.

- *"Low (1): Minor adverse change in views to scenic or visual resources, neighborhood character, or aesthetics resulting in a minor effect on the visual resource that would not generally be noted by the viewer because of the minor aspect of the change or distance from the site. Visual impacts would be considered less than significant and mitigation measures are not required."*
- *"Medium (2): Moderate adverse change in the views to scenic or visual resources, neighborhood character, or aesthetics resulting in an effect that some viewers would consider to be significant while others might not. Mitigation measures might be necessary to improve the visual quality of the area and create a setting where the visual impact would be considered less than significant."*
- *"High (3): Major adverse change to the views to scenic or visual resources, neighborhood character, or aesthetics resulting in an effect that the majority of the viewers would consider to be significant. Mitigation measures are needed to alleviate the problem. Without mitigation, visual impact is considered significant."*

The aesthetics impact analysis described below evaluates the potential aesthetic and visual changes, as well as potentially significant environmental impacts associated with the implementation of the Proposed Action and its alternatives.

This aesthetic impact analysis reviews aesthetics and includes a review of: Neighborhood Character, Landform, and Light and Glare. Also considered are Related Community Plans and Redevelopment Plans areas.

In regards to visual resources, several significant long and short–range views were considered for the sake of this analysis. These key view locations represent typical viewpoints of the proposed terminals and taxiway improvements. A total of 29 key view locations were identified. These viewpoints are located at residential neighborhoods, recreational facilities, and public roadways~~,~~ including I-5 and Pacific Highway. **Figure 5.16-1** identifies the location of these key views. Each of these views is depicted, along with a brief description in **Figures 5.16-2 through 5.16-30**.

The following steps were conducted for this visual resources assessment.

1) Define the existing conditions of the visual environment of the Proposed Action area.
2) Identify major viewer groups that would view the project area.
3) Select key views for the visual assessment based on representative viewer groups, public viewing locations, and public policies.
4) Document the type and degree of visual changes to the key views based on the significance criteria.
5) Select significant key views requiring further analysis and representation.
6) Assess visual impacts and determine level of significance.
7) Assess visual impacts during the course of construction.
8) Generate design recommendations to mitigate significant visual impacts

The weighting factor system used to rate the significance of the potential impacts to key views, is explained in Section 5.16.1.2.

Table 5.16-1 lists the key views presented and the weighting valuation for each using the system above.

[29] Federal Highway Administration (FHWA). *Aesthetics and Visual Quality Guidance Information.* August 18, 1986.

Table 5.16-1
Visual Impact Assessment Summary

Key Views	Potential Visual Change				Weighting Valuation	Significant Impact
	Views	Neighborhood Character	Aesthetics	Total		
1	2	1	1	4	Medium	No
2	1	1	1	3	Low	No
3	1	1	1	3	Low	No
4	1	1	1	3	Low	No
5	1	1	1	3	Low	No
6	1	1	1	3	Low	No
7	2	1	1	4	Medium	No
8	2	1	1	4	Medium	No
9	1	1	1	3	Low	No
10	1	1	1	3	Low	No
11	1	1	1	3	Low	No
12	2	1	1	4	Medium	No
13	2	1	1	4	Medium	No
14	1	1	1	3	Low	No
15	1	1	1	3	Low	No
16	1	1	1	3	Low	No
17	1	1	1	3	Low	No
18	1	1	1	3	Low	No
19	1	1	1	3	Low	No
20	1	2	1	4	Medium	No
21	1	1	1	3	Low	No
22	1	1	1	3	Low	No
23	1	1	1	3	Low	No
24	1	1	1	3	Low	No
25	1	1	1	3	Low	No
26	2	1	1	4	Medium	No
27	2	1	1	4	Medium	No
28	1	1	1	3	Low	No
29	1	1	1	3	Low	No

Low: 1 to 3 = ”Low Impact” and not considered significant
Medium: 4 to 6 = ”Medium Impact” and not considered significant
High: 7 to 9 = ”High Impact” and considered significant

The potential impacts for surrounding areas associated with these two components are discussed in the following section and include: 1) an analysis of aesthetic resources such as neighborhood character, land form and light and glare, 2) a visual resources analysis and 3) a review of compliance with adjacent land use plans.

5.16.2.3 West Terminal Alternative (with Parking Structure) (Preferred Alternative)

This section includes an analysis of the possible impacts to aesthetic and visual resources for the areas surrounding the West Terminal Alternative (with Parking Structure) (Preferred Alternative), as well as how this proposed project conforms to adjacent land use plans and policies.

Surrounding Area: Aesthetic Resources

In regards to aesthetic resources, the impact of the West Terminal Alternative (with Parking Structure) (Preferred Alternative) on aesthetics is based on the degree to which it maintains: the character of the neighborhood, existing landforms, and minimizes light and glare. Each of these issues is discussed below.

Neighborhood Character

The current character of the SDIA Project Area Lindbergh Field Planning Sub-area is represented by runways, taxiways, aircraft parking aprons, an airport traffic control tower, passenger terminals, and public parking.

The West Terminal Alternative (with Parking Structure) (Preferred Alternative), would not conflict with the current character of the SDIA Project area, because proposed improvements such as the addition and expansion of existing airport landside or airside improvements are planned to be consistent with the existing design of current development on site.

Additionally, the West Terminal Alternative (with Parking Structure) (Preferred Alternative) would not have a significant impact on the character of the surrounding neighborhoods. The features of the West Terminal Alternative (with Parking Structure) (Preferred Alternative) do not encroach onto adjacent communities and would not significantly impact the character of the neighborhoods that surround the project area the airport buildings and operations would have the same height, scale, and similar architectural style of the existing facilities.

Therefore, the West Terminal Alternative (with Parking Structure) (Preferred Alternative), would not have a significant impact on neighborhood character.

Landform

Impacts related to the landform changes resulting from the West Terminal Alternative (with Parking Structure) (Preferred Alternative)would be less than significant due to the fact that the existing site is relatively level. A grade change is proposed for the access from North Harbor Drive at McCain Drive. It is anticipated that grading at the site would be minimal and would have no significant impacts on the aesthetics of this area. However, as more site specific projects are proposed, further analysis may be needed to address potential aesthetic impacts.

Light and Glare

The addition to Terminal 2 West of 10 new gates would increase overall nighttime lighting. Proposed lighting for the Terminal 2 West expansion would be similar to the existing terminal and tarmac lighting near Terminal 2. It is anticipated that these light fixtures would be shielded to direct the light downward to the apron area. This would minimize light impacts from addition of new lighting, and would not have a significant impact in terms of glare on the neighboring residential communities. Therefore, the West Terminal Alternative (Preferred Alternative with Parking Structure) would not result in significant negative impacts related to lighting and glare. Further discussion on lighting is provided in Section 5.16.1 *Light Emissions*.

Surrounding Area - Visual Resources

Using the evaluation process described in Section 5.16.2.1, twenty-nine (29) key views were identified for evaluation in terms of the visual impact based on the features described in the West Terminal Alternative (Preferred Alternative). The results of the evaluation are presented in Table 5.16-1. As this table illustrates, most views were found to have a Low rating, while eight (8) views were determined to have a rating of Medium and none of the views received a High rating. The following is a detailed description and analysis of the key views most affected by the West Terminal Alternative (with Parking Structure),

which are Key Views 1, 2, and 23: Liberty Station Open Space Park, Key Views 3 and 4: Former NTC Site (currently used for surface parking), Key Views 5 and 6: North Harbor Drive and Spanish Landing, Key Views 7 and 8: Terminal 2 Interior Public Spaces, Key View 12: Pacific Highway Southbound I-5 On Ramp, Key View 20: Sheraton Hotel & Marina West, and Key Views 26 and 27: Marine Corps Recruit Depot.

Key Views, 1, 2 and 23 – Liberty Station Open Space Park:

These view sites are located at the Liberty Open Space Park that flanks the San Diego Bay "Navy Boat Channel" looking east. These three (3) views would be of one of the areas closest to the improvements associated with the West Terminal Alternative (with Parking Structure) (Preferred Alternative) and, therefore, would potentially be the most affected. Key Views 1, 2, and 23 are taken from the proposed public park located at Liberty Station (a mixed-use community of residential, office and light industrial uses). The view looks directly towards improvements to Terminal 2 West. Views to scenic resources of the San Diego Bay and the downtown skyline from this location are to the east / southeast and are currently not visible, except for the view of the downtown skyline to the north of Terminal 2 West. As illustrated in the photograph, the existing views of these scenic resources would not be impacted by the proposed because future improvements of the West Terminal Alternative (with Parking Structure) are proposed to be similar in height and scale to the existing facilities and the view resource to the downtown skyline would be minimally affected by the alternative.

It was initially determined that these views may have an impact value of "Medium." However, after further review and study, it was determined that no significant impacts to the key views occur at this location.

Key View 3 and 4: Former NTC Site/(currently used for Surface Parking)

These view sites are located immediately adjacent to the west side of the SDIA project area and are currently used as surface parking lots and are looking east.

The expansion of Terminal 2 West and the addition of a five (5) story parking structure would have minimal impact on the visual resources from this site because views from this site looking southeast toward the San Diego Bay and the downtown skyline are already obscured by the SDIA access ramps, the terminal structures, the U.S. Coast Guard Station buildings, hotels, and other commercial areas on Harbor Island. The Terminal 2 West expansion would extend towards the viewer at this site, and would have approximately the same height as the existing structures of the SDIA Project Area. The existing views from this site to the east are also of distant residential communities in the Uptown Community Plan Area. Views from this location to San Diego Bay, Point Loma Peninsula, Pacific Ocean, or downtown skyline would be minimally impaired due to the similar height of the proposed structure to those that already exist and would be blocked by existing structures as mentioned previously.

It was initially determined that these views may have an impact value of "Low." After further review and study, it was confirmed that the visual impact is low and no significant impacts to the key views occur at this location.

Key View 5 and 6: North Harbor Drive and Spanish Landing Park

These view sites are located along the west end of North Harbor Drive and the Spanish Landing Park and are looking north towards the SDIA Project Area. There are no existing views of scenic resources from this point along North Harbor Drive towards the SDIA project area. Therefore, the expansion of Terminal 2 West and a five (5) story parking structure would not have significant impacts.

It was initially determine that these views may have an impact value of "Low." After further review and study it was confirmed that the visual impact is low and no significant impacts to the key views occur at this location.

Key View 7 and 8: Terminal 2 Interior Public Spaces

These view sites are located within the public spaces of Terminal 2 W and 2 E looking south towards San Diego Bay. Several large windows located in Terminal 2 face south and could allow views to these local scenic resources. However, the views from these locations are completely obstructed by parked cars, landscaping, airport signage, building supports and parking lot lighting. Although small "slivers" of blue water from the San Diego Bay can be seen at certain locations of Terminal 2, it could not be considered of sufficient size to be considered a significant view. The development of a proposed 5-story parking

structure is not considered a significant impact since visual resources are already obstructed by existing buildings, circulation ramps, and trees.

It was initially determined that this view location may have an impact value of "Medium. However, after further review and study it was determined that no significant impacts to the key views occur at this location.

Key View 12: Pacific Highway Southbound I-5 On-ramp

Key View 12 is located on the Pacific Highway raised southbound on-ramp to Interstate 5 just north of Washington Street. From this elevated vantage point, the viewer is looking south/southwest towards the North Area of the SDIA Project Area and also towards the downtown skyline, with a small portion of the San Diego Bay visible. Per the West Terminal Alternative (Preferred Alternative) this north eastern part of the SDIA Project Area is planned to include: a new access road, new parking areas, a new aviation facility with terminals, hangers and apron, and to Taxiway D. New terminal heights are not anticipated at this time to be significantly higher than existing on-site structures such as Jimsair. Based on the proposed land uses and the proposed heights of the planned structures, the project would not have a significant visual impact because his view is elevated above the SDIA Project Area and would not be blocked. However, as more site-specific projects are proposed, further analysis may be needed to address potential visual impacts from this location.

Key View 20: Sheraton Hotel & Marina West

Key View 20 is located on north side of Harbor Island at the north side of the Sheraton Hotel and Marina West. From this vantage point, the viewer is looking north/north west towards the south side of the West Terminal Alternative. Here, the site is intended for ground transportation use and a 5-story parking structure in front of the Terminal 2 East building. The view of the five (5) story parking structure identified in the West Terminal Alternative would be compatible with typical airport support facility and would not be considered out of visual character with the surrounding area.

It was initially determined that this view location may have an impact value of "Medium." However, after further review and study it was determined that no significant impacts to the key views occur at this location since views towards the SDIA Project Area are mostly blocked by mature trees located at the Spanish Landing Park.

Key Views 26 and 27: Marine Corps Recruit Depot

Key Views 26 and 27 are two of the six views that are located on the Marine Corps Recruit Depot (MCRD). From this vantage point, the viewer is looking south (Key View 26)/southwest (Key View 27) toward the north side of Terminal 2 West from Midway Avenue on the MCRD base. There is no screening of the views toward the proposed improvements to Terminal 2 West, and the improvements to airport facilities will be visible from this vantage point. However, as illustrated in the photograph, the existing views of these scenic resources would not be impacted by the West Terminal Alternative because future improvements of the West Terminal Alternative (with Parking Structure) are proposed to be similar in height and scale to the existing facilities and the view resource to the downtown skyline would be minimally affected by the alternative.

In summary, there would be no significant visual impact on the 13 key views identified and studied for the West Terminal Alternative (with Parking Structure) (Preferred Alternative).

Surrounding Area's Land Use Plans and Policies – Aesthetic Impact Analysis

The West Terminal Alternative (Preferred Plan with Parking Structure) was analyzed with respect to each of the aesthetic / urban design and view corridor guidelines described in Section 5.16.2.1 for each of the potentially impacted CPAs. This section reviews the West Terminal Alternative (with Parking Structure), for compliance with plans and policies governing the surrounding area as described earlier in Section 5.16.2.1 and include: 1) the Port Master Plan, 2) The MCRD Base Exterior Architecture Plan and 3) the City of San Diego's Community and Redevelopment Plans.

Port Master Plan

The Port Master Plan outlines general goals addressing the design of new development.[30] The goals relevant to this project deal with view preservation. The above section about visual resources and key view demonstrates that the West Terminal Alternative (Preferred Plan with Parking Structure) would not have a significant impact on existing views of the Bay or the downtown area from Port Tidelands. Therefore, the Proposed Action would not have a significant impact on the adjacent land governed by the Port Master Plan.

While the Port Master Plan is not responsible for the urban design guidelines for SDIA, it does outline general goals that address the design of new development for property within its own jurisdiction. The primary goals of the PMP concern the preservation of views, access and use of the bay, and maintaining the bay and tidelands as an attractive physical and biological entity. The West Terminal Alternative (Preferred Plan with Parking Structure) would not prohibit any of these goals from being implemented. As such, the West Terminal Alternative (with Parking Structure) would not have a significant impact on adjacent lands governed by the Port Master Plan.

California Coastal Act

The primary goals of Section 30251 of the California Coastal Act is to preserve scenic resources along the coastal areas, minimize land form alteration and to be visually compatible with the character with the character of the surrounding area. As discussed earlier in this section, there would be no significant impacts to key views, no significant land form alteration and the West Terminal Alternative (Preferred Plan with Parking Structure) is in keeping with the existing character of the area which is currently an airport facility. Therefore, the West Terminal Alternative (Preferred Plan with Parking Structure) would not result in significant impacts related to these guidelines.

MCRD Base Exterior Architecture Plan

In regard to aesthetic and visual resources, the MCRD BEAP only addresses visual resources. More specifically, visual and noise buffers between MCRD San Diego and SDIA are proposed at MCRD's BEAP if new projects at MCRD are constructed. MCRD San Diego has identified the view down Belleau Avenue, looking towards the downtown skyline, as an asset. This view has the possibility of being blocked by future site-specific projects of the West Terminal Alternative (Preferred Plan with Parking Structure). However, due to the fact that this is a view from a single location that generally is not accessible to the public, it was not rated for visual impact. Under the significance criteria adopted in this report, only public views are analyzed for visual impact.

City of San Diego Community Plans and Redevelopment Plans

The West Terminal Alternative (with Parking Structure), was analyzed in relation to the criteria established earlier in this chapter as described in Section 5.16.2.1 for aesthetic and visual resources. In this section the Significance Criteria for each of the potentially impacted Community Plan Areas and Redevelopment Areas is analyzed for possible impacts to aesthetic and visual resources.

In regards to aesthetic impacts such as neighborhood character, land form, light and glare, the West Terminal Alternative (with Parking Structure) is similar to the existing development at the SDIA Project Area and land uses are consistent with the SDIA ALUCP. Therefore, the Proposed Action would be in conformance with these plans and would not result in significant impacts related to these plans and policies about aesthetic resources.

The key views are compatible with the view corridor descriptions within the San Diego Downtown Community Plan, the Uptown Community Plan, Midway Pacific Highway Corridor Community Plan, the Peninsula Community Plan and their related Redevelopment Plan Areas. These visual resources as defined in these plans are not significantly impacted.

5.16.2.4 West Terminal Alternative (without Parking Structure)

Since this Plan proposes less development than the West Terminal Alternative (with Parking Structure) (Preferred Alternative), it would have less impacts and would not be of significant impact in terms of

[30] San Diego Unified Port District (District). *San Diego Unified Port District, Port Master Plan.* Revised July 2005. <http://www.portofsandiego.org/>

aesthetic and visual resources. The analysis that precedes this section for the West Terminal Alternative (with Parking Structure) (Preferred Alternative) substantially conforms to the West Terminal Alternative (without Parking Structure).

5.16.2.5 East Terminal Alternative (with Parking Structure)

This section includes an analysis of the possible impacts to aesthetic and visual resources for the areas surrounding the East Terminal Alternative, as well as how this proposed project conforms to adjacent land use plans and policies.

Surrounding Area - Aesthetic Resources

In regard to aesthetic resources, the impact of the East Terminal Alternative on aesthetics is based on the degree to which it maintains: the character of the neighborhood, existing landforms, minimizes lighting and glare. Each of these issues is discussed below.

Neighborhood Character

The existing character of the SDIA Project Area is defined by the aesthetic qualities of the existing terminals, runways, taxiways, parking areas, and other related airport facilities. Therefore, the addition and expansion of existing airport landside or airside improvements would not have a significant impact on the character of the area.

In addition, the features of the East Terminal Alternative would not significantly impact the character of the neighborhoods that surround the project area. The surrounding communities currently have views of the airport buildings and operations. The expansion would have the same height, scale, and similar architectural style of the existing facilities, and would not create improvements that are out of character with current land uses, or views.

Therefore, the East Terminal Alternative would not have a significant impact on neighborhood character.

Landform

Impacts related to the landform changes resulting from the East Terminal Alternative would be less than significant due to the fact that the existing site is relatively level. Changes to the landform in the area between Terminal 1 and the existing Commuter Terminal would not be significant. Therefore, impacts due to the East Terminal Alternative would not be significant relative to existing or future conditions proposed at the SDIA Project Area. It is anticipated that grading at the site would be minimal and would have no significant impacts on the aesthetics of this area. However, as more site specific projects are proposed, further analysis may be needed to address potential aesthetic impacts.

Light and Glare

The addition to Terminal 1 of 10 new gates would increase overall nighttime lighting. Proposed lighting for the Terminal 1 expansion would be similar to the existing terminal and tarmac lighting near Terminal 1. It is anticipated that these light fixtures would be shielded to direct the light downward to the apron area. This would minimize light impacts from addition of new lighting and would not have a significant impact in terms of glare on the neighboring residential communities. Therefore, the East Terminal Alternative would not result in significant negative impacts related to lighting and glare. Further discussion on lighting is provided in Section 5.16.1, *Light Emissions*.

Surrounding Area - Visual Resources

Using the evaluation process described in Section 5.16.2.1, *Aesthetic and Visual Resources Impact Analysis*, the twenty-nine (29) key views were identified for evaluation in terms of the visual impact based on the features described in the project alternatives. The results of the evaluation are presented in Table 5.16-1. As this table illustrates, most views were found to have a Low rating, while eight (8) views were determined to have a rating of Medium, and none of the views received a High rating. The following is a detailed description and analysis of the key views most affected by the East Terminal Alternative, which are Key Views 1, 2, and 23: Liberty Station Open Space Park, Key Views 3 and 4: Former NTC Site (currently used for surface parking), Key Views: North Harbor Drive and Spanish Landing, Key Views 7 and 8: Terminal 2 Interior Public Spaces, Key View 12: Pacific Highway Southbound I-5 On Ramp, and Key View 20: Sheraton Hotel & Marina West.

Key Views 1, 2 and 23 – Liberty Station Open Space Park:

Key Views 1, 2, and 23 are taken from the proposed public park located at Liberty Station (a mixed-use community of residential, office and light industrial uses). The view direction looks directly toward the existing Terminal 2 West. However, views to the proposed East Terminal (adjacent to the existing Commuter Terminal) and parking structure would not be visible from this location. Views to scenic resources of the San Diego Bay and the downtown skyline from this location are to the east / southeast and are not visible from this site because of view blockage from the existing terminals, and other elements to the south of the SDIA Project Area. As illustrated in the photograph, the existing views of these scenic resources would not be impacted by the proposed improvements. Future improvements are proposed to be of similar height and scale as the existing facilities. As such, these improvements would not be seen from this location either.

Initial determination of was that Views 1, 2, and 23 may have an impact value of "Medium." However, after further review and study it was determined that no significant impacts to these key views occur at these locations.

Key View 3 and 4: Former NTC Site (currently used for surface parking)

These view sites are located immediately adjacent to the west side of the SDIA project area and are currently used as surface parking lots and are looking east.

The proposed eastern expansion of Terminal 1 and the new Terminal to be located between Terminal 1 and the Commuter Terminal would have no impact on the scenic views from this site since the existing Terminal 2 TW currently blocks those views. The proposed five (5) story parking structure would not have a significant impact on the visual resources of this site since it is far in the distance and in character with existing structure in terms of height, massing, scale and architectural style. Additionally other elements impede this view currently such as the circulation ramp to the SDIA Project site, and the buildings located along the south side of North Harbor Drive.

It was initially determined that these views may have an impact value of "Low." After further review and study it was confirmed that the visual impact is low and no significant impacts to the key views occur at this location.

Key View 5 and 6: North Harbor Drive and Spanish Landing

These view sites are located along the west end of North Harbor Drive and the Spanish Landing Park and are looking north towards the SDIA Project Area. There are no existing views of scenic resources from this point along North Harbor Drive towards the SDIA project area. Therefore, the expansion to west side of Terminal 2 West and new Terminal proposed to be placed between Terminal 1 and the Commuter Terminal, as well as a five (5) story parking structure would not have significant visual impacts. Additionally the views towards the SDIA Project Area would be similar in terms of their visual quality since the proposed project would be similar in architectural character.

It was initially determined that these views may have an impact value of "Low." After further review and study it was confirmed that the visual impact is low and no significant impacts to the key views occurs at this location.

Key View 9: North Harbor Drive and Pedestrian Promenade

This view is taken from the Harbor Police Station Site looking north towards the SDIA Project Area. There are no existing views of scenic resources from this point along North Harbor Drive towards the proposed improvements because an existing elevated circulation roadway ramp from the SDIA to Harbor Drive blocks this view. Therefore, the implementation of an expansion to Terminal 2 West, the proposed terminal building east of Terminal 1 or the proposed five (5) story parking structure would not have any significant impacts. Views of the Bay and the downtown skyline from this location are to the east and south of North Harbor Drive and, therefore, are not a factor.

It was initially determined that this view may have an impact value of "Low." After further review and study it was confirmed that the visual impact is low and no significant impacts to the key view occur at this location.

Key View 12: Pacific Highway Southbound I-5 On-ramp

Key View 12 is located on the elevated Pacific Highway southbound on-ramp to Interstate 5 just north of Washington Street. From this raised vantage point, the viewer is looking south/southwest towards the north side of the expansion for the East Terminal and the Terminal and other improvements at the north east side of the SDIA Project Area. Also, there views from this site towards the downtown skyline, with a small portion of the San Diego Bay visible. Because this view is taken from an elevated roadway on-ramp that would be above the height of proposed improvements–significant views would not be blocked and would not have a significant visual impact.

In summary, there would be no significant visual impact on the nine (9) key views identified and studied for the East Terminal Alternative (with Parking Structure).

5.16.2.6 Surrounding Area's Land Use Plans and Policies – Aesthetic Impact Analysis

The East Terminal Alternative (with Parking Structure) was analyzed with respect to each of the urban design and view corridor guidelines described in Section 5.16.2.1, for each of the potentially impacted plan areas.

As discussed earlier in this section, there would be no significant impacts to key views from the East Terminal Alternative (with Parking Structure). The key views are compatible with the view corridor descriptions within the Peninsula, Midway Pacific Highway Corridor, the Uptown CPA guidelines and the Port Master Plan. Therefore, the East Terminal Alternative (with Parking Structure) would not result in significant negative impacts related to these view corridors.

More specifically, this section reviews the East Terminal Alternative (with Parking Structure) for compliance with plans and policies governing the surrounding area including: 1) the Port Master Plan, 2) The MCRD Base Exterior Architecture Plan and 3) the City of San Diego's Community and Redevelopment Plans.

Port Master Plan

The Port Master Plan outlines general goals addressing the design of new development.[31] The goals relevant to this project deal with view preservation. The above section about visual resources and key views demonstrates that the East Terminal Alternative Plan would not have a significant impact on existing views of the Bay or the downtown area. Therefore, the East Terminal Alternative Plan would not have a significant impact on the adjacent land governed by the Port Master Plan.

US MCRD Base San Diego Exterior Architecture Plan

In regard to aesthetic and visual resources, the US MCRD San Diego BEAP only addresses visual resources. More specifically, Visual and noise buffers between US MCRD San Diego and SDIA are proposed at US MCRD San Diego's BEAP if new projects at US MCRD San Diego are constructed. US MCRD San Diego has identified the view down Belleau Avenue, looking towards the downtown skyline, as an asset. This view has the possibility of being blocked by future site-specific projects. However, due to the fact that this is a view from a single location that generally is not accessible to the public, it was not rated for visual impact. Under the significance criteria adopted in this report, only public views are analyzed for visual impact.

City of San Diego Community Plans and Redevelopment Plans

The East Terminal Alternative (with Parking Structure) was analyzed in relation to the criteria established earlier in this chapter as described in Section 5.16.2.1 for aesthetic and visual resources. In this section the Significance Criteria for each of the potentially impacted Community Plan Areas and Redevelopment Areas is analyzed for possible impacts to aesthetic and visual resources.

In regard to aesthetic impacts such as neighborhood character, land form, light and glare, the East Terminal Alternative (with Parking Structure) is in compliance with these plans and would not result in significant impacts.

[31] San Diego Unified Port District (District). *San Diego Unified Port District, Port Master Plan.* Revised July 2005. <http://www.portofsandiego.org/>

In regard to visual resources, the key views from the community plan areas and redevelopment plan areas, could potentially be aesthetically and visually impacted by projects proposed for the East Terminal Alternative (with Parking Structure) on the east side of the SDIA Project Area. Since proposed development of the East Terminal Alternative (with Parking Structure) includes projects that are similar in use, height, massing, bulk and architectural style there are no significant visual impacts to surrounding community plan and redevelopment areas.

In summary, the East Terminal Alternative (with Parking Structure) complies with the aesthetic/urban design guidelines and visual resources plans and policies contained within the San Diego Downtown Community Plan, the Uptown Community Plan, Midway Pacific Highway Corridor Community Plan, the Peninsula Community Plan and their related Redevelopment Plan Areas. As such, the East Terminal Alternative (with Parking Structure), project impacts would also be considered less than significant.

5.16.2.7 East Terminal Alternative (without Parking Structure)

Since this Alternative proposes less development than the East Terminal Alternative (with Parking Structure), it would have less impacts and would not be of significant impact in terms of aesthetic and visual resources. The analysis that precedes this section for the East Terminal Alternative (with Parking Structure) substantially conforms to this Alternative.

5.16.2.8 No Action Alternative

There would be no changes to the existing terminals, airside facilities, cargo facilities, or landside access facilities and, therefore, no impacts to aesthetic/urban design or visual resources either within or around the SDIA Project Area would occur under this alternative.

5.16.2.9 Mitigation Measures

Mitigation measures are not required since impacts to aesthetics and visual quality caused by the West Terminal Alternative (with Parking Structure) (Preferred Alternative) and its alternatives would be less than significant.

5.17 Hazardous Materials, Pollution Prevention, and Solid Waste

This section includes information regarding the potential to generate, disturb or dispose of hazardous materials, and the potential to generate or dispose of additional solid waste.

Hazardous materials are regulated by a number of federal laws and regulations - most of which are promulgated by the U.S. Environmental Protection Agency (EPA). These include the Resource Conservation & Recovery Act (RCRA), the Comprehensive Environmental Response Compensation & Liability Act (CERCLA), the Clean Air and Clean Water Acts (CAA, CWA), the Safe Drinking Water Act (SWDA), Hazardous Materials Transportation Act (HMTA) and the Emergency Planning & Community Right to Know Act (EPCRA). Together, these regulations serve as guiding principles governing the storage, use and transportation of hazardous and other regulated materials from their time of origin to their ultimate disposal. The recovery and clean-up of environmental contamination resulting from the accidental or unlawful release of these materials and substances are also governed by these regulations.

On the state level, the agency with similar authority to EPA over hazardous materials is the California Environmental Protection Agency (Cal-EPA). Specifically, the Cal-EPA Department of Toxic Substances Control (DTSC) is responsible statewide for matters concerning the use, storage, transport and disposal of hazardous materials. Similarly, California Integrated Waste Management Board (CIWMD) is responsible for the management of solid wastes and the Cal-EPA Office of Environmental Health Hazard Assessment (OEHHA) is involved in the evaluation of risks to public health and the environment posed by hazardous materials and environmental contamination. Importantly, Cal-EPA delegates much of the enforcement responsibility for hazardous materials to local governments under the Certified Unified Program Agency (CUPA) program.

Locally, the San Diego Department of Environmental Health (DEH) serves as the CUPA and is responsible for regulating hazardous materials, hazardous wastes and underground storage tanks (USTs) county-wide. The California (San Diego Region) Regional Water Quality Control Board (RWQCB) also has jurisdiction over the management of potential sources of surface and groundwater contamination such as the cleanup of UST and aboveground storage tank (AST) spill sites. The City of San Diego Solid Waste Department is designated as the Local Enforcement Agency (LEA) by the CIWMD and is responsible for enforcing regulations pertaining to solid waste disposal units (i.e., landfills, old burn dumps, etc.). Finally, the San Diego County Air Pollution Control District (APCD) is involved in the assessment of health and environmental hazards associated with toxic (or hazardous) air pollutants.

A listing of regulations pertaining to the management of hazardous materials and other hazard conditions in San Diego are listed in **Table 5-17.1**.

Regarding the generation and disposal of solid waste, in September 1989, the California Integrated Solid Waste Management Act (also known as Assembly Bill [AB] 939) was enacted into law. The IWMA establishes an integrated system of waste management in California and requires each local jurisdiction to implement a Source Reduction and Recycling Element (SRRE), Household Hazardous Waste Element (HHWE), and Non-Disposal Facility Element (NDFE). The IWMA requires that the Siting Element be prepared by the county and approved by the County Board of Supervisors and a majority of the cities within the county. The IWMA requires each city in the state to divert at least 50 percent of its solid waste from landfill disposal through source reduction, recycling, and composting.

Table 5-17.1

Regulations Pertaining to the Management of Hazards and Hazardous Materials in San Diego County

----- Federal -----
Comprehensive Environmental Response, Compensation & Liability Act (CERCLA) – Regulation of former and new waste disposal and spill sites. Established the "Superfund" program and the National Priority List (NPL).
Resource Conservation & Recovery Act (RCRA) – Regulation of the generation, transportation, storage, treatment, and disposal of hazardous materials.
Clean Water Act (CWA) – Regulation of discharges and spills of pollutants (including hazardous materials) to surface and ground-waters.
Safe Drinking Water Act (SWDA) – Regulation of discharges of pollutants to underground aquifers.
Clean Air Act (CAA) – Regulation of discharges of air emissions (including hazardous air pollutants) to the ambient (i.e., "outside") air.
Hazardous Materials Transportation Act (HMTA) – Regulation of the transport of hazardous materials by motor vehicles, marine vessels, and aircraft.
Emergency Planning & Community Right to Know Act (EPCRA) – Regulation of facilities that use hazardous materials in quantities that require reporting to emergency response officials.
----- State -----
Hazardous Materials Release Response Plans & Inventory Act – Requires facilities using hazardous materials to prepare Hazardous Materials Business Plans.
Hazardous Waste Control Act – Similar to RCRA on the federal level in regulating the generation, transportation, storage, treatment, and disposal of hazardous materials.
Safe Drinking Water & Toxic Enforcement Act – Similar to the SWDA and CWA on the federal level in regulating the discharge of contaminants to groundwater.
California Government Code Section 56962.5 – Requires the DTSC to compile and maintain lists of potentially contaminated sites throughout the State.
Emergency Services Act – Similar to EPCRA on the federal level.
----- Local -----
APCD Rules 50, 51, and 59 – Requires permits, monitoring plans, and other dust mitigation measures for large scale construction projects and waste sites.

5.17.1 Methodology

5.17.1.1 Hazardous Materials

Impacts related to hazards and hazardous materials associated with the each alternative were analyzed following a three-step process that (1) address the potential for encountering existing environmental contamination or hazardous materials in the project area, (2) identify the types and quantities of hazardous materials generated during the operation and construction of the project, and (3) evaluate these findings with respect to appropriate significance criteria.

The first step was accomplished by mapping areas of known and/or potential environmental contamination identified in Chapter 4, *Affected Environment* and then comparing these sites to the locations of the proposed improvements. For those areas where no existing source(s) or evidence of environmental contamination or hazardous materials exists, no additional analysis was conducted. However, in cases where the planned improvements are located on or adjacent to properties where these substances and materials could be encountered, the potential impacts were further evaluated.

The second step was performed by evaluating the types of improvements included in each alternative with emphasis on the use, storage and disposal of hazardous materials during the operational and construction phases. The basis of this assessment was developed from what is known about existing land-uses and facilities at the Airport (also reported in Chapter 4, *Affected Environment*) combined with information about current construction practices.

The third step was conducted by comparing the findings from Steps 1 and 2 to the regulatory requirements and guidelines and the State's CEQA significance thresholds (listed below). The outcome of

this analysis is reported in the sections that follow, by alternative (i.e., West Terminal Alternative, East Terminal Alternative, and the No Action Alternative).

For hazards and hazardous materials, the criteria used to evaluate the potential impacts associated with the construction and implementation of the planned improvements to SDIA are derived from State of California CEQA guidelines and the City of San Diego, Development Services Department, *Draft CEQA Significance Thresholds*.[32] According to these guidelines, a project may have significant hazards or hazardous materials impacts if it could:

- Create a significant hazard to the public or the environment through the routine 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. Specific conditions include:
  - Located within 1,000 feet of a known contamination site.
  - Located within 2,000 feet of a known "border zone property" (i.e., "Superfund" site) or a hazardous waste property subject to corrective action pursuant to applicable health and safety codes.
  - Involve excavation at a DEH closed site that could disturb contaminated soils.
  - Located on or near an active or former landfill.
  - Properties historically developed with industrial or commercial uses that involve dewatering in association with major excavation in an area of high groundwater.
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste 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, create a significant hazard to the public or the environment.[33]
- 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, result in a safety hazard for people residing or working in the project area.
- For a project within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area.
- 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.

For the purposes of this assessment, hazardous materials are meant to include the regulatory-defined terms of hazardous materials, hazardous wastes, hazardous substances and dangerous goods; environmental contamination to soil, surface waters and groundwater; as well the range of similarly regulated substances such as fuel and other petroleum-based products. With respect to hazardous materials, the information described in this section includes an overview of the regulatory context by which these substances are managed, and a determination as to whether the planned improvements to SDIA represent potentially significant environmental impacts in connection with these materials.

Other hazards evaluated include those related to the safety of nearby residents and workers, emergency response plans and wildland fires.

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[32] 2006 CEQA Guidelines, Consulting Engineers and Land Surveyors of California, 2006 and City of San Diego, Draft Significance Determination Thresholds, California Environmental Quality Act (CEQA), Development Services Department, Land Development Review Division, Environmental Analysis Section, November, 2004.

[33] California Government Code Section 65962.5 – Requires the DTSC to compile and maintain lists of potentially contaminated sites throughout the state.

5.17.1.2 Solid Waste

As with all service systems and utilities at SDIA, providers were identified through review of maps, available studies, and other documents; field reconnaissance; and communications with personnel at San Diego Gas and Electric Company (SDG&E), City of San Diego, and SDIA. Potential impacts to public utilities and service systems were evaluated by (a) assessing the potential for the Proposed Action to increase demand, and (b) comparing the ability of the service provider/public facility to serve the Proposed Action developments and accommodate the associated increase in demand.

5.17.2 West Terminal Alternative (with and without Parking Structure)

5.17.2.1 Hazardous Materials

As shown in **Figure 5.17-1**, elements of the West Terminal Alternative (with and without Parking Structure) are located in, or adjoining, areas of the Airport that contain hazardous materials and/or environmental contamination. Therefore, the adoption of the plan would involve some of the conditions contained in the Significance Criteria listed above in Section 5.17.1. Specifically, these impacts are summarized as follows:

- The expanded terminal, additional aircraft gates, new aircraft parking aprons and the aircraft taxi-lane as well with the new surface parking lot associated with the expanded Terminal 2 West are partially located on the Former NTC Landfill (Site No. 1). However, a Remediation Plan for the removal of household waste and burn ash is underway and is expected to be completed in mid 2009.
- The new parking structure and vehicle circulation improvements serving Terminal 2 are located in the area of the Former Rental Car Facility Fuel Farm (Site No. 2) and Former Lindbergh Field Fuel Farm (Site No. 3). In both areas, the extent of residual contamination has been fully delineated, is petroleum-based and, therefore, can be addressed in accordance with state and local requirements during the construction phase, if necessary.
- The reconfiguration of SAN Park Pacific Highway, the new access road to the North Area facilities, and the new General Aviation facilities are all located in the vicinity of the former General Dynamics Facility (Site No. 8), and the Jimsair UST (Site No. 9). Because the residual contaminants underlying the former General Dynamics Facility site are covered with an impervious layer and are not a hazard to neighboring land-uses or the environment, the majority of this area has been designated for “open field” land-uses. Further coordination with local agencies is underway by SDCRAA to extend this designation to other areas of the site. The Jimsair site UST will be addressed according to appropriate fuel clean-up guidances, should contamination exist.
- The former Teledyne Ryan Facility is currently under a Clean Up and Abatement Order. Therefore, the full extent of any involvement with ACM and/or LBP as well as the delineation of underlying environmental contamination will be determined by the responsible parties and independently from the AMP process. Based upon the outcomes of these assessments, the necessary abatement and clean-up actions required under federal, state and local regulations will be determined. Until these requirements are further identified and achieved, no actions or projects associated with the West Terminal Alternative (with and without Parking Structure) will be undertaken that could potentially interfere with these measures.

As the previously described impacts require action to limit their potential effect to a less than significant level the following project improvements are included:

- For the former NTC landfill, the Remediation Plan scheduled to be completed by mid 2009 addresses all the necessary mitigation measures including those pertaining to groundwater, dust, odors, surface traffic, water management, public health, and safety, etc.
- For the former Rental Car Fuel Facility and Lindbergh Field Fuel Farm, the AMP construction plans and specifications will include provisions for the handling, treatment and/or disposal of

petroleum-contaminated soils and/or groundwater, should they be encountered. These provisions may include the excavation and off-site disposal of impacted soils and the proper recovery and treatment of impacted groundwater.

- In addition to maintaining the impervious layer that covers the former General Dynamics site, these same provisions discussed above will also apply to any contaminates encountered at this location.

With incorporation of these project improvements and because the West Terminal Alternative (with and without Parking Structure) would not involve the generation, use or storage of hazardous materials in quantities or types that are substantially different from those that are currently associated with the Airport, the West Terminal Alternative (with and without Parking Structure) would not create a significant long-term hazard to the public or the environment. Moreover, the projects would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances or waste within ¼ mile of a school nor are they located within 2,000 ft. of a Superfund site.

There are no other potential hazards to public safety associated with the West Terminal Alternative (with and without Parking Structure) as the projects would not substantially change the operational characteristics of the airfield, impair or interfere with emergency response or evacuation plans nor involve wildland fires.

5.17.2.2 Solid Waste

Operation of the West Terminal Alternative (with and without Parking Structure) is anticipated to result in an increase of solid waste generated at SDIA. This increase would be negligible in comparison to the available disposal capacity described above. Construction and demolition activities would result in a substantial temporary increase of solid waste generation at SDIA. However, recycling, salvage, reuse, and disposal options would be identified in a Solid Waste Management Plan in advance of all activities in order to minimize the amount of debris directed to local landfills. This plan would include the identification of locations for sorting of materials for reuse and recycling. At least 50 percent of all waste generated during construction and demolition activities would be recycled in accordance with the C&D Ordinance.

It is expected that project-generated solid waste would be transported for disposal at the City-operated (under a lease agreement with the Marine Corp Air Station Miramar) Miramar Landfill because it is the closest landfill to the project site. The West Terminal Alternative (with and without Parking Structure) is not anticipated to result in changes to the operation of the Miramar Landfill entrance facility because the increase in solid waste transported to the landfill from the project would be small in comparison to the capacity of the three landfill entrance lanes. Because measures would be incorporated to recycle at least 50 percent of all waste generated during construction and demolition activities, in accordance with the C&D Ordinance, the West Terminal Alternative (with and without Parking Structure) would have a less-than-significant impact on the solid waste disposal system.

Any hazardous waste resulting from construction, demolition, and operations at SDIA, including roughly 25,000 cubic yards of potentially contaminated soil at the former NTC landfill site and any other contaminated soil identified at the project location, would not be disposed at Miramar Landfill and would instead be disposed at a landfill approved to receive hazardous waste, as required by local and state regulations. A Remediation Plan for the removal of household waste and burn from this site as well as environmental review documentation has been prepared and adopted by the SDCRAA.

5.17.3 East Terminal Alternative (with and without Parking Structure)

5.17.3.1 Hazardous Materials

As shown in **Figure 5.17-2** elements of the East Terminal Alternative are located in, or adjoining, areas of the Airport that contain hazardous materials and/or environmental contamination. Therefore, the adoption of the plan would involve some of the conditions contained Section 5.17.1.1, *Methodology.* Specifically, these impacts are summarized as follows:

- The new aircraft gates, new aircraft parking and RON aprons and the aircraft taxi-lane as well with the new surface parking lot associated with the expanded Terminal 2 West are partially located on the Former NTC Landfill (Site No. 1). However, a Remediation Plan for removal of

household waste and burn ash is underway and scheduled to be completed by mid 2009.

- The new parking structure and vehicle circulation improvements serving Terminal 2 are located in the area of the Former Rental Car Facility Fuel Farm (Site No. 2) and Former Lindbergh Field Fuel Farm (Site No. 3). In both areas, the extent of residual contamination has been fully delineated, is petroleum-based and, therefore, can be addressed in accordance with state and local requirements during the construction phase, if necessary.
- The reconfiguration of SAN Park Pacific Highway, the new access road to the North Area facilities, and the new General Aviation facilities are all located in the vicinity of the former General Dynamics Facility (Site No. 8), and Jimsair UST (Site No. 9). Because the residual contaminants underlying the former General Dynamics Facility site are covered with an impervious layer and are not a hazard to neighboring land-uses or the environment, the majority of this area has been designated for "open field" land-uses. Further coordination by SDCRAA with local agencies is underway to extend this designation to other areas of the site. The Jimsair UST will be addressed according to appropriate clean-up guidelines for fuel contamination, should it exist.
- The former Teledyne Ryan Facility is currently under a Clean Up and Abatement Order. Therefore, the full extent of any involvement with ACM and/or LBP as well as the delineation of underlying environmental contamination will be determined by the responsible parties and independently from the AMP process. Based upon the outcomes of these assessments, the necessary abatement and clean-up actions required under federal, state and local regulations will be determined. Until these requirements are further identified and achieved, no actions or projects associated with the Proposed Action will be undertaken that could potentially interfere with these measures.

As the previously described impacts require action to limit their potential effect to a less than significant level the following project improvements are included:

- For the former NTC landfill, the Remediation Plan scheduled to be completed by mid 2009 addresses all the necessary mitigation measures including those pertaining to groundwater, dust, odors, surface traffic, water management, public health, and safety, etc.
- For the former Rental Car Fuel Facility and Lindbergh Field Fuel Farm, the AMP construction plans and specifications will include provisions for the handling, treatment and/or disposal of petroleum-contaminated soils and/or groundwater, should they be encountered. These provisions may include the excavation and off-site disposal of impacted soils and the proper recovery and treatment of impacted groundwater.
- In addition to maintaining the impervious layer that covers the former General Dynamics site, these same provisions discussed above will also apply to any contaminates encountered at this location.
- For any areas on or surrounding the former Teledyne Ryan Facility, the necessary abatement and clean-up actions required under federal, state and local regulations will be determined as part of the Clean Up and Abatement Order. Until these requirements are further identified and achieved, no actions or projects associated with the site will be undertaken that could potentially interfere with these abatement and clean up actions.

With incorporation of these project improvements and because the East Terminal Alternative would not involve the generation, use or storage of hazardous materials in quantities or types that are substantially different from those that are currently associated with the Airport, the projects would not create a significant long-term hazard to the public or the environment. Moreover, the projects would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances or waste within ¼ mile of a school nor are they located within 2,000 ft. of a Superfund site.

There are no other potential hazards to public safety associated with the East Terminal Alternative as the projects would not substantially change the operational characteristics of the airfield, impair or interfere with emergency response or evacuation plans, nor involve wildland fires.

5.17.3.2 Solid Waste

Solid Waste impacts would be similar to those described for the West Terminal Alternative (with and without Parking Structure) and are less than significant for the same reasons as discussed in Section 5.17.2.2.

5.17.4 No Action Alternative

5.17.4.1 Hazardous Materials

Adoption of the No Action Alternative would not impact any of the Significance Criteria listed in Section 5.17.1.1, *Methodology*. This is because the No Action Alternative would not involve construction or other subsurface activities that could encounter hazardous materials or environmental contamination nor would it have any affect on the types or quantities of hazardous materials currently used at the Airport.

5.17.4.2 Solid Waste

Adoption of the No Action Alternative would not generate additional solid waste due to construction, demolition, or other operations, and therefore would not have any impacts on solid waste at SDIA.

5.17.5 Mitigation Measures

Because the project improvements are provided to reduce potential impact associated with hazards and hazardous materials resulting from the West Terminal Alternative and East Terminal Alternative, there would be a less than significant impact due to hazards and hazardous materials and therefore mitigation is not required.

Implementation of the Proposed Action would include coordination with the affected solid waste/service system operators with regard to extending services. Similarly, SDCRAA would pay necessary engineering or facility expansion fees to affected service providers (e.g., SDG&E reengineering fees). These measures are considered to be elements of the Proposed Action and not mitigation. Because the Proposed Action would not generate significant impacts, no service system mitigation is required.

5.18 Construction Impacts

Construction of the Proposed Action may create some unavoidable temporary impacts to surrounding communities such as noise, fugitive dust, and degraded water quality. Most of these impacts can be mitigated using proper construction techniques, many of which are regulated. The Sponsor's Preferred Alternative would be constructed in accordance with the applicable state and local ordinances and regulations, and FAA Advisory Circular 150/5370-10A, *Standards for Specifying Construction of Airports, Item P-156, Temporary Air and Water Pollution, Soil Erosion, and Siltation Control*.

Potential construction impacts would be associated with both the West Terminal Alternative (Preferred Alternative) and the East Terminal Alternative. Because both alternatives would entail generally similar construction types and extents, the following assessment of associated potential impacts is applicable to both the West Terminal Alternative (Preferred Alternative) and the East Terminal Alternative.

Erosion and Sedimentation

Proposed short-term grading, excavation and construction activities would increase the potential for erosion and the off-site transport of eroded material (sedimentation). Discussion of erosion control requirements under NPDES standards is provided in Section 5.6, *Water Quality*, due to the relationship between this issue and water quality concerns.

Shallow Groundwater

Shallow groundwater is present within the SDIA at approximate depths of between 5 and 12 feet below the surface, and would likely be encountered during construction of the Proposed Action. The occurrence of shallow groundwater within the project site could potentially affect construction activities such as excavation and grading. Specifically, the presence of shallow groundwater in proposed cuts or excavations could require temporary dewatering to allow access by construction equipment and/or personnel. Dewatering activities would require conformance with applicable NPDES permit requirements as previously discussed under Section 4.7.4, *Water Quality*. The majority of these requirements are associated with water quality concerns such as potential erosion/sedimentation effects (e.g., if extracted groundwater is discharged onto graded or unstabilized areas), and the occurrence of contaminants in local aquifers. Conformance with identified discharge requirements in the NPDES Groundwater Permit would avoid or reduce these associated potential impacts below a level of significance.

The presence of shallow groundwater could also potentially affect the stability of proposed excavations (e.g., trench walls), resulting in safety or damage impacts to construction workers and equipment from caving. Project construction would be conducted in accordance with applicable Occupational Safety and Health Administration (OSHA) and CAL/OSHA standards related to (among other issues) the stability of excavations (e.g., 29 CFR Part 1926, Occupational Health Standards-Excavations). Conformance with these (or other appropriate) requirements would avoid or reduce potential impacts related to the stability of open excavations below a level of significance.

Shallow Bedrock/Oversize Materials

The generation of oversize rock fragments during grading and excavation can pose potential development hazards if improperly handled or placed onsite. Specifically, the presence of oversize materials in engineered fills can result in effects such as differential compaction and settlement, with related issues including adverse effects to overlying structures, pavement or drainage. The SDIA and adjacent areas typically encompass approximately 20 feet of artificial fill, with underlying bay deposits consisting of unconsolidated silt and clay materials. Based on these conditions and the nature of proposed grading and excavation, bedrock is not expected to be encountered during project construction, and no significant impacts related to shallow bedrock or oversize materials are anticipated from implementation of the Proposed Action.

5.18.1 Noise

Construction noise sources do not always correspond to 24-hour community noise standards because they occur only during selected times and the source strength varies with the type of equipment in use.

As a result, the San Diego City municipal code regulates construction noise in terms of time of day and maximum noise levels. This analysis evaluates construction noise in this context.

There are noise sensitive land uses in the vicinity of the areas where construction would occur with the West Terminal Alternative (Preferred Alternative) and East Terminal Alternative. In the vicinity of the Terminal 2 West expansion and apron, there are homes within a minimum distance of approximately 2,200 to 4,000 feet from the potential construction zone. For the North Area projects that would occur in the vicinity of Interstate 5, there are homes on the opposite side of the highway at minimum distances of about 1,500 to 1,700 feet from the potential construction zone.

Because construction is not a chronic, permanent noise source, the environmental setting in the vicinity of SDIA is not currently affected by construction-related noise on a regular basis.

Table 5-18.1 shows the maximum noise level by the equipment types that would be used in construction of the West Terminal Alternative (Preferred Alternative) and East Terminal Alternative, as well as the resulting noise at various distances from the construction zones. Among the various equipment types, the maximum noise levels would be produced by the pile drivers, with resulting noise levels in residential areas of 62.8 dB to 48.0 dB at distances of 1,500 to 4,000 from the sources, respectively.

Table 5-18.1
Construction Noise Levels by Equipment Type and Distance

Equipment	Maximum Noise (dB) at 50ft	Noise (dB) at Receiver by Distance (feet)								
		1,000	1,500	2,000	2,500	3,000	3,500	4,000	4,500	5,000
Compacter/Roller	88	52.2	45.8	41.2	37.6	34.8	32.8	31.0	29.3	27.8
Front Loader	97	61.2	54.8	50.2	46.6	43.8	41.8	40.0	38.3	36.8
Backhoe	93	57.2	50.8	46.2	42.6	39.8	37.8	36.0	34.3	32.8
Scraper/ Grader	96	60.2	53.8	49.2	45.6	42.8	40.8	39.0	37.3	35.8
Paver	92	56.2	49.8	45.2	41.6	38.8	36.8	35.0	33.3	31.8
Truck	97	61.2	54.8	50.2	46.6	43.8	41.8	40.0	38.3	36.8
Concrete Mixer	90	54.2	47.8	43.2	39.6	36.8	34.8	33.0	31.3	29.8
Concrete Pump	85	49.2	42.8	38.2	34.6	31.8	29.8	28.0	26.3	24.8
Crane (Movable)	96	60.2	53.8	49.2	45.6	42.8	40.8	39.0	37.3	35.8
Crane (Derrick)	88	52.2	45.8	41.2	37.6	34.8	32.8	31.0	29.3	27.8
Pump	80	44.2	37.8	33.2	29.6	26.8	24.8	23.0	21.3	19.8
Generator	83	47.2	40.8	36.2	32.6	29.8	27.8	26.0	24.3	22.8
Compressor	88	52.2	45.8	41.2	37.6	34.8	32.8	31.0	29.3	27.8
Jackhammer/Drill	99	63.2	56.8	52.2	48.6	45.8	43.8	42.0	40.3	38.8
Pile Drivers	105	69.2	62.8	58.2	54.6	51.8	49.8	48.0	46.3	44.8

Note: Atmospheric adsorption calculated for 1,000 Hz. at 60.4-degrees F, 72.7% relative humidity, and 28.44-inches Hg atmospheric pressure.

Sources: HNTB analysis using:
Equipment noise levels: Handbook of Noise Control, Cyril Harris, 1979.
Ground Attenuation: Ground to Ground Lateral Attenuation, INM 6.0 Technical manual, page 55.
Atmospheric Adsorption: Absorption of Sound in Air versus Humidity and Temperature, Cyril Harris, 1966, and http://www.csgnetwork.com/atmossndabsorbcalc.html.

Based upon this analysis, the construction noise would not exceed 75 dB in residential areas. The construction noise would be lower than the aircraft and highway noise that occurs in the residential areas near the construction zones. Due to the louder noise levels and more frequent events that occur with aircraft operations and surface vehicle traffic and in consideration of the logarithmic quantities of noise measured in decibels (see Section B.1.1 of Appendix B, *Noise and Health Effects of Noise*), aircraft and highway noise would continue to be the determinative sources in the noise environment. Thus, the ambient noise levels would not be expected to increase due to the construction activity. Additionally, the construction work would not be expected to result in excessive ground-borne vibration to home sites.

Therefore, the construction work would cause less than significant impacts in regard to noise with either the West Terminal Alternative (Preferred Alternative) or the East Terminal Alternative.

5.18.2 Air Quality / Construction Emissions

Construction-related emissions are primarily associated the exhaust from heavy equipment, delivery trucks and construction worker vehicles; dust from site preparation and demolition activities; and fugitive emissions from the storage/transfer of raw materials. Although these emissions are temporary in nature and generally confined to the construction site and the access/egress roadways, they are also quantified in this section to determine if they will exceed the federal CAA General Conformity Rule *de minimis* levels.

For this analysis, the construction schedules and requirements (i.e., work crews, equipment types, etc.) for each project were developed, or estimated, by construction engineers familiar with the airport improvements.[34] See Appendix E, Part II for multi-year construction schedule details. From this analysis, the total hours of equipment operation (by equipment type), work crew trips, and daily activity levels were derived for the anticipated five-year construction period. These data and information were then combined with appropriate emission factors obtained from the CARB OFFROAD2007 and EMFAC2007 models to obtain estimates of annual total emissions of CO, NO_x, VOC, SO_x and $PM_{10/2.5}$.

Proposed Action and No Action emissions were not calculated for 2009, 2010, 2011, 2012, or 2013 in this EA as aircraft operations and passenger levels are the same for these years, see Section 1.2.1, *Derivative Forecast for Environmental Analysis,* for detail and construction of proposed improvements that would alter airfield operations are not expected to be completed prior to 2013. However, in order to consider operational emissions in combination with construction emissions in a conservative manner, this EA includes the 2010 operational emissions that were analyzed in the Environmental Impact Report (EIR) for SDIA [certified in May 2008] for the years 2009 and 2010. In consideration of the construction schedule, there will be no physical changes to any part of the airfield until about 2011. Therefore the 2010 No Action Alternative emissions represent both the future with and without the Proposed Action for the years 2009 and 2010. For the construction years 2011, 2012, and 2013, in order to consider the most potential emissions associated with the Proposed Action, the 2015 operational emissions from the Proposed Action alternative with the most potential emissions (the East Terminal Alternative with Parking Structure as detailed in Table 5-5.8 of this EA) are combined with construction emissions for each year. This is done to determine if the combination of construction and operational emissions would be below *de minimis* levels and, therefore, be presumed to conform. The construction period emissions inventory combined with operational emissions are summarized in **Table 5-18.2 though 5-18.6** by pollutant and construction year. For comparison, the federal CAA General Conformity Rule de *minimis* levels are also shown.

As shown, construction-related emissions of CO, VOC, NO_x, SO_x, and $PM_{10/2.5}$ when combined with operational emissions are within the federal CAA General Conformity Rule de *minimis* levels.

5.18.3 Water Quality

Any potential construction impacts to water quality and hydrology would be less than significant as all improvements/projects undertaken at SDIA must comply with the SDIA SWMP. The SWMP mandates BMPs and other stormwater pollution prevention measures to minimize potential impact to surface and ground waters inclusive of construction activities.

5.18.4 Department of Transportation: Section 4(f)/6(f)

Construction would not directly affect Section 4(f) properties. Specifically, the Proposed Action would not encroach into existing or planned recreational areas. With regard to indirect effects, there would be a temporary construction-related increase in traffic on North Harbor Drive, including road segments adjacent to Spanish Landing Park and along the North Embarcadero. As a result, these areas would experience a temporary increase in traffic noise levels. Because these are urban parks/walkways located along a major road, traffic noise is not unexpected, and construction traffic noise generally would not be discernable from the overall level of Airport-related and other North Harbor Drive traffic. Accordingly, this short-term effect would be less than significant. There are no Section 6(f) properties in the vicinity of SDIA.

[34] For this assessment, the West Terminal Alternative (with Parking Structure) scenario is considered to be representative of potential "worst-case" conditions among all the available scenarios, including the West Terminal Alternative (without Parking Structure) and the East Terminal Alternative, both with and without the Parking Structure.

Table 5-18.2

2009 Construction-Related Air Emissions Inventory (Annual tons) Combined with Proposed Action Alternative Emissions[a]

	CO	VOC	NO_x	SO_x	PM_{10}	$PM_{2.5}$
2010 Proposed Action Alternative[i]						
Aircraft	368	117	785	75	17	17
GSE/APU	318	12	47	2.3	1.4	1.4
Stationary Sources	3.7	3.3	12	4.0	0.6	0.6
Motor Vehicles (on-site)	40	2.0	4.3	0.0	0.6	0.4
Motor Vehicles (off-site)	178	7.1	44	0.2	2.9	1.8
2009 Construction	4.1	1.1	6.8	<0.1	8.3	4.3
Total	911.8	142.5	899.1	81.6	30.8	25.5
2010 No Action Alternative[i]						
Aircraft	368	117	785	75	17	17
GSE/APU	318	12	47	2.3	1.4	1.4
Stationary Sources	3.7	3.3	12	4.0	0.6	0.6
Motor Vehicles (on-site)	40	2.0	4.3	0.0	0.6	0.4
Motor Vehicles (off-site)	178	7.1	44	0.2	2.9	1.8
Total	907.7	141.4	892.3	81.5	22.5	21.2
Difference (+/-)	4.1	1.1	6.8	<0.1	8.3	4.3
De minimis Levels[c]	100	50	50	n/a	n/a	n/a
Presumed to conform[c]	**Yes**	**Yes**	**Yes**	**n/a**	**n/a**	**n/a**

CO = carbon monoxide, HC = hydrocarbons, NO_x = nitrogen oxides,
SO_x = sulfur oxides, $PM_{10/2.5}$ = particulate matter less than 10 and 2.5 microns, respectively. n/a = not applicable.

[a] Estimates apply to the Airport Implementation Plan with Parking Structure.

[b] Original calculations were made for the years 2006 through 2010 and later applied to the period 2009 through 2013. This is justified as the results from the initial analysis are conservatively high compared to the updated assessment.

[c] See Section 5.5.1 for the federal CAA General Conformity Rule de minimis levels.

[d] "No" means the totals are less than the quantitative NEPA thresholds and therefore not considered potentially significant under NEPA and "Yes" means the differences are greater than the quantitative thresholds and are potentially significant under NEPA.

[i] See Table 5-5.32 in Final Environmental Impact Report for San Diego International Airport Master Plan, Certified May 2008.

[ii] See Table 5-5.8 in this EA.

[iii] See table 5-5.14 in this EA.

Source: KB Environmental Sciences, 2008.

Table 5-18.3

2010 Construction-Related Air Emissions Inventory (Annual tons) Combined with 2010 Proposed Action Alternative Emissions[a]

	CO	VOC	NO_x	SO_x	PM_{10}	$PM_{2.5}$
2010 Proposed Action Alternative[i]						
Aircraft	368	117	785	75	17	17
GSE/APU	318	12	47	2.3	1.4	1.4
Stationary Sources	3.7	3.3	12	4.0	0.6	0.6
Motor Vehicles (on-site)	40	2.0	4.3	0.0	0.6	0.4
Motor Vehicles (off-site)	178	7.1	44	0.2	2.9	1.8
2010 Construction	12	3.2	26	<0.1	10	5.9
Total	919.7	144.6	918.3	81.6	32.5	27.1
2010 No Action Alternative[i]						
Aircraft	368	117	785	75	17	17
GSE/APU	318	12	47	2.3	1.4	1.4
Stationary Sources	3.7	3.3	12	4.0	0.6	0.6
Motor Vehicles (on-site)	40	2.0	4.3	0.0	0.6	0.4
Motor Vehicles (off-site)	178	7.1	44	0.2	2.9	1.8
Total	907.7	141.4	892.3	81.5	22.5	21.2
Difference	12	3.2	26	<0.1	10	5.9
De minimis Levels[c]	100	50	50	n/a	n/a	n/a
Presumed to conform[c]	**Yes**	**Yes**	**Yes**	**n/a**	**n/a**	**n/a**

Refer to Table 5-18.2 for notes.

Source: KB Environmental Sciences, 2008.

Table 5-18.4

2011 Construction-Related Air Emissions Inventory (Annual tons) Combined with 2015 Most Conservative Proposed Action Alternative Emissions[a]

	CO	VOC	NO_x	SO_x	PM_{10}	$PM_{2.5}$
2015 Most Conservative Proposed Action Alternative[ii]						
Aircraft	426	133	1,004	92	22	22
GSE/APU	193	7.4	31	2.3	1.0	0.9
Stationary Sources	4.1	3.5	13	4.0	0.7	0.7
Motor Vehicles (on-site)	35	1.6	3.7	0.0	0.8	0.6
Motor Vehicles (off-site)	141	5.4	34	0.3	3.1	2.0
2011 Construction	20	4.7	37	<0.1	12	7.7
Total	819.1	155.6	1122.7	98.7	39.6	33.9
2015 No Action Alternative[iii]						
Aircraft	408	132	1,001	91	22	22
GSE/APU	193	7.4	31	2.3	1.0	0.9
Stationary Sources	3.7	3.5	12	4.0	0.6	0.6
Motor Vehicles (on-site)	32	1.5	3.4	0.0	0.7	0.6
Motor Vehicles (off-site)	141	5.4	34	0.3	3.1	2.0
Total	777.7	149.8	1,081.4	97.6	27.4	26.1
Difference	41.4	5.8	41.3	1.1	12.2	7.8
De minimis Levels[c]	100	50	50	n/a	n/a	n/a
Presumed to conform[c]	**Yes**	**Yes**	**Yes**	**n/a**	**n/a**	**n/a**

Refer to Table 5-18.2 for notes.

Source: KB Environmental Sciences, 2008.

Table 5-18.5

2012 Construction-Related Air Emissions Inventory (Annual tons) Combined with 2015 Most Conservative Proposed Action Alternative Emissions[a]

	CO	VOC	NO_x	SO_x	PM_{10}	$PM_{2.5}$
2015 Most Conservative Proposed Action Alternative[ii]						
Aircraft	426	133	1,004	92	22	22
GSE/APU	193	7.4	31	2.3	1.0	0.9
Stationary Sources	4.1	3.5	13	4.0	0.7	0.7
Motor Vehicles (on-site)	35	1.6	3.7	0.0	0.8	0.6
Motor Vehicles (off-site)	141	5.4	34	0.3	3.1	2.0
2012 Construction	12	2.9	22	<0.1	10	5.9
Total	811.1	153.8	1107.7	98.7	37.6	32.1
2015 No Action Alternative[iii]						
Aircraft	408	132	1,001	91	22	22
GSE/APU	193	7.4	31	2.3	1.0	0.9
Stationary Sources	3.7	3.5	12	4.0	0.6	0.6
Motor Vehicles (on-site)	32	1.5	3.4	0.0	0.7	0.6
Motor Vehicles (off-site)	141	5.4	34	0.3	3.1	2.0
Total	777.7	149.8	1,081.4	97.6	27.4	26.1
Difference	33.4	4.0	26.3	1.1	10.2	6.0
De minimis Levels[c]	100	50	50	n/a	n/a	n/a
Presumed to conform[c]	**Yes**	**Yes**	**Yes**	**n/a**	**n/a**	**n/a**

Refer to Table 5-18.2 for notes.

Source: KB Environmental Sciences, 2008.

Table 5-18.6
2013 Construction-Related Air Emissions Inventory (Annual tons) Combined with Most Conservative Proposed Action Alternative Emissions[a]

	CO	VOC	NO_x	SO_x	PM_{10}	$PM_{2.5}$
2015 Most Conservative Proposed Action Alternative[ii]						
Aircraft	426	133	1,004	92	22	22
GSE/APU	193	7.4	31	2.3	1.0	0.9
Stationary Sources	4.1	3.5	13	4.0	0.7	0.7
Motor Vehicles (on-site)	35	1.6	3.7	0.0	0.8	0.6
Motor Vehicles (off-site)	141	5.4	34	0.3	3.1	2.0
2013 Construction	0.2	0.0	0.2	<0.1	2.4	0.4
Total	799.3	150.9	1085.9	98.7	30	26.6
2015 No Action Alternative[iii]						
Aircraft	408	132	1,001	91	22	22
GSE/APU	193	7.4	31	2.3	1.0	0.9
Stationary Sources	3.7	3.5	12	4.0	0.6	0.6
Motor Vehicles (on-site)	32	1.5	3.4	0.0	0.7	0.6
Motor Vehicles (off-site)	141	5.4	34	0.3	3.1	2.0
Total	777.7	149.8	1,081.4	97.6	27.4	26.1
Difference	21.6	1.1	4.5	1.1	2.6	0.5
De minimis Levels[c]	100	50	50	n/a	n/a	n/a
Presumed to conform[c]	**Yes**	**Yes**	**Yes**	**n/a**	**n/a**	**n/a**

Refer to Table 5-18.2 for notes.

Source: KB Environmental Sciences, 2008.

5.18.5 Historic, Architectural, Archaeological, and Cultural Resources

All impacts identified for the West Terminal Alternative (Preferred Alternative) and the East Terminal Alternative would be the result of construction (as opposed to operation). Impacts would result from the removal or alteration of the buildings identified as significant resources.

5.18.6 Biotic Communities / Threatened & Endangered Species

Construction at SDIA would either comply with the Biological Opinion (BO) measures for construction crews working on facility improvements, as described in Chapter 4.6, *Affected Environment* (e.g., implementing a construction-worker education program, constraining ingress and egress routes to at least 1,200 feet from the ovals, lowering crane booms when not in use, ensuring that trash would be properly disposed, and not feeding potential tern predators in the area) or include negotiated mitigation measures similar to those identified in Section 5.9.5, *Mitigation Measures*, to reduce the potential for adverse effect on the California least tern during nesting season. The SWMP requirements combined with mitigation measures discussed in Section 5.17, *Hazardous Materials and Solid Waste*, would avoid significant construction-related effects associated with contaminated sediments.

Through compliance with the BO (or negotiated California least tern construction mitigation measures) and the measures addressed in Sections 5.6 *Water Quality* and 5.17 *Hazardous Materials and Solid Waste*, impacts associated with construction of the West Terminal Alternative (Preferred Alternative) and the East Terminal Alternative projects would be less-than-significant. This assessment reflects, in part, the distances between the West Terminal Alternative (Preferred Alternative) and East Terminal Alternative project sites and the least tern nesting ovals and the absence of other sensitive biological resources on Airport.

5.18.7 Coastal Resources

With the implementation of water quality best management practices (BMPs) and other stormwater pollution measures identified in the SWPPP (see Section 5.6, *Water Quality*), construction activities would not have a significant effect on coastal act policies.

5.18.8 Natural Resources and Energy Supply

Construction of the alternatives would require water for dust suppression, and would generate small amounts of construction waste and construction debris. In addition, minimal wastewater is expected to be generated during construction. These utility and service needs would be within the capacity of the respective utility and service systems and would not cause a significant impact.

As discussed in Section 5.15, construction of the West Terminal Alternative (Preferred Alternative) and the East Terminal Alternative facilities could also require that existing utility infrastructure be relocated. Prior to severing existing utility lines, replacement lines would be brought into service. Accordingly, disruptions in service would be avoided or limited to the short amount of time necessary to make new connections. All utility relocation would be conducted in close coordination with (or by) the respective service providers. Accordingly, construction impacts on utilities and service systems would not be significant.

5.18.9 Light Emissions and Visibility

5.18.9.1 Light Emissions

Construction activities could create light or glare impacts during both daylight and non-daylight hours if safety and security lights were not positioned correctly. With the following improvement as a project component during construction those impacts would be reduced to a less than significant level.

- During construction activities, the construction contractor shall ensure that temporary construction-related lighting shall be arranged so that direct rays would not shine on or produce glare for adjacent street traffic, or community, biological or scientific resources.

5.18.9.2 Visibility

The West Terminal Alternative (with Parking Structure) (Preferred Alternative) results in two (2) short-term impacts during the course of construction. The first impact would be associated with the construction related activities. These activities would be visible by the public as they approach the Terminal 2 West buildings or from the public areas of Spanish Landing. These would include views of construction activities, storage and use of materials and equipment, truck traffic, stockpiling of soils and of the general construction staging areas at various locations. These visual changes to the airport facilities character, although short term, would be considered significant and require mitigation. With improvement as a project component during construction, those impacts would be reduced to a less than significant level.

- During construction activity, the construction contractor shall ensure that construction material; equipment and staging areas are screened from the public wherever feasible. Appropriate screening material, such as temporary fencing with opaque material, shall be used to buffer and screen views of construction activity and the construction site.

The second short-term impact would be lighting and glare during the course of construction. These impacts would typically be limited to nighttime lighting required for security purposes or related to nighttime construction work on the taxiways, terminal building and the parking structure. All construction lighting and security lighting would be required to meet FAA standards to insure that “spill-over” lighting does not occur and would not affect pilots using this facility. Also, the shielding of construction lighting would be required to avoid impacts to motorist accessing the airport or traveling on nearby streets such as North Harbor Drive. During construction, lighting and glare impacts would be reduced to a level of less than significant as follows:

During construction activity, the construction contractor shall ensure that construction material; equipment and staging areas are screened from the public wherever feasible. Appropriate screening material, such as temporary fencing with opaque material, shall be used to buffer and screen views of construction activity and the construction site.

Due to the similar nature of the East Terminal Alternative, the discussion on temporary construction-related impacts and the project improvements would also apply to this alternative.

The No Action Alternative would not result in any construction related aesthetics impacts because it does not propose any construction activities. No construction related impacts would occur under the No Action alternative.

5.18.10 Hazardous Materials and Solid Waste

5.18.10.1 Hazardous Materials

As discussed above in Section 5.17, *Hazardous Materials and Solid Waste*, elements of the West Terminal Alternative (Preferred Alternative) and the East Terminal Alternative are located in, or adjoining, areas of the Airport that contain hazardous materials and/or environmental contamination. For the Former NTC Landfill (Site No. 1), a *Remediation Plan* (published separately) would address all of the potential construction-related impacts including those associated with stormwater, surface traffic, waste management and waste disposal.[35] In the areas of the Former Rental Car Facility Fuel Farm (Site No. 2) and Former Lindbergh Field Fuel Farm (Site No. 3), petroleum-contaminated soil and/or groundwater may be encountered by the construction contractor. Therefore, the Plans and Specification for the Proposed Action would require the contractor(s) to include provisions for handling and disposing of these materials in accordance with state and local regulations, if it becomes necessary. The same precautions would be required for the Former General Dynamics Facility (Site No. 8).

During the construction of the West Terminal Alternative (Preferred Alternative) or the East Terminal Alternative, hazardous materials (i.e., fuel, waste oil, solvents, paint, and other hydrocarbon-based products) would be used in quantities that are typical of the construction industry. Again, the construction contract documents would require these materials be stored, labeled and disposed of in accordance with state and local regulations. The contractors would also be held responsible for reporting any discharges of hazardous materials or other similar substances (in amounts above their reportable quantities). Lastly, contractors will be required to stop work in the event that previously unknown contaminants are discovered during construction, or a spill occurs during construction, until the National Response Center is notified.

5.18.10.2 Solid Waste

Construction of the alternatives would generate small amounts of construction waste and construction debris. In addition, minimal wastewater is expected to be generated during construction. These utility and service needs would be within the capacity of the respective utility and service systems and would not cause a significant impact.

[35] A Community Health and Safety Plan has been developed for the former NTC Landfill (Ninyo & Moore, *Community Health and Safety Plan, Former Naval Training Center Inactive Landfill Clean Closure*, San Diego California, prepare for San Diego county Regional Airport Authority, March 13, 2006).

5.19 Cumulative Impacts

Consideration of potential cumulative impacts applies to the impacts resulting from the implementation of the Proposed Action, the Sponsor's Preferred Alternative. This analysis of potential cumulative impacts defines cumulative impacts, identifies potential categories, and presents the analysis of these categories.

NEPA Definition and Background

The concept of cumulative impacts addresses the potential for individually minor but collectively significant impacts to occur over time. CEQ Regulations, Section 1508.7, define Cumulative Impacts as the incremental impact of the action when added to the past, present, and reasonably foreseeable future actions regardless of the agency (federal or non-federal) undertaking such actions. CEQ Regulations (Section 1508.25) define the following types of actions that should be considered in assessing cumulative impacts.

- Connected actions are closely related and should be discussed in the same NEPA document. Actions are connected if they meet one or more of the following criteria:
    - Actions that automatically trigger other actions which may require an Environmental Impact Statement (EIS).
    - Actions that cannot or would not be proceed unless other actions are taken previously or simultaneously.
    - Actions that are interdependent parts of a larger action and depend upon that action for their justification.
- Cumulative actions, when considered with other proposed actions, have cumulatively significant impacts and should therefore be discussed in the same NEPA document.
- Similar actions that have similarities such as timing or location with other reasonably foreseeable or proposed projects provide a basis for evaluating their environmental impacts in the same NEPA document.

5.19.1 Application Plans and Policies

The West Terminal Alternative (with and without Parking Structure) does not trigger another action, can be implemented without any other actions, and is not part of a larger action. Therefore, the West Terminal Alternative considered in this EA is an independent action. Cumulative impacts were evaluated by considering recently completed, underway, and possible future projects in and around SDIA.

Given the anticipated geographic scope of cumulative impacts, the cumulative analysis for the Proposed Action is based on the following plans:

City of San Diego General Plan

- General Plan Housing Element, August/November 2001
- Strategic Framework Element, Sept 2002
- General Plan, March 2008

Community Plans/Precise Plans

- Final EIR for the Proposed San Diego Downtown Community Plan, Centre City Planned District Ordinance and 10th Amendment to the Redevelopment Plan for the Centre City Redevelopment Project, Volume 1A, January 2006
- Midway/Pacific Highway Corridor Community Plan, January 1999
- North Bay Revitalization Area Final EIR, March 1998
- Old Town San Diego, Community Plan, July 1987
- Peninsula Community Plan, September 1989

- Uptown Community Plan, February 1988/October 1989
- Redevelopment Agency, Naval Training Center/Liberty Station Precise Plan/EIR, January 2000/September 2001

San Diego Association of Governments (SANDAG) Regional Plans

- Regional Comprehensive Plan 2004
- Mobility 2030, The Transportation Plan for the San Diego Region, April 2003
- Draft 2007 Regional Transportation Plan, June 2007

Port of San Diego Plans

- Port of San Diego Master Plan, August 2004
- COMPASS Strategic Plan, 2007-2011, June 2006
- North Embarcadero Alliance Visionary Plan, December 1998 (in conjunction with the Centre City Development Corporation, the City of San Diego, the County of San Diego and the United States Navy); EIR certified April 2000
- Harbor Island Redevelopment (Staff Report), December 2005
- Woodfin Hotel Suites DEIR, February 2006
- Sunroad Marina Notice of Preparation of a DEIR, February 2006
- America's Cup Harbor Redevelopment Plan, June 2003

The community plans and precise plans provide a more detailed level of planning for specific segments of the City than that provided by the more comprehensive General Plan. In the same way, the Port of San Diego Master Plan is supplemented by several more specific plans for certain areas.

The major planning documents are described below, highlighting their growth projections and related anticipated environmental impacts.

City of San Diego General Plan

Until recently, the Progress Guide and General Plan, adopted in 1992, governed development in the City of San Diego. On March 10, 2008, however, the City of San Diego Council adopted a new General Plan to guide development in the City.

The recently adopted General Plan presents ten elements that together provide a comprehensive "blueprint" for the City of San Diego's evolution over the next twenty years and beyond. Planned growth is based on a strategy called the City of Villages, which focuses on pedestrian-friendly, mixed-use village centers that are linked by a high quality transit network, and served by public facilities and supporting infrastructure and amenities. The village centers are designed to maintain the unique character of each of San Diego's many neighborhoods, while facilitating connections among jobs, residences, local shopping, services, and public amenities such as parks and libraries. Growth is directed primarily toward aging commercial shopping areas, with the intention of protecting natural open spaces and single-family neighborhoods from development pressure.

The General Plan is composed of ten interlinked elements described below:

- Strategic Framework. Contains citywide goals, the comprehensive City of Villages strategy, overall policy direction for future community plan updates and amendments and the implementation program. The following summaries of the other plan elements are excerpted from the Strategic Framework element.
- Land Use and Community Planning Element. Provides policies to implement the City of Villages strategy within the context of San Diego's community planning program. The Land Use and Community Planning Element addresses land use issues that apply to the City as a whole and identifies the community planning program as the mechanism to designate land uses, identify site-specific recommendations, and refine citywide policies as needed.

- Mobility Element. The Mobility Element contains policies to promote a balanced, multi-modal transportation network intended to get people where they want to go and to minimize environmental and neighborhood impacts.
- Urban Design Element. Urban Design Element policies are intended to capitalize on San Diego's natural beauty and unique neighborhoods by calling for development that respects the natural setting, enhances the distinctiveness of our neighborhoods, strengthens the natural and built linkages, and creates mixed-use, walkable villages throughout the City.
- Economic Prosperity Element. The Economic Prosperity Element seeks to help create an environment that fosters creativity and allows San Diego to better compete in the regional, national, and global economic setting. The Economic Prosperity Element links economic prosperity goals with land use distribution and employment land use policies. The Economic Prosperity Element also expands the traditional focus of a general plan to include economic development policies that have a less direct effect on land use. These include policies aimed at supporting existing and new businesses that reflect the changing nature of industry, creating the types of jobs most beneficial to the local economy, and preparing our workforce to compete for these jobs in the global marketplace. The Economic Prosperity Element also describes how the formation of redevelopment project areas can be used to help implement community goals.
- Public Facilities, Services, and Safety Element. The Public Facilities, Services, and Safety Element is intended to respond to the challenge of providing adequate public facilities to serve the City's current and future population through policies that address public financing strategies, public and developer financing responsibilities, prioritization, and the provision of specific facilities and services that must accompany growth. The policies within the Public Facilities Element also apply to transportation, and park and recreation facilities and services.
- Recreation Element. The goals and policies of the Recreation Element were developed to take advantage of the City's natural environment and resources, to build upon existing recreation facilities and services, to help achieve an equitable balance of recreational resources, and to adapt to future recreation needs.
- Conservation Element. The Conservation Element contains policies intended to guide the conservation of resources that are fundamental components of San Diego's environment, that help define the City's identify, and that are relied upon for continued economic prosperity.
- Noise Element. The Noise Element provides goals and policies to guide compatible land uses and the incorporation of noise attenuation measures for new uses to protect people living and working in the City from an excessive noise environment.
- Housing Element. The Housing Element identifies and analyzes the City's housing needs; establishes goals, objectives and policies based on those needs; and sets forth a five-year program of actions to achieve, as fully as possible, the identified goals and objectives. As mandated by State law, the Housing Element is updated every five-years. The Housing Element is provided under separate cover from the rest of the General Plan due to the need for frequent Housing Element updates, and to facilitate compliance with the state reporting requirements.

Community and Redevelopment Plans

Downtown Community Plan

The Downtown community planning area, encompassing roughly 1,450 acres, immediately adjoins SDIA to the southwest. This area is the focus of intense planned development, both commercial and residential, which is to be guided by the goals and policies presented in the Downtown Community Plan and associated documents. Projected expansion by land use and district within the Downtown area is presented in **Table 5-19.1**.

Midway/Pacific Highway Corridor Community Plan

The Midway/Pacific Highway Corridor borders the project site along the east and northeast. This area encompasses approximately 800 acres of relatively flat land, divided into two zones: the northern Midway area and the narrow, linear Pacific Highway Corridor. The area is currently used primarily for urbanized

Table 5-19.1

Existing vs. Proposed Land Use by District

Land Use Type	Existing	Proposed Buildout
Little Italy District		
Residential	1,974 units	7,970 units
Office	978,853 s.f.	1,925,401 s.f.
Civic Office	208,000 s.f.	208,000 s.f.
Culture and Education	20,300 s.f.	63,903 s.f.
Retail	266,191 s.f.	380,607 s.f.
Hotel Rooms	1,134 rooms	1,261 rooms
Other	--- s.f.	--- s.f.
Cortez District		
Residential	2,700 units	6,238 units
Office	716,737 s.f.	1,192,836 s.f.
Civic Office	85,831 s.f.	85,831 s.f.
Culture and Education	125,000 s.f.	327,761 s.f.
Retail	67,300 s.f.	187,744 s.f.
Hotel Rooms	635 s.f.	667 s.f.
Other	--- s.f.	--- s.f.
Civic/Core District		
Residential	684 units	1,274 units
Office	4,169,900 s.f.	4,916,716 s.f.
Civic Office	1,085,618 s.f.	2,857,072 s.f.
Culture and Education	139,500 s.f.	124,500 s.f.
Retail	253,000 s.f.	402,000 s.f.
Hotel Rooms	1,116 s.f.	1,530 s.f.
Other	--- s.f.	--- s.f.
Columbia District		
Residential	1,132 units	3,859 units
Office	2,503,031 s.f.	6,043,011 s.f.
Civic Office	939,871 s.f.	3,290,227 s.f.
Culture and Education	115,495 s.f.	151,464 s.f.
Retail	183,880 s.f.	685,234 s.f.
Hotel Rooms	2,003 s.f.	4,321 s.f.
Other	--- s.f.	--- s.f.

Source: Centre City Development Corporation. Final EIR for the Proposed San Diego Downtown Community Plan, Centre City Planned District Ordinance and 10th Amendment to the Redevelopment Plan for the Centre City Redevelopment Project, Volume 1A, January 12, 2006.

commercial and industrial purposes. A few multi-family residential complexes are located in the western portion of the Midway area, bordering Point Loma.

The Midway/Pacific Highway Corridor Community Plan, as amended in 1999, governs development in this area. Four amendments to the Midway/Pacific Highway Corridor Community Plan are currently under consideration by the City of San Diego. Of these, three could change commercial or light industrial land use designations to allow for residential development, as listed in **Table 5-19.2**. The fourth amendment would remove the Bay-to-Bay link[36] from the community plan.

The Midway/Pacific Highway Corridor Community also is encompassed by the North Bay Redevelopment Project and Revitalization Area plan, described below.

North Bay Revitalization Area

In addition to the Midway/Pacific Highway Corridor Community Plan, the area described above is also subject to the goals and policies of the North Bay Redevelopment Project and the North Bay Revitalization Area. The North Bay area includes the entire Midway/Pacific Highway Corridor, but also extends into parts of the northeastern section of the Peninsula community planning area, and further north along I-5, including small portions of the communities of Clairemont Mesa, Linda Vista, Old Town, and Uptown.

The development goals of the North Bay Redevelopment Project[37] include the following:

- Mixed-use/high density and multi-family residential uses;
- High-tech industrial and office uses to complement the Space and Naval Warfare Systems Command (SPAWAR) and the Naval Training Center re-use project;
- Light industrial manufacturing;
- Neighborhood commercial centers;
- Affordable housing;
- High-quality jobs;
- Traffic improvements; and
- Open space and community facilities.

Projects slated for development in the North Bay Redevelopment Project area include the following:

Commercial Development

- SPAWAR High Technology District. SPAWAR is a Navy facility responsible for the research, engineering, and management of all high technology systems for the U.S. Pacific fleet. The proposed SPAWAR District would include 40 to 70 acres of land, located at the interchange of I-5 and I-8, bound roughly by Pacific Highway, Barnett Avenue, Midway, Rosecrans and Camino del Rio. This district would offer large-floor plate, campus-style buildings, parking, shopping, and other amenities.
- YMCA. The Redevelopment Agency is contributing $575,000 to assist the Point Loma YMCA in a $5.5 million project to expand and improve their current facility.

Mixed Use Housing Projects

- Hancock Street Mixed-Use Project. The Redevelopment Agency is working with two local property owners to develop housing projects near the corner of Hancock and Washington Streets (Mission Brewery and Hancock Brickworks; see Table 5-19.2.

[36] The Bay-to-Bay Link would have entailed a park-lined canal leading from the San Diego Bay, via the former NTC Boat Channel, to Mission Bay.

[37] San Diego, City Of. North Bay Redevelopment Project. 1998.

Table 5-19.2
Proposed Midway/Pacific Highway Corridor Community Plan Amendments/Developments

	Mission Brewery	Laurel and Kettner Parking	Hancock Brickworks	Stella
Site Size (acres)	1.95 acres	0.85 acres	1.26 acres	0.89 acres
Current Land Use Designation	Commercial-Transportation	Industrial Small Lot Zone (IS-1-1) Zone	Light Industrial	Light Industrial
Proposed Land Use Designation	Multiple Use	Industrial Small Lot Zone (IS-1-1) Zone	Multiple Use	Very High Density Residential
Proposed Amendment/ Development	164,253 s.f. mixed use development (89 residential condos, 8 commercial condos with parking below)	Add 160,043 sq. ft. to existing 442,358 sq. ft. parking structure, adding additional 489 space	53 units, 21 of which would be live-work units	86 multi-family units
CEQA Document (Type, Date)	MND April 2006	MND May 2007	N/A (no application for specific project yet on file)	MND August 2005
Proposed Operation Date	Late 2007	Unknown	Unknown	2008

Sources:

City of San Diego Development Services, Land Development Review Division. Draft Mitigated Negative Declaration, Mission Brewery Villas. April 5, 2006.City of San Diego Planning Department (Personal communication, Tony Kempton, Community Planner);

City of San Diego Development Services Department (Personal communication, Cory Wilkinson, Development Project Manager); Draft MND for Laurel and Kettner Parking (May 2007);

City of San Diego. Report No. PC-05-021. Subject: Initiation of an Amendment to the Progress Guide and General Plan and the Midway/Pacific Highway Corridor Community Plan and Local Coastal Program to revise the land use designation on a 1.26-acre site from Light Industrial to Multiple Use. 1895 Hancock/Brickworks - Project No. 47051. January 6, 2005;City of San Diego. Report No. PC-05-302. Subject: Stella - Project No. 65484. Process Five. October 20, 2005.; Report No. PC-06-115, Mission Brewery Villas, April 27, 2006.

- Morena Vista Mixed Use Project. The Morena Vista mixed-use project is a $32 million project being developed by City Link Investments. It consists of 161 residential units, 18,500 square feet of retail space and additional parking to support the Trolley Line.
- Upper Voltaire Street Mixed-Use Project. The Upper Voltaire Street mixed-use project proposed by PacWest Enterprises, LLC would provide a proposed 28 residential units and 6 commercial units (4,750 square feet of retail). Two other in-fill projects are being considered on the same block of Voltaire.
- Vietnam Veterans of San Diego. The Vietnam Veterans of San Diego, a social services provider for homeless Veterans, is in the process of building a campus of supportive services for their clients located at 4141 Pacific Highway. This small campus will be home to their corporate office, a counseling center, an employment and educational center, a kitchen, dining area, and a multipurpose area. It will also provide a 224-bed rehabilitation facility with an additional 24 three-bedroom apartments for program graduates.

Old Town San Diego Community Plan

Just east of the Midway/Pacific Highway Corridor is the 230-acre Old Town Community Planning Area. Although separated from the project site by the narrow band of land adjoining the Pacific Highway, Old Town is close enough to the Airport to potentially contribute to and/or be subject to SDIA Master Plan-related cumulative environmental impacts.

The Old Town San Diego Community Plan, adopted in 1987 and designed to guide development for a period of approximately 20 years, has not been updated in recent years. The Plan directed that development of the area be oriented toward a mix of tourist-related and residential development, with the implementation of architectural and density controls to ensure compatibility with the historical atmosphere of the area.

According to the Old Town Community Planning Committee, little further development is planned in the area in the foreseeable future. Remaining room for new development is extremely limited, and combining lots is not permitted, so most current development takes the form of improvements to existing structures, such as the addition of rooms to existing hotels. The only large projects planned or in progress are the Caltrans "campus", consisting of three buildings (the largest of which is 5 stories high) in an area at the north end of Old Town that was previously slated for mixed-use development in the community plan; and the proposed construction of a new parking structure to be located at one of two possible sites.[38] In addition, Delaware North Companies Parks and Resorts, the new concessionaire for restaurants and retail stores in the former Bazaar del Mundo within Old Town State Historic Park, plans to begin operation of three new restaurants and 10 retail concessions in June 2006. The company plans to plans to invest about $12 million to upgrade and renovate the historic structures that will include the new restaurants and retail stores, to be renamed Plaza del Pasado.

Peninsula Community Plan

To the north of SDIA is the 4,409-acre (approximately seven-square-mile) Peninsula community planning area, governed by the Peninsula Community Plan, as amended in September 1989. This highly urbanized community consists of 11 fairly distinct residential neighborhoods, several commercial districts, a university, three major regional recreational areas (Sunset Cliffs, Shelter Island and Cabrillo National Monument), and the former Naval Training Center (see discussion of the Naval Training Center/Liberty Station Precise Plan/EIR below).

Many of the neighborhoods of the Peninsula community are designated as "protected" single-family neighborhoods with densities in the range of two to nine dwelling units/acre, in which all development or redevelopment is limited to single-family residential use. Multi-family developments are located in several other neighborhoods, most notably adjacent to the Midway community planning area.

The Peninsula Community Plan has not been updated in recent years. It envisioned the continued domination of the southern portion of the peninsula by Navy-related industry and the Cabrillo National Monument, with single-family residential uses occupying the majority of the rest of the area. Commercial recreational uses were expected to be prevalent in Shelter Island, North Harbor Drive and adjacent parts of Roseville, with the Roseville core/Rosecrans Street being the focus of community commercial uses, and neighborhood commercial development along Voltaire Street. Goals include conserving open space, public view access, and the character of existing single-family neighborhoods, while reducing traffic congestion and airport noise pollution, improving the transit network, and promoting multi-family infill projects and appropriate development in the commercial core.

Development of the Naval Training Center in the northeast corner of the Peninsula community planning area is subject to more recent planning efforts described below.

Naval Training Center/Liberty Station Precise Plan

Immediately adjacent to the Airport to the north is the former Naval Training Center (NTC), which was transferred to the City of San Diego and established as a redevelopment area in 1997. A 361-acre portion of the NTC is being developed as "Liberty Station", under the NTC Precise Plan and Local Coastal Program, adopted in 2001. A 72-acre adjacent area remains under Navy ownership and is being developed as a military family housing complex. **Table 5-19.3** summarizes the planned NTC/Liberty Station development program.

One specific recent development proposal at Liberty Station is the proposed Nickelodeon/Marriott Hotel. This resort hotel will include a 650-room facility on 18 acres and will incorporate a 100,000-square-foot

[38] Richard Stegner, member of the Old Town Community Planning Committee, personal communication: August 9, 2005.

Table 5-19.3

NTC/Liberty Station Planned Development Program Summary

NTC Specific Planning Area	General Description	Gross Acreage	Total Gross Square Footage	New Construction	Rehabilitation
Residential Area	Market rate single-family and multi-family homes	37	36,000 (pool/gym)	350 units	36,000 (pool/gym)
Educational Area	Focus on public and/or private education for children/adults	22	495,000	--	495,000
Office/Research & Development	Primarily traditional office uses	22	380,000	380,000	--
Mixed Use Commercial Precinct: Office, retail, live/work lofts, restaurants, commercial recreational facilities, museums	Reuse of buildings primarily within historic district	107 60	625,000 324,000	--	625,000 324,000
Civic, Arts, Culture Precinct: Civic, arts, cultural, nonprofit, office, museums, restaurants, specialty retail, special education	Reuse of buildings primarily within historic district	25	301,000	--	301,000
Golf Course Precinct	Golf Course	22	--	--	--
Park and Open Space	Public use open space and park	46*	19,000 (child care center)	--	19,000 (child care center)
Boat Channel	Open water area for public use	54	--	To be determined	To be determined
Visitor Hotel Area	350 rooms	2*	33,000 (conference center)	350 rooms	33,000 (conference center)
Business Hotel Area	650 rooms	16*	--	650 rooms	--
Metropolitan Waste-water Department Area	Water-Testing Laboratory	9*	140,000	140,000	--

* This gross acreage includes the waterfront esplanade area.

Source: NTC Precise Plan and Local Coastal Program, September 2001.

water park and activity deck complex featuring a variety of pools and interactive attractions. The resort is expected to begin construction in January 2008 and open in early 2010.

Uptown Community Plan

The Uptown Community Plan governs development in this approximately 2,700-acre area between Old Town and Balboa Park, northeast of the Downtown area, and separated from the Airport by the relatively narrow Pacific Highway Corridor. Development goals for Uptown include:

- Encouragement of mixed-use projects with residential use over street-level retail use;
- Public right-of-way improvements;
- Preservation of low-density single-family residential neighborhoods and open-space hillsides and canyons; and,
- Implementation of permanent height limits and other design elements to protect public views.

The Plan proposed land uses including 57 percent of the total area, or 1,013 net acres, designated for residential use (over half at low-density); 30 percent, or 533 acres, of parks, open space, schools, and institutional use; with the remainder designated for mixed commercial use.

At the time the Uptown Community Plan was produced in 1988/1989, the estimated buildout capacity for residential development was 25,410 dwelling units, compared to 20,275 dwelling units existing in 1987. This Plan has not been updated in recent years, although an Uptown Public Facilities Finance Plan was produced in October 2002. The Uptown Public Facilities Finance Plan indicated that development was proceeding according to Uptown Community Plan guidelines, and by 2002 had reached a total of 21,601 dwelling units. Construction of an additional 7,134 dwelling units by the year 2022 was predicted.

Regional Plans

SANDAG Regional Comprehensive Plan

The SANDAG Regional Comprehensive Plan (RCP), approved in 2004, provides the long-term planning framework for the San Diego region, intended to reflect and be implemented through updates of local and regional plans such as the community plans discussed above. The RCP focuses on the principles of sustainability and smart growth. SANDAG does not have the authority to make enforceable land use designations or approve proposed development projects (this authority lies with the respective local governments, such as the City of San Diego). Because of the RCP's regional focus and SANDAG's lack of land use jurisdiction, the SANDAG RCP does not identify proposed developments in the vicinity of SDIA. See below regarding SANDAG transportation projects.

Mobility 2030, The Transportation Plan for the San Diego Region and 2007 Regional Transportation Plan

Mobility 2030, The Transportation Plan for the San Diego Region[39] serves as the Regional Transportation Plan (RTP) for San Diego County. This plan is the product of collaboration between SANDAG, the 18 City governments in the area, the County government, the San Diego Metropolitan Transit Development Board (MTDB), the North San Diego County Transit District (NCTD) and the California Department of Transportation (Caltrans), as well as other agencies and many interest groups. Mobility 2030 was designed to coordinate with the smart growth program developed in the RCP described above, and focuses on expansion of travel choices (including buses, trolleys, trains and cars), integration of transit and roadway systems, taking advantage of new technologies, reducing demand on the transportation system during peak hours, and other region-wide changes.

The RTP contemplates possible long-term ground access improvements to the Airport including direct freeway ramps from I-5 to Pacific Highway, exclusive lanes for buses/high-occupancy vehicles (HOVs) between the Old Town Transit Center and the Airport, and intersection upgrades on Laurel Street.

Other transportation options in the Airport area that are planned or explored in the RTP include the following:

- A new freeway connection between I-5 and I-8 (for movement from East to North and from South to West);
- HOV/Managed lane facilities on I-5 from SR 54 in the south through the downtown area past the Airport to I-8;
- Implementation of signal timing programs;
- Improvements to the coastal rail corridor, including completion of double-tracking from downtown San Diego to Orange County;
- Possible high-speed rail connections from downtown San Diego through Orange County to Los Angeles;
- A review of the potential for consolidating intermodal rail, truck and air cargo freight facilities;
- New or improved transit services:

[39] SANDAG 2003.

- Increases in the existing blue and orange line trolley services;
- Services through the mid-coast from Old Town to Sorrento Mesa;
- Services from Escondido to Centre City and the Airport via I-15/SR 94;
- Services from Old Town to Kearney Mesa via Mission Blvd./Balboa Avenue; and
- Services from Coronado and Centre City to Sorrento Mesa via Hillcrest/Genesee Avenue.

An update the RTP is currently being prepared by SANDAG. The Draft 2007 RTP incorporates a new regional growth forecast, strategic initiatives from the Regional Comprehensive Plan, the Independent Transit Planning Review, and several other white papers on topics not previously covered in the RTP. The SANDAG Board of Directors accepted the Draft 2007 RTP and its Draft EIR for distribution and public comment in June 2007. The Final 2007 RTP and EIR were scheduled to come to the SANDAG Board for adoption in November 2007.

Port of San Diego

Port Master Plan

The Port of San Diego controls tidelands in the San Diego Bay area, including two planning districts in the area of the Proposed Action site: the Harbor Island/Lindbergh Field planning district and the Centre City/Embarcadero planning district. According to the Port of San Diego Port Master Plan (2004), the Port's mission is "to balance regional Economic Benefits, Recreational Opportunities, Environmental Stewardship and Public Safety while protecting Tidelands Trust resources on behalf of the citizens of California."

In the 995.4-acre Harbor Island/Lindbergh Field planning district (of which 815.4 acres are tidelands and 180 acres are submerged tidelands), a significant portion of the land is already developed and under long-term lease commitment. Only the east end of the Harbor Island peninsula is vacant; this is currently slated for hotel development (see below). The un-submerged land use allocations for this planning area are presented in **Table 5-19.4**.

Table 5-19.4
Harbor Island/Lindbergh Field Planning District Land Use Allocations

Land Use	Acres
Commercial	90.6
Airport-Related Commercial	38.0
Commercial Recreation	52.6
Industrial	631.8
Aviation-Related Industrial	130.6
Industrial Business Park	33.1
International Airport	468.1
Public Recreation	26.2
Open Space	7.5
Park	16.4
Promenade	2.3
Public Facilities	66.8
Harbor Services	1.3
Streets	65.5
Total Land Area	815.4

Source: Unified Port District of San Diego, Port Master Plan, August 2004.

The Port of San Diego is currently evaluating proposed changes to the Harbor Island/Lindbergh Field Planning District. These include deleting SDIA from the Port Master Plan, as well as the proposed Woodfin Suites Hotel & Port Master Plan Amendment project and the East Harbor Island Redevelopment, described separately below.

The City Centre/Embarcadero planning district adjoins the Proposed Action site on its southern boundary, and encompasses 441.3 acres, of which 245.2 acres are tidelands and 196.1 acres are submerged tidelands. The un-submerged land use allocations for this planning area are presented in **Table 5-19.5**.

A portion of the Port's City Centre/Embarcadero planning district is also within the North Embarcadero Alliance Visionary Plan, which is described below.

COMPASS Strategic Plan

The Port's 2006 COMPASS Strategic Plan identifies a number of action items for 2007-2011 that may result in development projects with the potential to incrementally contribute to cumulative impacts in the SDIA area. These include:

- Determine highest and best use for Navy Pier;
- Complete North Harbor Drive vacation and initiate construction of necessary road improvements;
- Implement Historic Waterfront and redevelopment of the old police station site;

Table 5-19.5
City Centre/Embarcadero Planning District Land Use Allocations

Land Use	Acres
Commercial	109.8
Commercial Fishing	4.7
Commercial Recreation	105.1
Industrial	29.2
Aviation-Related Industrial	22.3
Marine Terminal	6.9
Public Recreation	59.5
Open Space	0.5
Park/Plaza	51.3
Promenade	7.7
Public Facilities	46.7
Streets	46.7
Total Land Area	245.2

Source: Unified Port District of San Diego, Port Master Plan, August 2004.

- Monitor construction and hold ribbon-cutting ceremony for the new Hilton Convention Center Hotel;
- Implement Phase 1 of North Embarcadero Visionary Plan;
- Implement America's Cup Harbor projects for redevelopment of Shelter Island entrance;
- Negotiate and implement the option agreement(s) and monitor milestones on Lane Field development project, inclusive of the construction of a new Cruise Ship Terminal on B Street pier;
- Review, approve and facilitate tenant redevelopment plans for Harbor Island;
- Implement the option agreement and monitor milestones for the Spinnaker Hotel; and
- Evaluate and develop a plan for the best use of Pacific Highway complex.

Specific development proposals and/or projects under construction that are consistent with the Port District's identified action items are summarized below.

- Cruise Terminal Expansions. The Port District is currently evaluating proposed development concepts for the Broadway Pier and B Street Cruise Terminal Pier that would improve these facilities to serve projected growth in the San Diego cruise ship market. The improvements would be intended to meet transportation security requirements, increase terminal capacity, and improve the experience of cruise passengers, including those on transient and homeported cruise ships. Potential development concepts are undergoing evaluation and neither pier has a set schedule for its planned major upgrade. Renovation of Broadway Pier to strengthen its pier deck is, however, ongoing and expected to be completed in 2008.[40]

- Lane Field Redevelopment. This proposed redevelopment project, named for the former athletic field located near B Street and Harbor Drive, includes two elements, Lane Field North and Lane Field South. The Port District Board has approved the development of a 500 to 550 room hotel on Lane Field South and a 250 to 300 room hotel on Lane Field North. These projects are currently undergoing review to determine if any additional environmental analysis is required under CEQA, or if the projects are adequately addressed under the Port Master Plan and its associated EIR.[41]

- West Island Palms West Hotel. The Port District approved the Island Palms West Hotel project in October 2006. The proposed Island Palms West Hotel Project, which would be located on Shelter Island, includes demolition and removal of the former Voyager Restaurant building of approximately 11,627 square feet; construction of a new three-story hotel building of approximately 25,600 square feet that includes 48 guest rooms plus marina offices and facilities; remodeling of the existing building to provide 77 guestrooms, an approximately 1,560-square foot two-story main lobby, and an approximately 1,330-square foot dining area; and other related elements.[42]

- Hilton San Diego Convention Center Hotel. This hotel project, located adjacent to the San Diego Convention Center, includes a 385 foot tower, 106,000 square feet of meeting space, 5,360 square feet of retail space, a 23,082 square-foot health club, 1,200 private rooms, a 14,000 square-foot restaurant, and a 4.3-acre public park. This project is currently under construction, with completion targeted for December 2008.[43, 44]

- Redevelopment of Old Police Headquarters and Harbor Seafood Mart. The planned redevelopment of the old police headquarters site includes retention and adaptive reuse of the old police headquarters for a mix of specialty retail, entertainment and restaurant uses; demolition of Harbor Seafood Mart and development of a smaller facility to incorporate commercial fishing uses, a waterfront fish restaurant and retail spaces; reconfiguration of parking lots; and new public park and plaza areas. Construction is expected to be complete in 2008.[45]

- East Harbor Island Redevelopment. The Port District is evaluating redevelopment of approximately 17.8 acres of east Harbor Island with a 600-room hotel, over 21,000 square feet of meeting space, restaurants, retail, public plazas and promenades and associated public infrastructure. The proposed site includes approximately 2.10 acres of water area and 15.70 acres of land area currently developed with two restaurants (one of which would be incorporated as part of the project), a 600-slip marina (which would remain, albeit with new marina buildings and other improvements), and a surface parking lot for airport employees.

- Woodfin Suites Hotel Project. The proposed Woodfin Suites Hotel Project involves the demolition

[40] San Diego Unified Port District, JPA/NEVP Presentation on Cruise Terminals (PowerPoint), July 26, 2007; Press Release: Port of San Diego to go Mediterranean with Moorings for Mega Yachts. July 18, 2007; Press Release: Broadway Pier to Close Temporarily for Improvement Project. March 29, 2007.

[41] San Diego Unified Port District; Port of San Diego website. http://www.portofsandiego.org/. Accessed on August 6, 2007.

[42] San Diego Unified Port District, Island Palms West Hotel Notice of Determination. As referenced on CEQAnet (http://www.ceqanet.ca.gov). October 12.

[43] San Diego Unified Port District; Port of San Diego website. http://www.portofsandiego.org/. Accessed on August 6, 2007.

[44] Hensel Phelps Construction, Hilton San Diego Convention Center Hotel project website. http://www.destinationwebcam.com/HenselPhelps/. Accessed on August 6, 2007.

[45] San Diego Unified Port District; Port of San Diego website. http://www.portofsandiego.org/. Accessed on August 6, 2007.

of all existing structures on the 3.79-acre filled tidelands portion of the project site on West Harbor Island, and the construction and operation of a 165,000-foot structure, to include an eight-story (maximum 140-suite) hotel, and a 12,500-square-foot clubhouse (including spa and restaurant). In addition, 401 parking spaces would be provided (including 59 underground spaces within the hotel structure), as well as a two-story, approximately 11,200-square-foot marina services building, and an approximately 1,120-linear-foot seawall topped by a public promenade, along the northern limit of tidelands within the property. The Final EIR for the Woodfin Project was approved in July 2006.

Woodfin Suites Hotel and Port Master Plan Amendment Project

On February 8, 2006, the Port of San Diego issued for public review the Draft EIR for the Woodfin Suites Hotel and Port Master Plan Amendment Project (Woodfin Project). The Draft EIR analyzes the Proposed Action and six alternatives. The proposed Woodfin Project involves the demolition of all existing structures on the 3.79-acre filled tidelands portion of the project site in West Harbor Island, and the construction and operation of a 165,000-foot structure, to include an eight-story (maximum 140-suite) hotel, and a 12,500-square-foot clubhouse (including spa and restaurant). In addition, 401 parking spaces would be provided (including 59 underground spaces within the hotel structure), as well as a two-story, approximately 11,200- square-foot marina services building, and an approximately 1,120-linear-foot seawall topped by a public promenade, along the northern limit of tidelands with in the property.

The Draft EIR indicates that the Woodfin project would result in significant but mitigable to less-than-significant impacts to air quality, geology and coastal processes, hazards and hazardous materials, noise, public services and utilities, and transportation/traffic/parking. The Draft EIR also concludes that by 2030, the Woodfin Project would contribute to a significant cumulative noise impact because noise levels at the site would increase by at least 3 dB.

Sunroad Harbor Island Hotel & Port Master Plan Amendment

The Port of San Diego is evaluating a proposal to redevelop approximately 17.80 acres of east Harbor Island with a 600-room hotel, over 21,000 square feet of meeting space, restaurants, retail, public plazas and promenades and associated public infrastructure. The Port of San Diego completed a staff report on the proposed redevelopment in December 2005 and issued a Notice of Preparation of a DEIR on February 6, 2006.

The proposed site includes approximately 2.10 acres of water area and 15.70 acres of land area currently developed with two restaurants (one of which would be incorporated as part of the project), a 600-slip marina (which would remain, albeit with new marina buildings and other improvements), and a surface parking lot for airport employees.

The Port's proposed project would consist of a phased development, ultimately including the following elements:

- Demolition of all existing structures on site except the Island Prime Restaurant and the Reuben E. Less Sternwheeler (which would eventually be dismantled or relocated);
- Hotel space totaling 600 rooms, including two hotel towers up to 280 feet tall, a full-service restaurant, pool terrace and approximately 15,000-square-foot spa, and 53,000 square feet of flexible indoor meeting and function space;
- Three additional restaurants, dock and dine as well as water taxi facilities within the existing marina, and retail uses at various locations in the proposed development;
- New marina buildings to replace existing marina structures;
- Up to 1,500 surface and structured parking spaces to be built in phases;
- Landscaping improvements, including a 1.75-acre central square surrounded by the retail and restaurant plaza, meandering landscaped pathways and an improved promenade along the bay;
- Narrowing of Harbor Island Drive from four lanes to three lanes; and
- Replacement and relocation of the existing traffic circle at the end of Harbor Island Drive with a smaller turnaround.

The possibility of operating a portion of the hotel under a time-share concept is also being explored.

As noted above, the Port is currently preparing a DEIR to address the proposed project. If approved, construction could potentially begin late in 2007, with completion of the first phase of the project in 2009.

Shelter Island/America's Cup Harbor Redevelopment

The Port Master Plan was amended in 2003 to include a redevelopment plan for the America's Cup Harbor portion of the Shelter Island planning area. The plan includes both physical modifications and land use changes intended to promote the redevelopment of the America's Cup Harbor and enhance public access linkages, waterfront promenades and recreational opportunities throughout the area. It proposes redevelopment of the former Tarantino's Restaurant site, Sun Harbor Marina, the Kettenburg Boatyard, and the former Bay City Marine site. The plan also includes consolidation of buildings and redistribution of parking and added shoreline walkway in the Shelter Island Drive corridor; street enhancement to North Harbor Drive; development of a continuous public promenade, additional park acreage, public parking; and associated land use changes.

North Embarcadero Alliance Visionary Plan

The North Embarcadero Alliance Visionary Plan, dated December 1998, is intended to guide development along the City's North Embarcadero (including a portion of the Port of San Diego's City Centre/Embarcadero Planning District). This document is the outcome of an alliance among five government agencies with significant ownership and/or jurisdictional interests in the area; these include, in addition to the Port of San Diego, the Centre City Development Corporation, the City of San Diego, the County of San Diego and the United States Navy. The plan envisions a mix of hotel, retail, office, residential and entertainment uses, as well as public parks and cultural facilities, all encouraging a water orientation. Water uses include specific areas for commercial fishing berthing, public boat docking and the ferry landing, ship anchorage, marine terminal berthing, and boat/ship navigation corridors. Eventually, the full build-out of the North Embarcadero area could culminate in up to 3.0 million square feet of office space, 175,000 square feet of restaurant, retail and entertainment uses, 3,500 hotel rooms, 100,00 square feet of cultural facilities, 800 residential units, a home port cruise ship terminal with associated customs and immigration facilities, and over 12,000 parking spaces.

5.19.2 Summary of Cumulative Impacts

Table 5-19.6, below, provides a summary of the potential cumulative impacts for each impact category considered in this EA.

Table 5-19.6

Summary of Cumulative Impacts by Topic

Topic	EA Section	Incremental contribution to significant cumulative impact?
Noise	5.1	The SDCRAA is not currently aware of any proposed projects that would create cumulative noise impacts in combination with aircraft and highway noise exposure levels.
Compatible Land Use	5.2	Cumulative developments envisioned would be consistent with the land uses defined in the area's Community Plans or in the Port Master Plan. Consequently, these future developments when combined with the Proposed Project would not result in any significant land use impacts.
Socioeconomic Impacts	5.3	West Terminal Alternative would not incrementally contribute to a significant cumulative socioeconomic impact because the West Terminal Alternative would not require relocation of residents, demolish or relocate residences, impact levels of service on off-Airport streets in immediate vicinity to the Airport, or measurably affect jobs/housing balance.
Secondary Impacts	5.4	The West Terminal Alternative projects would result in both short- and long-term increases in employment (e.g., construction workers, airline personnel, on-Airport parking lot attendants). Within the context of the San Diego area's large labor pool, the number of new jobs would be nominal and would not cause a noticeable change in the regional jobs/housing balance or (un)employment figures. The West Terminal Alternative would not result in noticeable noise increases off-Airport. Accordingly, the West Terminal Alternative is not expected to alter the quality of life at neighborhoods near SDIA and/or under its approach and departure flight paths; these communities would not incur a physical change as a result of the project's social effects.
Air Quality	5.5	Conservatively high background concentrations levels were modeled to account for air emission sources outside of the study area; therefore, cumulative impacts were assessed. In this way, the impacts discussion is reflective of the combined impacts from both airport and non-airport sources of air emissions on existing and future-year ambient air quality conditions. Therefore, the West Terminal Alternative (with Parking Structure) (Preferred Alternative) will not have cumulatively significant air quality impacts.
Water Quality	5.6	As SDIA projects must adhere to the Stormwater Management Plan, water quality impacts will be less than significant both individually and cumulatively under the West Terminal Alternative.
Department of Transportation: Section 4(f)	5.7	West Terminal Alternative would not incrementally contribute to a significant cumulative impact because it would have an effect on Section 4(f) resources or historic resources.
Historic, Architectural, Archaeological, Paleontological, and Cultural Resources	5.8	The West Terminal Alternative would not incrementally contribute to a significant cumulative impact because there are no incremental impacts to historic/cultural resources.
Fish, Wildlife, and Plants	5.9	The West Terminal Alternative would not incrementally contribute to a significant cumulative impact because the individual projects will not directly affect sensitive vegetation communities or valuable habitat.
Wetlands	5.10	The West Terminal Alternative would not incrementally contribute to a significant cumulative impact because no wetlands would be affected by the West Terminal Alternative.
Floodplains	5.11	West Terminal Alternative would not incrementally contribute to a significant cumulative impact because the SDIA Study Area is not within the 100-year floodplain.
Wild and Scenic Rivers	5.12	West Terminal Alternative would not incrementally contribute to a significant cumulative impact because no Wild and Scenic Rivers are

Table 5-19.6
Summary of Cumulative Impacts by Topic

Topic	EA Section	Incremental contribution to significant cumulative impact?
		located within the SDIA Study Area.
Farmland	5.13	West Terminal Alternative would not incrementally contribute to a significant cumulative impact because the alternatives would not affect prime or unique farmland.
Coastal Resources	5.14	West Terminal Alternative would not incrementally contribute to a significant cumulative impact to coastal resources because it is consistent with the coastal resources management and planning policies of the California Coastal Act, and because other developments in the Coastal Zone also would be required to be consistent with these policies.
Natural Resources and Energy	5.15	West Terminal Alternative would not incrementally contribute to a significant cumulative impact because service providers would be able to accommodate proposed SDIA improvements and other projected developments.
Light Emissions and Visual Impacts	5.16	West Terminal Alternative would not incrementally contribute to a significant cumulative impact in light emissions because it would not significantly alter the perception of the area as an illuminated urban environment. It would not incrementally contribute to significant cumulative impact in visual impacts because the Proposed Action is in compliance with plans and policies regarding both on site and surrounding areas.
Hazardous Materials and Solid Waste	5.17	West Terminal Alternative would not incrementally contribute to a significant cumulative impact because actions would be taken during construction to limit potential for impacts and hazards associated with the NTC and other sites would be mitigated separately. West Terminal Alternative also would not incrementally contribute to a significant cumulative impact in solid waste because service providers would be able to accommodate proposed SDIA improvements and other projected developments.
Construction Impacts	5.18	West Terminal Alternative would not incrementally contribute to a significant cumulative impact because construction impacts would be reduced with mitigation measures during construction to limit potential for impact and hazards associated with construction.

Chapter Six: Agency and Public Involvement

Public and agency involvement meetings are conducted to ensure that information about the Sponsor's Proposed Action is provided to the general public and public agencies. The following sections discuss the consultation with the public, interested parties, and public agencies completed to fulfill the requirements of the NEPA process.

The EA was circulated for public review and comment period. The review period was initiated on November 24, 2008 and concluded on January 16, 2009, allowing more than 45 days for review. The last comment on the Draft EA was received on January 20, 2009. During this time, interested parties, responsible agencies, and the general public were allowed to review the document and provide comments on its contents. **Table 6.1** provides the agencies that were sent hard copies of the Draft EA:

Table 6.1
Agencies in receipt of Draft EA

Federal
U.S. Department of Agriculture
U.S. Marine Corps
Environmental Protection Agency
U.S. Fish & Wildlife Services
U.S. Army Corps of Engineers
State
California Air Resources Board
California Dept. of Conservation
Cal EPA
California Ocean Protection Council/California Resources Agency
Dept. of Toxic Substances Control
Native American Heritage Commission
California Coastal Commission
California State Historic Preservation Office
California Environmental Resources, Evaluation System (CERES)
Dept. of California Highway Patrol
Dept. of Transportation
Regional Water Quality Control Board
California Coastal Conservancy
California Dept. of Water Resources
California Fish & Game Commission
Dept. of Fish & Game, Region 5
Dept. Transportation, Development Review Branch
Local
City of San Diego, Econ. Development & Community Services
County of San Diego, Planning & Land Use

City of San Diego, Solid Waste Local Enforcement Agency
Councilmember, Second District City of San Diego
City of San Diego, Planning Dept.
SD County Archeological Society, Inc., Environ. Review Committee
City of San Diego, City Planning & Community Investment
SANDAG, Land Use & Transportation
Planning Groups
Ocean Beach Planning Board, Airport Noise Advisory Committee
Ocean Beach Planning Board
Peninsula Community Planning Board
Peninsula Community Planning Board, Airport Committee
SANNoise
Ms. Cynthia Conger
Libraries
City of San Diego Central Library
Point Loma Hervey Branch Library
Mission Hills Branch Library
Ocean Beach Branch Library

Source: San Diego International Airport

Each of these agencies was requested to submit comments regarding the Proposed Action and any potential environmental impact associated with the Proposed Action alternatives. Appendix A provides a list of other local agencies, organizations, and individuals that were sent a notice of availability for the Draft EA.

6.1 Public Hearing

Notice of the public meeting was provided in the San Diego Daily Transcript and the San Diego Union Tribune on December 5, 2008. The hearing, held on January 6, 2009, began with an introduction of the staff followed by a brief PowerPoint presentation outlining the project and potential impact areas before a request for comments. Nine people are listed on the sign-in sheet; four members of the public and five individuals representing agencies. Agencies represented at the public hearing included: Port of San Diego, City of San Diego, and SANDAG.

At the public hearing those in attendance were encouraged to make comments verbally or submit them later in person or via mail, email, or fax. Only two comment cards were received at the public hearing and both indicated that written comments would soon follow. Five verbal statements were made, two by the public and three by members representing an agency. Both written and verbal comments are provided and responded to in **Appendix A**, *Public and Agency Involvement*. Comments made at the public hearing generally concerned the potential impact the Proposed Action would have on airport capacity and nearby traffic, but also included noise, air quality, and coordination with the Destination Lindbergh project.

6.2 Comments and Responses on Draft EA

This Final EA includes as part of Appendix A all comments submitted on the draft and at the public hearing, as well as responses to all these comments. The appendix includes the public hearing sign-in sheet, the PowerPoint presentation, the transcript of the event, and the comment cards received at the conclusion of the hearing. Additionally, this appendix includes the comments received throughout the comment period and responses to each comment. It is noted that both the transcript of the public hearing

and the comments received have individual comments identified; this is in reference to tables provided later in the appendix which transcribe these marked comments and provide responses. The table below lists agencies and members of the public who submitted comments and identifies the general area of concern identified in the comment.

Table 6.2
Comments on the Draft EA

Commenter	Topic of Comments
Cynthia Conger	Noise; flight tracks; terrain issues within INM; runway use; coastal resources; NTC inactive landfill; comment period extension; air pollution; jet exhaust; airport growth
Lance Murphy	Air capacity; air pollution; noise exposure
Candice Disney Magnus, on Behalf of Unified Port of San Diego	Traffic on Harbor Drive
Mike Zdon, on behalf of San Diego Association of Governments	Traffic; financial commitment to mitigation; coordination with Destination Lindbergh
Job Nelson, on behalf of the City of San Diego	Destination Lindbergh
James W. Royle, Jr., on behalf of San Diego County Archeological Society	Ryan Aeronautical Company Historic District; Table 3 of Appendix F; Section 5.3.1 of Appendix F Interpretation; Table 4-8.1; Buried Archaeological Resources; C.J. Paderewski architecture
John Helmer, on behalf of the Unified Port of San Diego	Access to the bay; parking impacts; secondary impacts of Proposed Improvements; Section 5.14.2; Coastal Act Section 30212.5; Section 1.3.9; proposed mitigation; Destination Lindbergh
Christine Eary, on behalf of North County Transit District	Employee Parking Demand vs. Passenger Parking Demand; Employee Transit Incentive Program; providing prioritized bicycle and motorcycle parking; coordination with RideLink
Bob Leiter, on behalf of SANDAG	Traffic impacts; construction of Terminal 2; Destination Lindbergh; near-term improvements;
Tait Galloway, on behalf of City of San Diego	Traffic impacts; construction of Terminal 2; Reduced Terminal 2 Parking Structure; Destination Lindbergh; near-term Improvements
Bill Figge, on behalf of CALTRANS	Insufficient response to previous comment; Destination Lindbergh coordination; funding; coordination; City of Marina
Kevin Faulconer, on behalf of Second District, City of San Diego	Resubmission of Draft EIR comments

Multiple comments were received on the potential traffic impact of the Proposed Action. Traffic and circulation was a primary impact concern of the Final EIR for Airport Master Plan (May 2008). The Final EIR considered traffic impacts for through the year 2030 to align with regional transportation planning studies even though the project-level proposed improvements only addressed demand through 2015. The Final EIR also included the consideration of an Airport Land Use Plan which incorporated, on a program level, additional facilities to match proposed land use areas. The Final EIR determined potentially significant traffic impacts projected for 2015 for off-airport roadways beyond the immediate vicinity of the Airport, (i.e. Kettner Boulevard between Sassafras Street and Palm Street and Sassafras Street between Pacific Highway and Kettner Boulevard and Kettner Boulevard and India Street). These determinations were made in consideration of the City of San Diego's CEQA Significance Determination Thresholds. In response to these potential impacts the Final EIR provided for mitigation and the Authority is preparing a detailed mitigation plan. Additional off-Airport roadway improvements are also being considered as part of Destination Lindbergh, the long range planning study that is contemplating necessary Airport and associated access improvements for airport users beyond 2015. Staff and policy makers from the Unified Port of San Diego, the City of San Diego, and the San Diego Association of

Governments are participating in Destination Lindbergh with the SDCRAA.

The EA used the results from the traffic and circulation analysis found in the Final EIR to review levels of service for street segments in the immediate vicinity of the Airport (North Harbor Drive, Pacific Highway, and Rosecrans Street) and found that the Level of Service for the Proposed Action did not change when compared to the No Action Alternative through 2020. For this reason there are no significant traffic impacts associated with the near term improvements proposed in the EA. The EA considered the potential air quality impact of the proposed near term improvements on vehicular traffic through 2020 and determined that there were no significant air quality impacts. Additional language has been added to Section 5.3.2, *West Terminal Alternative*, to clarify this issue.

The comments received on the Draft EA did not require additional analysis to develop the Final EA. Additional language has been added specifically to Section 5.3, *Socioeconomic Impacts, Environmental Justice, and Children's Environmental Health and Safety Risks*, to better clarify the reasons that vehicular traffic is not significantly impacted by the Proposed Action, to Section 5.8, Historic, Architectural, Archaeological, and Cultural Resources, to included monitoring during geotechnical boring and grading in the east most portion of the Airport to confirm that no archaeological resources are on-stie, and to Section 5.9, *Fish, Wildlife, and Plants*, to include results of additional consultation with the U. S. Fish & Wildlife Service.

Additionally, Appendix A includes comments and responses received on the 2007 Draft EIR. These comments are provided to supplement the range of comments and responses received on the near-term improvements at SDIA. These comments were considered in the development of the Draft EA in so far as the comments pertained to the proposed improvements and the Federal impact categories analyzed in the EA.

Chapter Seven: List of Preparers and Glossary

Table 7.1

List of Preparers

Name	Education	Experience (Years)	Responsibility
Federal Aviation Administration (FAA)			
Responsibility for review of this Environmental Assessment rests with the FAA. Listed below is the identity and background of the principal FAA individuals in accordance with the Council on Environmental Quality (CEQ) Regulations Section 1502.17 and Paragraph 1007(j)(1) of FAA Order 5050.4B.			
Victor Globa	B.S. Business Administration	20	FAA review of EA; coordination with the California State Historic Preservation Office and the U.S. Fish and Wildlife Service
San Diego County Regional Airport Authority			
Ted Anasis, AICP	B.S. Environmental Policy Analysis and Planning	14	Manager – Airport Planning
Paul Webb	B.A. Zoology; M.C.P, City and Regional Planning	30	Airport Planner II
Brett Caldwell, AICP	M.S. City & Regional Planning; B.S. Geography (City & Regional Planning)	21	Airport Planner II
Paul Manasjan, MS, REHS	B.A. Cultural Anthropology; B.A. Biology; M.S. Environmental and Occupational Health	22	Director – Environmental Affairs
Richard Gilb	B.S. Geology; M.P.H. Environmental Health	22	Environmental Affairs Manager
Lynda Tamura	B.A. Developmental Psychology	5	Administrative Assistant II
HNTB Corporation			
Kim Hughes, P.E.	B.S. Civil Engineering	23	EA Project Manager. Responsible for overall EA document
Evan Pfahler	B.S. Urban Planning and Design	11	Purpose and Need for the Proposed Project, Project Description, Airfield Planning, North Area Planning
Caroline Ellis	B.A. Historic Preservation M.A. City and Regional Planning	5	EA-documentation support
Laura Schaefer	B.A. Environmental Studies, Policy Concentration	1	EA-documentation support

Helix Environmental Planning, Inc.			
Michael Schwerin	M.A. Geography; B.A. Engineering	18	EA-preparation support
Teresa Weschler	M.P.P. Public Policy; B.A. Political Science	6	EA-preparation support
Stacy Nigro	B.S. Forest Resources & Conservation	13	Biological Resources
Doug Feremenga	PhD Urban Planning; M.P. Urban/Regional Planning; B.S. Rural/ Urban Planning	10	Utilities & Service Systems
Christiano Giovando	B.S. Geographic Information Systems	7	GIS Specialists
Affinis			
Mary Robbins-Wade	M.A. Anthropology; B.A. Anthropology	29	Historic/Cultural Resources Project Manager. Responsible for historic, archaeological, paleontological, and cultural resources technical reports and EIR analysis
Stephen R. Van Wormer	M.A. History; B.A. Social Science (emphasis on history and anthropology)	32	Historian. Responsible for historic research and historic architectural evaluation
CityWorks			
Laura Warner AIA	B.A. Architecture	23	Responsible for the preparation of the analysis for the Aesthetics and Land Use sections of the DEIR
KBE Environmental Sciences, Inc.			
Michael Kenney	B.A. Environmental Science; M.S. Environmental Engineering Sciences; Post-Graduate Studies; Industrial Hygiene and Environmental Health	27	Task Manager for Air Quality and Hazardous Materials. Involved in data collection, agency coordination, technical analyses and presentation of results
L. Carrol Bryant	B.A. Geography	25	Involved in emissions inventory and dispersion modeling for air quality assessment. Also conducted QA/QC of technical analyses of air quality impacts

Mike Ratte	B.S. Meteorology	16	Involved in emissions inventory and dispersion modeling for air quality assessment. Also conducted health risk assessment
Wayne Arner	B.S. Environmental Engineering; Post Graduate Studies, Current, Environmental Engineering	7	Involved in data and information processing, development of emissions inventory and dispersion modeling for air quality analysis

Glossary

A-Weighted Sound Level – A quantity, in decibels, read from a standard sound-level meter with A-weighting circuitry. The A-weighting scale discriminates against the lower frequencies below 1000 hertz according to a relationship approximating the auditory sensitivity of the human ear. The A-weighted sound level is approximately related to the relative "noisiness" or "annoyance" of many common sounds.

Acoustics – The science of sound, including the generation, transmission, and effects of sound waves, both audible and inaudible.

Adverse Impact - A term used to describe unfavorable, harmful, or detrimental environmental changes. Adverse impacts may be significant or not significant.

Air Carrier – An entity holding a Certificate of Public Convenience and Necessity issued by the Department of Transportation to conduct scheduled air services over specified routes and a limited amount of non-scheduled operations.

Air Pollutant – Any substance in air that could, in high enough concentration, harm man, other animals, vegetation, or material. Pollutants may include almost any natural or artificial composition of airborne matter capable of being airborne. They may be in gases, particulates, or in combinations thereof. Generally, they fall into two main groups: (1) those emitted directly from identifiable sources and (2) those produced in the air by interaction between two or more primary pollutants, or by reaction with normal atmospheric constituents, with or without photoactivation.

Airside - Facilities principally related to the airfield. Airside facilities often include the runway and taxiway system, runway safety areas, the runway approach area, and associated equipment such as airfield lighting and navigational aids.

Airfield– The area of an airport devoted to use by aircraft. This includes the runways, taxiways, gate area and aprons..

Altitude – Height above a reference point, usually expressed in feet. Reference points are typically sea level, the ground, or airfield elevation in which case MSL, AGL or AFE further describes the altitude, respectively.

Ambient Noise Level – The level of noise that is all-encompassing within a given environment for which a single source cannot be determined. It is usually a composite of sounds from many and varied sources near to and far from the receiver.

Arithmetic Averaged Sound Pressure Level – The arithmetic sum of a series of sound pressure levels divided by the number of levels included in the sum.

Biological Opinion – A report summarizing the opinion of the Fish and Wildlife Service regarding whether or not a given project is likely to endanger a threatened or endangered species or negatively impacting a species critical habitat.

Biotic Community – A naturally occurring assemblage of animals and plants that live in the same environment and are mutually sustaining and interdependent.[1]

Built Conditions – The existing human-made environment including such things as buildings, streets and open spaces.

Bulk – The height, mass, density, and location of buildings on a piece of land.

Capital Improvement Program – A major public infrastructure and planning tool for municipalities. The CIP is a statement of the City's policies and financial abilities to manage the physical development of the community.

Community Noise Equivalent Level (CNEL) - A noise compatibility level established by California Administrative Code, Title 21, Section 5000. Represents a time-weighted 24-hour average noise level based on the A-weighted decibel. The CNEL includes an additional 5 dB adjustment to sounds occurring

[1] www.entrix.com/resources/glossary.aspx

in the evening (7 p.m. to 10 p.m.) and a 10dB adjustment to sound occurring in the late evening and early morning between (10 p.m. and 7 a.m.).

Departure – The act of an aircraft taking off from an airport.

Day-Night Average Sound Level (DNL) – A measure of the annual average noise environment over a 24-hour day. It is the 24-hour, logarithmic- (or energy-) average, A-weighted sound pressure level with a 10-decibel penalty applied to the nighttime event levels that occur between 10 p.m. and 7 a.m.

Decibel (dB) – Commonly used to define the level produced by a sound source. The decibel scale is logarithmic; e.g., when the scale goes up by ten, the perceived level is twice as loud.

Environment - The physical conditions which exist within an area which will be affected by a proposed project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historical or aesthetic significance. The area involved shall be the area in which significant effects would occur either directly or indirectly as a result of the project. The "environment" includes both natural and man-made conditions.

Environmental Assessment (EA) – An EA is a concise document used to describe the environmental impacts of a proposed Federal action.

Environmental Impact Report (EIR) – A detailed statement prepared under the California Environmental Quality Act (CEQA) describing and analyzing the significant environmental effects of a project and discussing ways to mitigate or avoid the effects..

Equivalent Sound Level (L_{eq}, LAEQ, LAEQD or LAEQN) – The level of a constant sound which, in the given situation and time period, has the same average sound energy, as does a time-varying sound. Specifically, equivalent sound level is the energy-averaged sound pressure level of the individual A-weighted sound pressure levels occurring during the time interval. The time interval over which the measurement is taken (or for which the metric is computed) should always be specified. For example, if the time interval is the daytime period (7 a.m. to 10 p.m.) then the acronym LAEQD is used. Similarly, if the time interval is the nighttime period (10 p.m. to 7 a.m.) then the acronym LAEQN is used.

Federal Aviation Administration (FAA) – The Federal Aviation Administration (FAA) is the element of the United States government with primary responsibility for the safety of civil aviation. Among its major functions are the regulation of civil aviation to promote safety and fulfill the requirements of national defense and development and operation of a common system of air traffic control and navigation for both civil and military aircraft.

Federal Emergency Management Agency (FEMA) - The federal agency under which the National Flood Insurance Program is administered.

Fixed Base Operator (FBO) - An operator of an aviation facility at a fixed location with access to the airfield. An FBO can be a full service or limited use facility. A full service FBO sells fuel, provides hangar space, and offers a variety of services such as flight instruction, flight charters, and maintenance. A limited use FBO would not offer fuel, and would be limited to hangar space, maintenance, or other support uses such as instrumentation or engine repairs.

Flora – The plant life in a given area.

Frequency (acoustic) – The number of oscillations per second completed by a vibrating object.

Fauna – The animal life in a given area.

General Aviation (GA) – All civil aviation except scheduled passenger and cargo airlines.

General Plan - A compendium of city or county policies regarding long-term development, in the form of maps and accompanying text. A General Plan is a legal document required of each local agency by the State of California Government Code Section 65301 and adopted by a city council or board of supervisors.

Habitat – The natural home of a plant or animal.

Hertz (Hz) – The unit used to designate frequency; specifically, the number of cycles per second.

Household – A household includes all the persons who occupy a housing unit. The occupants may be a single family, one person living alone, two or more families living together, or any other group of related or unrelated persons who share living arrangements.

Hydrocarbons (HC) – Chemical compounds that consist entirely of carbon and hydrogen.

Impact - The effect, influence, or imprint of an activity or the environment. Impacts include: direct or primary effects which are caused by the project and occur at the same time and place; indirect or secondary effects which are caused by the project and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect or secondary effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density, or growth-rate and related effects on air and water and other natural systems, including ecosystems.

Impervious Surface - Ground surface that cannot be penetrated by water. It includes paved and compacted surfaces, as well as those covered by buildings.

Instrument Flight Rules (IFR) – Rules governing the procedures for conducting instrument flight. Also a term used by pilots and controllers to indicate type of flight plan.

Instrument Meteorological Conditions (IMC) – Weather conditions expressed in terms of visibility, distance from clouds, and cloud ceilings during which all aircraft are required to operate using Instrument Flight Rules (IFR).

Intermodal Center – a place where multiple modes of transportation connect including trains, airplanes, buses, bikes, pedestrian routes, and boats.

Invasive Species – Invasive species are organisms (usually transported by humans) which successfully establish themselves in, and then overcome, otherwise intact, pre-existing

Landside – The portion of an airport that is not designed for aircraft to operate on. This includes, but is not limited to, parking garages, roadways, landscaping, and passenger pick-up/drop-off areas.

Landform - A natural feature of a land surface.

Land Use - The purpose or activity for which a piece of land or its building is designed, arranged, or intended, or for which it is occupied or maintained.

Land Use Plan - An adopted map depicting the approximate location of residential, commercial, public, semi-public, and private-uses, open space, and road systems with a statistical summary of areas and densities for these land uses.

Leasehold – Property held by lease.

Level of Service (LOS) - A concept developed to quantify the degree of comfort afforded to drivers as they travel on a given roadway. The degree of comfort includes such elements as travel time, number of stops, total amount of stopped delay, etc. As defined in the Highway Capacity Manual, six grades are used to describe LOS, and are denoted A through F.

Loudness – The attribute of an auditory sensation, in terms of which sounds may be ordered on a scale extending from soft to loud. Loudness depends primarily upon the sound pressure of the source, but it also depends upon the frequency and waveform of the source.

Mean Sea Level (MSL) – The height of the surface of the sea for all stages of the tide, used as a reference for elevations. Also called sea level datum.

Metropolitan Statistical Area (MSA) – Metropolitan Statistical Areas is an area containing a recognized population center and nearby communities that interact highly with that center.

National Ambient Air Quality Standards (NAAQS) – Standards for criteria pollutants established by United States Environmental Protection Agency that apply to outdoor air.

Natural Areas – Undeveloped areas of land such as parks, wildlife refuges/management areas, and nature preserves.

Nautical Mile (NM) – A measure of distance equal to 1 minute of arc on the earth's surface (approximately 6,076 feet).

Noise – Any sound that is undesirable because it interferes with speech and hearing, or is intense enough to damage hearing, or is otherwise annoying.

Noise Exposure – The cumulative acoustic stimulation reaching the ear of a person over a specified period of time (e.g., a work shift, a day, a working life, or a lifetime).

Operation – Landing or take-off of an aircraft.

Overlay Zone - A zone which is superimposed upon other zoning. Overlay zones are used in areas which need special protection (as in a historic preservation district) or have special problems (such as steep slopes or flooding). Development of land subject to an overlay must comply with the regulations of both zones.

Peak Hour – The hour-long period of time on any given day at a given airport where the number of flights is highest.

Prime Farmland – A special category of highly productive cropland that is recognized and described by the US Department of Agriculture's Soil Conservation Service and receives special protection under the Surface Mining Law.

Public Trust Doctrine – Common law doctrine that holds that title to lands under navigable waters up to the high water mark is held by the State in trust for the people for their common heritage and common use. These lands are not alienable in that all of the public's interest in them cannot be extinguished.

Setback/Stepback - The minimum distance required by zoning to be maintained between two structures or between a structure and a property line.

Sound Exposure Level (SEL) – A time-integrated metric (i.e., continuously summed over a time period) which quantifies the total energy in the A-weighted sound level measured during a transient noise event. The time period for this measurement is generally taken to be that between the moments when the A-weighted sound level is 10 dB below the maximum.

Sound Pressure Level – A measure, in decibels, of the magnitude of the sound. Specifically, the sound pressure level of a sound that, in decibels, is 10 times the logarithm to the base 10 of the ratio of the squared pressure of this sound to the squared reference pressure. The reference pressure is usually taken to be 20 micropascals. (See also Energy-Averaged Sound Pressure Level.)

Source (acoustic) – The object that generates the sound.

Statute Mile (SM) – A measure of distance equal to 5,280 feet.

Sulfur Dioxide (SO_2) – Sulfur dioxide typically results from combustion processes, refining of petroleum, and other industrial processes.

Turboprop Aircraft – An aircraft whose main propulsive force is provided by a propeller driven by a gas turbine. Additional propulsive force may be provided by gas discharged from the turbine exhaust.

Unique Farmland – Land other than prime farmland that is used for production of specific high-value food and fiber crops, as determined by the Secretary of Agriculture. Unique farmland possesses a special combination of soil quality, location, growing season, and moisture supply needed to economically produce sustained high quality or high yields of specific crops when treated and managed according to acceptable farm methods.

View Corridor - The line of sight - identified as to height, width, and distance - of an observer looking toward an object of significance to the community (e.g., ridgeline, river, historic building, etc.); the route that directs the viewers attention.

Visual Meteorological Conditions (VMC) – Weather conditions expressed in terms of visibility, distance from cloud, and ceiling equal to or better than specified minima.

Visual Flight Rules (VFR) – Rules that govern the procedures for conducting flight under visual conditions. The term 'VFR' is also used in the United States to indicate weather conditions that are equal to or greater than minimum VFR requirements. In addition, it is used by pilots and controllers to indicate type of flight plan.

Volatile Organic Compound (VOC) – Any organic compound that participates in atmospheric photochemical reactions except those designated by EPA as having negligible photochemical reactivity.

Volume to Capacity Ratio (V/C) - The ratio of flow rate to capacity for a transportation facility.

Wake Turbulence – Phenomena resulting from the passage of an aircraft through the atmosphere. The term includes vortices, thrust stream turbulence, jet blast, jet wash, propeller wash, and rotor wash both on the ground and in the air.

Wetland – An area that is regularly saturated by surface water or groundwater and is characterized by a prevalence of vegetation that is adapted for life in saturated soil conditions (eg, swamps, bogs, fens, marshes, and estuaries).[2]

Zoning – Local codes regulating the use and development of property. The zoning ordinance divides the city or county into land use districts or "zones", illustrated on zoning maps, and specifies the allowable uses within each such zone. It establishes development standards such as minimum lot size, maximum structure, height, building setbacks, and yard size.

[2] www.epa.gov/glnpo/rptcong/1994/glossary.htm