# Regional Aviation Strategic Plan (RASP) Implementation Report

**PUBLIC DRAFT – February 2021**

PREPARED FOR
San Diego County Regional Airport Authority

SAN DIEGO COUNTY REGIONAL AIRPORT AUTHORITY

PRESENTED BY
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# Section 1—Executive Summary

## 1.1 Overview

In 2011, the San Diego Regional Aviation Strategic Plan (RASP) was prepared by the San Diego County Regional Airport Authority (Airport Authority or Authority) to evaluate the long-term capabilities of the public-use airports within the County of San Diego Region (Region) to meet future air travel demand through 2030. This Implementation Report (Report) considers the 12 public-use airports within the Region plus Tijuana Rodriguez International Airport and provides an analysis of each airport, the aviation industry, developments within the Region, and each of the alternative scenarios discussed in the RASP. The RASP alternative scenarios include:

- **Scenario One: Commercial Service Optimization -** This scenario seeks to address commercial service capacity limitations by developing future facilities, enhancing airline service at other regional airports, preserving capacity at San Diego International Airport (SAN) for commercial service, and adjusting the size of aircraft at the airport to accommodate more passengers.
- **Scenario Two: Enhanced Utilization of Tijuana Rodriguez International Airport -** This scenario focuses on improving access to Tijuana Rodriguez International Airport to assist in accommodating the Region's passenger demand.
- **Scenario Three: California High Speed Rail -** This scenario identified high speed rail to offer passengers an alternative transportation resources to reach cities within California.
- **Scenario Four: General Aviation Optimization -** This scenario focuses on enhancing the Region's high-end general aviation airports, providing an alternative to SAN.
- **Scenario Five: Air Cargo Optimization -** This scenario focuses on enhancing the Region's ability to process cargo at the general aviation airports, providing an alternative to SAN.

**Figure 1.1—RASP Implementation Report Summary of Key Findings**


Source: Consultant Team, 2020

# Section 2—RASP Implementation Report Overview

## 2.1 Introduction

In 2011, the San Diego Regional Aviation Strategic Plan (RASP) was prepared by the San Diego County Regional Airport Authority (Airport Authority or Authority) to evaluate the long-term capabilities of the public-use airports within the County of San Diego Region (Region). The RASP also identified opportunities to collectively improve the San Diego Regional Airport System to help meet future air travel demand through 2030.

**For more information on the 2011 RASP, visit the Authority's website.**

## 2.2 Background

The San Diego Regional Airport System is comprised of the 12 public-use airports located within San Diego County plus Tijuana Rodriguez International Airport, which is located just south of the California-Mexico border. All 13 airports were considered in the RASP, but only 7 airports were evaluated to improve operational efficiencies and/or increase capacity – Brown Field Municipal, Gillespie Field, McClellan-Palomar, Montgomery Field (now named Montgomery-Gibbs Executive), San Diego International, Tijuana Rodriguez International, and Ramona. The four military airfields in San Diego County were excluded from the RASP, because they do not accommodate civilian air travel.

California Senate Bill 10 (2007) and the California Public Utilities Code defines the roles of the Authority and the San Diego Association of Governments (SANDAG) in the development of the RASP and an Airport Multimodal Accessibility Plan (AMAP). These plans feed into SANDAG's Regional Transportation Plan (RTP), which seeks to establish a balanced vision for the evolution of the Region's transportation system over the next 40 years. In addition to the requirements set forth by the State, the objective of the RASP is to define the Region's long-range air transportation needs and the role of each airport in meeting them. Additionally, the RASP looks to determine opportunities and constraints with respect to accommodating future demand and develop strategies to maximize the efficiency and effectiveness of existing and planned facilities.

## 2.3 Regional Airport System

The National Plan of Integrated Airport Systems (NPIAS) is prepared biannually by the Federal Aviation Administration (FAA) and defines the role of each public-use airport in the United States. For the purposes of this Implementation Report, it is important to note that nomenclature classifying airports in the NPIAS has been slightly altered since the RASP was originally prepared; however, the overall roles of the airports studied in the RASP have not changed.

The *NPIAS 2021-2025 Report*, produced by the U.S. Department of Transportation (DOT), documents the projected facility improvements and needs for 3,304 existing and six proposed airports location in the United States (U.S.). The NPIAS categorizes airports into nine different classifications, as defined below.

**Primary Airports** – In 2020, there were 396 primary airports grouped into the four categories below:

- Large Hub – accounts for one percent or more of the total U.S. passenger enplanements, or people boarding aircraft. These airports primarily serve commercial service and cargo operations with limited general aviation (GA) operations.
- Medium Hub – accounts for between 0.25 and one percent of total U.S. passenger enplanements. Typically, these airports accommodate more GA traffic than the large hub airports.
- Small Hub – accounts for between 0.05 to 0.25% of total U.S. passenger enplanements. These airports accommodate a great deal of GA traffic in addition to commercial service operations.
- Non Hub – accounts for less than 0.05% of total U.S. passenger enplanements. These airports are also used heavily by GA traffic.

**Nonprimary Airports** – are mainly used by GA traffic and in 2020 included 123 nonprimary commercial service, 250 relievers, and 2,535 general aviation airports. These airports are divided into five categories, as defined below:

- National – located in metropolitan areas near major business centers and support air traffic throughout the U.S. and the world.
- Regional – are also located in metropolitan areas and serve large populations. These airports support regional economies with interstate and long distance flying.
- Local – provide communities with access to local and regional markets. Usually located near large population centers, but not in metropolitan areas.
- Basic – provide a means for private GA flying within a community, linked with the national airport system.
- Unclassified – limited activity and include public and privately-owned airports.

The principal difference between primary and nonprimary airports is the amount of commercial service operations handled at the airport. Per current FAA regulations, primary airports handle over 10,000 operations per year and fall into a different category of federal funding than nonprimary airports. In addition to the categories defined by the NIPAS for nonprimary airports, these airports are further classified as:

- Nonprimary Commercial Service – handle between 2,500 and 10,000 commercial service passengers annually.
- Reliever – large general aviation facilities located in metropolitan areas that provide "relief" for Hub airports in the region.
- General Aviation – these facilities have at least 10 based aircraft and handle fewer than 2,500 scheduled passengers per year.
- Unclassified – all other facilities fall under this category.

The following airports make up the San Diego Regional Airport System and were evaluated as part of the RASP. Several airports within the Region are not part of the NPIAS, these airports are listed as "limited use general aviation." The region's airports are operated by several Airport Operators (responsible jurisdictions) as listed in **Table 2.1**.

**Table 2.1 — List of Airport within the San Diego Region**

| Airport | Airport Operator | Regional Role |
|---|---|---|
| **San Diego International (SAN)** | San Diego County Regional Airport Authority | Large-Hub Commercial Service |
| **McClellan-Palomar (CRQ)** | County of San Diego | National Commercial Service |
| **Montgomery-Gibbs Executive (MYF)** | City of San Diego | Regional Reliever |
| **Gillespie Field (SEE)** | County of San Diego | National Reliever |
| **Brown Field Municipal (SDM)** | City of San Diego | Regional Reliever |
| **Ramona (RNM)** | County of San Diego | Regional Reliever |
| **Bob Maxwell Memorial Airfield (OKB)** | City of Oceanside | Local General Aviation |
| **Fallbrook Community Airpark (L18)** | County of San Diego | Local General Aviation |
| **Borrego Valley (L08)** | County of San Diego | Basic General Aviation |
| **Agua Caliente (L54)** | County of San Diego | Limited Use General Aviation |
| **Ocotillo (L90)** | County of San Diego | Limited Use General Aviation |
| **Jacumba (L78)** | County of San Diego | Limited Use General Aviation |
| **Tijuana Rodríguez International Airport (TIJ)/Cross Border Xpress** | Grupo Aeroportuario del Pacifico/Cross Border Xpress | International Commercial Service |

Source: FAA NPIAS, and Consultant Team, 2020

## 2.4 RASP Implementation Report

This Implementation Report generally provides an update and status of the factors evaluated in the RASP. Specifically, the Report considers the 2011 RASP, changes in the aviation industry since the RASP was developed, and progress in implementing the scenarios originally identified in the RASP. The Report includes sections detailing:

- An inventory of airports, including their unique operational characteristics
- Reassessment of airport system capacity and regional demand forecasts
- Collective progress in implementing airport improvements to increase efficiency and/or capacity

The findings of the Report are noted throughout the document. The Report will be considered by SANDAG in their update to the RTP, helping to ensure strong connectivity between air and surface transportation networks in the San Diego region.

It should be noted that during the development of this Report, the COVID-19 pandemic had a significant impact on the aviation industry globally and, likewise, some airports within San Diego County. The Report does not incorporate COVID-19 considerations into its forecasts and findings, primarily because the full long-term impacts to global and regional aviation are not yet known.

## 2.5 RASP Implementation Report Stakeholders

Consistent with the 2011 RASP, the RASP Implementation Report was developed with the input, participation and guidance of the Region's airport sponsors and partners. The Stakeholder group meet several times throughout the process to share information and provide input on the development of the report.

Representatives from the following entities participated in the preparation of this report:

- City of Oceanside
- City of San Diego
- County of San Diego
- Cross Border Xpress
- San Diego Association of Governments
- San Diego County Regional Airport Authority
- Tijuana International Airport

## 2.6 Summary of Scenarios

The 2011 RASP anticipated that many Southern California commercial service airports, including San Diego International, would reach capacity during the 2011 RASP forecast period (2010-2030). It was anticipated that when these airports reached capacity, it would be necessary to find alternative methods to meet the region's commercial service demands. While no airport in Southern California has reached its capacity as anticipated in the original RASP, the region has made progress towards overall implementation within most of the scenarios. The following three pages provide a high-level summary of the status of each of the scenarios. The five scenarios considered in the RASP are summarized in **Figure 2.1** and discussed in detail in **Section 6**.

**Figure 2.1 — Summary of RASP Scenarios**


Source: Consultant Team, 2020

## Implementation Report Finding

The 2020 Implementation Report's findings are summarized and reported throughout the document in call-out boxes. Generally, the findings follow a summary of a particular component of the 2011 RASP and a related status update.

# Section 3— Airport Inventories

## 3.1 Introduction

The San Diego Region is considered one of the busiest and most complex airspace regions in the United States. As shown in **Figure 3.1**, with multiple airports in close proximity, surrounded by military airspace and complex terrain, each airport within the system has unique attributes and constraints that must be considered when discussing the roles within the Region. The San Diego Regional Airport System consists of two Commercial Service airports (SAN, and CRQ), four Reliever airports (MRY, SEE, SDM, and RNM), three General Aviation airports (OKB, L18, and L08), and three Limited Use General Aviation airports (L54, L90, and L78). Combined, these airports offer a total of 17 runways and handled 1,349,203 and 1,221,142 total aircraft operations in 2007 and 2018, respectively. The 2011 RASP evaluated each airport and considered its strengths, weaknesses, opportunities and threats (now simplified into "Opportunities" and "Constraints"). On the following pages, the Report summarizes and provides an update to the general description of each airport. While many factors considered in the RASP remain valid, each airport has seen significant changes and development since last evaluated.

**Figure 3.1 — San Diego Region's Airports**


Source: Consultant Team, 2020

## 3.2 San Diego International Airport (SAN)

**Airport Overview** – The San Diego International Airport is the regional airport system's Primary Commercial Service Airport. The airport is focused on accommodating the Region's commercial service and cargo activity. Owned and operated by the San Diego County Regional Airport Authority, the Airport is located near downtown San Diego and is ultimately constrained by both surrounding land uses and its single runway.

**For more information visit SAN's website.**

Formally known as Lindbergh Field, SAN is the busiest single runway airport in the United States and is served by 17 airlines including: Air Canada, Alaska Airlines, Allegiant Air, American Airlines, British Airways, Delta Airlines, Edelweiss Airlines, Frontier Airlines, Hawaiian Airlines, Japan Airlines, jetBlue Airlines, Lufthansa Airlines, Southwest Airlines, Spirit Airlines, Sun Country Airlines, United Airlines, and WestJet Airlines.

**Figure 3.2—SAN**

Source: Consultant Team, 2020

**Airport Opportunities** – The Airport is located three miles northwest of downtown San Diego and the Region's strong economic drivers (including tourism, conventions, and nearby military bases) provide a strong and constant customer base for SAN. Currently underway, SAN's Airport Development Program (ADP) includes both landside and airfield improvements that will modernize the facility, improve operational efficiency, and enhance the overall user experience.

**Airport Constraints** – At 661 acres, the Airport's footprint is limited to its current single runway configuration. As such, maximizing the efficiency and use of the entire Airport property is critical. Additionally, the Airport's close proximity to downtown San Diego and its skyscrapers results in potential airspace encroachment. Any proposed development near the Airport should continue to be closely reviewed per local, state, and federal regulations to ensure critical airspace for commercial air service is protected.

**Table 3.1—SAN**

| Description | RASP | Implementation Report |
|---|---|---|
| **NPIAS Designation** | Primary Commercial Hub | Primary Commercial Hub |
| **California Aviation System Plan Designation** | Large Hub Primary Commercial | Large Hub Primary Commercial |
| **Runway Length (feet)** | | 9,400 |
| **Miles from Downtown San Diego** | | 3 |
| **Annual Passengers (2007 and 2018)** | 21,724,000 | 24,238,300 |
| **% Change in Annual Passengers** | | 11.6% |
| **Annual Operations (2007 and 2018)** | 245,908 | 225,058 |
| **% Change in Annual Operations** | | -8.5% |
| **Forecast Passengers (2030)** | 28,213,494 | 35,390,567 |
| **% Variance 2030 Forecast Passengers** | | +25.4% |
| **Forecast Operations (2030)** | 309,800 | 280,955 |
| **% Variance 2030 Forecast Operations** | | -9.3% |
| **2038 Airport Passenger Forecast** | | 38,653,535 |
| **2038 Airport Operations Forecast** | - | 377,230 |

Source: FAA NPIAS, Airport Data, Caltrans System Plan and Consultant Team, 2020

## Implementation Report Finding

Notable improvements completed by the Airport Authority at the San Diego International Airport since the 2011 RASP include the 10-gate expansion of Terminal 2 and a new International Arrivals facility. On the Airport's north side, a new consolidated rental car center and new fixed-base operator (FBO) facility have been constructed; while a new parking plaza and other ground transportation improvements have been completed in the south side terminal area. SAN is currently pursuing its Airport Development Program (ADP), which aims to replace Terminal 1 with a more modern, 30-gate facility and other airfield improvements that will enhance the overall airport experience for all.

SAN has seen a -8.5% decrease in annual operations since 2007 and a -9.3% decrease in 20-year forecasted operations. The Airport has experienced an 11.6% increase in annual passengers over the same time period. The disproportionate growth of enplanements versus operations is mainly due to the up-gauging of aircraft size by airlines.

## 3.3 McClellan-Palomar (CRQ)

**Airport Overview** – The McClellan-Palomar Airport (CRQ) is high-end corporate general aviation airport, operated by the County of San Diego. Historically, CRQ has served the general aviation market and provided non-stop commuter service to Los Angeles (LAX) with seven flights per day offered by a single carrier (Skywest/United Express). While commuter service has been discontinued at the Airport, the County is actively working to reestablish this service. The facility currently prioritizes high-end corporate general aviation activity with a continued focus for commercial service.

**For more information visit CRQ's website.**

**Figure 3.2—CRQ**

Source: Consultant Team, 2020

**Airport Opportunities** – The Airport is located near the population center of northern San Diego County and is in close proximity to large tourist attractions. There is a modern terminal, a customs facility on site for international business jet arrivals, and a strong on-airport tenant base. The Airport is currently working towards adding an EMAS system, which will enhance safety, and allow for larger aircraft to use the facility.

**Airport Constraints** – As the Airports continues to work towards commercial service operations, it is constrained by the length of its runway, size of the commercial aircraft ramp, and a City/County ordinance that limits the size of aircraft using the Airport to 70 seats or less.

**Table 3.2—CRQ**

| Description | RASP | Implementation Report |
|---|---|---|
| **NPIAS Designation** | Primary Commercial Non-hub | National Commercial Service |
| **California Aviation System Plan Designation** | Non-Hub Primary Commercial | National General Aviation |
| **Runway Length (feet)** | - | 4,897 |
| **Miles from Downtown San Diego** | - | 32 |
| **Annual Passengers (2007 and 2018)** | 100,000 | 15,974 |
| **% Change in Annual Passengers** | | -84.0% |
| **Annual Operations (2007 and 2018)** | 227,847 | 156,113 |
| **% Change in Annual Operations** | | -31.5% |
| **Forecast Passengers (2030)** | 100,000 | 274,670 |
| **% Variance 2030 Forecast Passengers** | | +174.7% |
| **Forecast Operations (2030)** | 268,700 | 188,324 |
| **% Variance 2030 Forecast Operations** | | -29.9% |
| **2038 Airport Passenger Forecast** | | 283,722 |
| **2038 Airport Operations Forecast** | | 195,050 |

Source: FAA NPIAS, Airport Data, Caltrans System Plan and Consultant Team, 2020

## Implementation Report Finding

Notable improvements completed by the County of San Diego at the McClellan-Palomar Airport since the 2011 RASP include the Airport's continued work to attract commercial service and multiple airfield improvements. Currently, the Airport has initiated the design of EMAS improvements, which will be a key consideration in additional air service at the Airport. Several past airlines have established the validity of the commercial service market. The Airport's instrument landing system makes it an attractive airport for high-end aircraft. The Airport continues to see successful general aviation operations with the fixed-based operators consolidating, while also increasing in size. The Airport has seen a 31.5% decrease in operations since 2007 and 29.9% decrease in 20-year forecasted operations.

## 3.4 Montgomery-Gibbs Executive (MYF)

**Airport Overview** – The Montgomery-Gibbs Executive Airport is operated by the City of San Diego and located 8.5 miles north of downtown San Diego. The airport shares its airspace with Marine Corps Air Station (MCAS) Miramar and primarily accommodates recreational and educational general aviation traffic. The Airport has significant land available for development and its location close to downtown provides convenient access.

**For more information visit MYF's website.**

**Figure 3.3—MYF**

Source: Consultant Team, 2020

**Airport Opportunities** – As mentioned, the Airport is located in close proximity to downtown San Diego and the County's population center. The Airport is a busy facility with room for additional development as needed. The relocation of the displaced threshold and the main runway's grooving will help the Airport improve safety and its operations.

**Airport Constraints** – The Airport is limited to small general aviation aircraft due to the length of its runways and a City Ordinance prohibiting operations by aircraft weighing more than 20,000 lbs. The proximity of MCAS Miramar could potentially limit future instrument operations or changes in airport operational patterns. Additionally, the Airport is constrained by environmental issues that could potentially limit its ability to develop.

**Table 3.3—MYF**

| Description | RASP | Implementation Report |
|---|---|---|
| **NPIAS Designation** | Metropolitan GA | Regional Reliever |
| **California Aviation System Plan Designation** | Reliever | Regional Reliever |
| **Runway Length (feet)** | - | 3,401 |
| **Miles from Downtown San Diego** | - | 8 |
| **Annual Enplanements (2007 and 2018)** | - | 394 |
| **Annual Operations (2007 and 2018)** | 253,769 | 226,599 |
| **% Change in Annual Operations** | | -10.7% |
| **Forecast Operations (2030)** | 271,800 | 214,582 |
| **% Variance 2030 Forecast Operations** | | -21.1% |
| **2038 Airport Operations Forecast** | | 221,896 |

Source: FAA NPIAS, Airport Data, Caltrans System Plan and Consultant Team, 2020

## Implementation Report Finding

Notable improvements completed by the City of San Diego at the Montgomery-Gibbs Executive Airport since the 2011 RASP include significant growth in operations with existing operations surpassing the 2019 Master Plan forecast. The Airport is being rapidly developed by existing FBOs and is expected to accommodate additional FBOs in the near future. Two FBO's are currently under construction and the City is seeking a third development. Additionally, the Airport is also seeing a demand for helicopter facility development and, as such, has recently approved the development of a helicopter-focused FBO.

The Airport has seen a 10.7% decrease in operations since 2007 and a 21.1% decrease in 20-year forecasted operations. The Airport is finalizing a new master plan, which forecasts increased general aviation activity and the need for the associated facilities to meet that demand.

## 3.5 Gillespie Field (SEE)

**Airport Overview** – The Gillespie Field Airport serves as a Reliever Airport to SAN, and is the busiest airport within the Region. The airport accommodates flight school activity, recreational general aviation and corporate jet activity. The Airport is operated by the County of San Diego and located between El Cajon and Santee.

For more information visit SEE's website.

**Figure 3.4—SEE**

Source: Consultant Team, 2020

**Airport Opportunities** – The Airport has substantial on-airport land for development, including the 70-acre El Cajon development to expand the tenant base. The airport's location near the Orange and Green Trolley lines stop at SEE, providing public transportation between the airport, downtown San Diego, and other regional locations.

**Airport Constraints** – The Airport's instrument approach capabilities are limited by the surrounding military airspace and terrain. Additionally, the Airport's primary runway ends are surrounded by development.

**Table 3.4—SEE**

| Description | RASP | Implementation Report |
|---|---|---|
| **NPIAS Designation** | Regional GA | National Reliever |
| **California Aviation System Plan Designation** | Reliever | National Reliever |
| **Runway Length (feet)** | - | 4,145, 2,738, and 5,342 |
| **Miles from Downtown San Diego** | - | 23 |
| **Annual Operations (2007 and 2018)** | 299,769 | 238,879 |
| **% Change in Annual Operations** | | -20.3% |
| **Forecast Operations (2030)** | 489,600 | 261,081 |
| **% Variance 2030 Forecast Operations** | | -46.7% |
| **2038 Airport Operations Forecast** | | 276,746 |

Source: FAA NPIAS, Airport Data, Caltrans System Plan and Consultant Team, 2020

## Implementation Report Finding

Notable improvements completed by the County of San Diego at the Gillespie Field Airport since the 2011 RASP include the initial development of the 70-acre El Cajon Center. The development allows for the Airport to accommodate current and future aviation demand. A detention basin was built to accommodate development on the site and transient aircraft apron and two five-acre lots are currently being prepped for development.

The Airport saw a 20.3% decrease in operations since 2007 and 46.0% decrease in 20-year forecasted operations. The Airport is planning for general airfield rehabilitation and improvements to current standards.

## 3.6 Brown Field Municipal (SDM)

**Airport Overview** – The Brown Field Municipal Airport serves as a Reliever Airport to SAN. The airport accommodates corporate and recreational general aviation activity. The Airport is operated by the City of San Diego and is located 20 miles southeast of downtown San Diego, and 1.5 miles north of the Mexican border. The Airport is near the Otay Mesa Port of Entry.

**For more information visit SDM's website.**

**Figure 3.5—SDM**

Source: Consultant Team, 2020

**Airport Opportunities** – The Airport's runway is 7,972 feet long, which is a sufficient length to accommodate a large range of aircraft types (including commercial service and cargo aircraft). The Airport is also well located near highways 805, 905, and 125.

**Airport Constraints** – The Airport's airspace operations and instrument approach capabilities are limited by the Otay Mountain located directly east of the Airport. As a result, the only instrument approach is to Runway 8L from the west. However, these constraints may change in the future with newly-available GPS technology.

**Table 3.5—SDM**

| Description | RASP | Implementation Report |
|---|---|---|
| **NPIAS Designation** | Regional GA | Regional Reliever |
| **California Aviation System Plan Designation** | Reliever | Regional Reliever |
| **Runway Length (feet)** | - | 7,972, and 3,185 |
| **Miles from Downtown San Diego** | - | 20 |
| **Annual Enplanements (2007 and 2018)** | - | 46 |
| **Annual Operations (2007 and 2018)** | 142,820 | 78,046 |
| **% Change in Annual Operations** | | -45.4% |
| **Forecast Operations (2030)** | 175,900 | 86,625 |
| **% Variance 2030 Forecast Operations** | | -50.8% |
| **2038 Airport Operations Forecast** | | 87.050 |

Source: FAA NPIAS, Airport Data, Caltrans System Plan and Consultant Team, 2020

## Implementation Report Finding

Notable improvements completed by the City of San Diego at the Brown Field Municipal Airport since the 2011 RASP include further planning for a 260-acre new development that would create a new main entrance to the Airport and establish new onsite lease areas for general aviation. Additionally, the Customs facility is planned to be upgraded in the near-term.

The Airport has seen a 45.4% decrease in operations since 2007 and 50.8% decrease in 20-year forecasted operations. The Airport is currently finalizing a new master plan that predicts a need for additional t-hangar capacity for future general aviation needs.

## 3.7 Bob Maxwell Memorial Airfield (OKB)

**Airport Overview** – The Bob Maxwell Memorial Airfield, formerly the Oceanside Municipal Airport, is owned by the City of Oceanside, but operated by a third party under a long term lease. The Airport is located in the eastern section of the City of Oceanside, approximately 35 miles north of downtown San Diego.

For more information visit OKB's website.

**Figure 3.6—OKB**

Source: Consultant Team, 2020

**Airport Opportunities** – The Airport's location is close to both the north San Diego and Orange County general aviation market base. The Airport has a strong tenant base appealing to the tourism market, including skydiving and aero-tour in both helicopters and biplanes.

**Airport Constraints** – The Airport is constrained by surrounding development and nearby military airspace. With Camp Pendleton's airspace encircling it, a road and river to the west, and commercial development to the east, the Airport is limited in its ability to expand outside of its current footprint.

**Table 3.6—OKB**

| Description | RASP | Implementation Report |
|---|---|---|
| **NPIAS Designation** | Regional GA | Local GA |
| **California Aviation System Plan Designation** | GA | Local GA |
| **Runway Length (feet)** | - | 2,712 |
| **Miles from Downtown San Diego** | - | 40 |
| **Annual Operations (2007 and 2018)** | 15,092 | 8,300 |
| **% Change in Annual Operations** | | -45.0% |
| **Forecast Operations (2030)** | 18,200 | 23,050 |
| **% Variance 2030 Forecast Operations** | | +26.6% |
| **2038 Airport Operations Forecast** | | 24,300 |

Source: FAA NPIAS, Airport Data, Caltrans System Plan and Consultant Team, 2020

## Implementation Report Finding

Notable improvements completed by the City of Oceanside at the Bob Maxwell Memorial Airport since the 2011 RASP include multiple airfield and hangar enhancements. The Airport is currently at capacity with aircraft storage hangars and has a desire to expand pending future funding. The Airport has also been identified as an ideal location for urban air mobility – serving as a base for north San Diego County.

The Airport has seen a 45.0% decrease in operations since 2007 and a 26.6% increase in 20-year forecasted operations.

## 3.8 Tijuana Rodriguez International Airport (TIJ) & Cross Border Xpress (CBX)

**Airport Overview** – The Tijuana Rodríguez International Airport is owned and operated by the Grupo Aeroportuario del Pacífico. Starting operations in December 2015, Cross Border Xpress is a pedestrian bridge for passengers from the Tijuana International Airport, allowing passengers to cross the border between Mexico and the United States. CBX users can fly directly to more than 35 destinations in Mexico, as well as take advantage of overseas service to China.

**For more information visit TIJ's and CBX's websites.**

**Figure 3.7—TIJ**

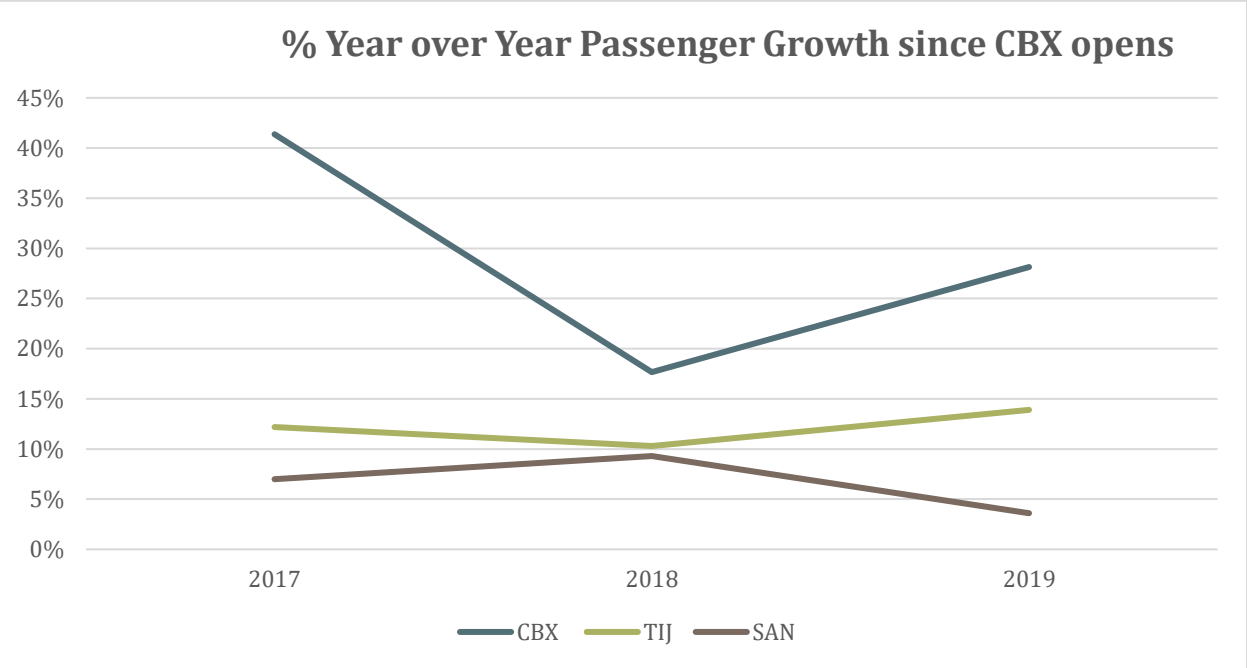
Source: Consultant Team, 2020

**Figure 3.8—CBX**

Source: Consultant Team, 2020

**Airport Opportunities** – CBX provides a link to TIJ and its non-stop service to Mexico markets, many of which are not directly served by SAN. The rapid and successful growth seen by both TIJ and CBX will allow for continued and expanded service offerings in the future. In addition, CBX received its own IATA locator code in 2020, which will soon allow travelers to find flights from CBX/TIJ when searching for flights offered in the San Diego Region.

**Figure 3.9 — CBX**




Source: CBX, and Consultant Team, 2020

**Airport Constraints** – The CBX model is an untraditional method to broaden air travel service opportunities for the San Diego Region. Markets often experience a "learning curve," when introducing a new service or method. As such, some portion of the commercial service passenger market in the Region may require additional time before taking advantage of the CBX/TIJ connection. Further considerations include the uncertainty of future changes in border security due to pandemics, or other unforeseen changes in Federal policy.

**Table 3.7—TIJ**

| Description | RASP | Implementation Report |
|---|---|---|
| **NPIAS Designation** | n/a – as an international facility, it's not part of the U.S. system | |
| **California Aviation System Plan Designation** | n/a – as an international facility, it's not part of the U.S. system | |
| **Runway Length (feet)** | - | 9,711 |
| **Miles from Downtown San Diego** | - | 24 |
| **Annual Passengers (2007 and 2018)** | - | 14,070,714 |
| **% Change in Annual Passengers** | TIJ passengers/operations were not considered in the RASP. | |
| **Forecast Passengers (2030)** | | 14,070,714 |
| **% Variance 2030 Passengers Operations** | TIJ passengers/operations were not considered in the RASP. | |
| **2038 Airport Operations Forecast** | | 20,788,853 |

Source: FAA NPIAS, Airport Data, Caltrans System Plan and Consultant Team, 2020

## Implementation Report Finding

CBX has seen tremendous growth since opening in 2015. Nearly 3 million passengers used the facility in 2019 and it surpassed 10 million cumulative passengers in less than five years of operation. TIJ Airport had seen an approximate annual growth rate of 2% per year prior to the CBX facility opening, since then, growth has been near 20%. TIJ has the second highest amount of connections out of any Mexican airport behind Mexico City and recently completed a $95 million (U.S.) facility upgrade. TIJ has seen a 0.7% increase in operations since 2007 and 53.6% increase in 20-year forecasted operations. TIJ plans to double the terminal area size by 2022.

It is estimated that most passengers are coming from the Los Angeles area to utilize the CBX/TIJ facilities, as they allow passengers to access low-cost domestic flights instead of higher-priced international flights out of LA area airports. In the future, once TIJ's International processor is complete (in approximately 2 years), more international traffic is expected.

## 3.9 San Diego County Rural Airports

**San Diego County Rural Airports Overview** – The County of San Diego owns and operates six rural general aviation airports. While each airport plays an important role within the regional system due to their remote locations and focus on recreational general aviation, they do not play a significant role in the scenarios recommended in the 2011 RASP. These airports are summarized below, and an in-depth analysis of each airport can be found in the original Report.

**For more information visit the County's website.**

**Ramona Airport (RNM)** – Ramona Airport is 36 miles northeast of downtown San Diego. The Airport is a single runway reliever airport that accommodates recreational general aviation activity. The Airport has seen a 47.3% decrease in operations since 2007 and has a forecasted 20-year 22.1% increase in operations. While RNM is a reliever airport, due to its location, it did not factor into the recommended scenarios in the RASP.

**Figure 3.10— San Diego County Rural Airports - RNM**

Source: Consultant Team, 2020

**Fallbrook Community Airport (L18)** – Fallbrook Community Airpark is 58 miles east-northeast of downtown San Diego. The Airport is a single runway airport that accommodates recreational general aviation activity. The Airport has seen a 45.1% decrease in operations since 2007 and has a forecasted 20-year 39.8% increase in operations.

**Figure 3.11— San Diego County Rural Airports - L18**

Source: Consultant Team, 2020

**Borrego Valley Airport (L08)** – Borrego Valley Airport is 90 miles northeast of downtown San Diego. The Airport is a limited use, single runway airport that accommodates recreational general aviation activity. The airport has seen a 0.7% decrease in operations since 2007 and has a forecasted 20-year 34.5% increase in operations.

**Figure 3.12— San Diego County Rural Airports – L08**


Source: Consultant Team, 2020

**Ocotillo Airport (L90)** – Ocotillo Airport is 65 miles east of downtown San Diego. The Airport is a single runway airport that accommodates recreational general aviation activity. The Airport has seen a 125% increase in operations since 2007 and has a forecasted 20-year 11.7% increase in operations.

**Figure 3.13— San Diego County Rural Airports – L90**

Source: Consultant Team, 2020

**Agua Caliente Airport (L54)** – Agua Caliente Airport is 77 miles east of downtown San Diego. The Airport is a limited use, single runway airport that accommodates recreational general aviation activity. The Airport has seen a 1.3% increase in operations since 2007 and has a forecasted 20-year 3.2% increase in operations.

**Figure 3.14— San Diego County Rural Airports – L54**

Source: Consultant Team, 2020

**Jacumba Airport (L78)** – Jacumba Airport is 74 miles east-southeast of downtown San Diego. The Airport is a limited use, single runway airport that accommodates glider and sailplane activity. The Airport has seen a 321.5% increase in operations since 2007 and has a forecasted 20-year 3.2% increase in operations.

**Figure 3.15— San Diego County Rural Airports – L78**

Source: Consultant Team, 2020

## Implementation Report Finding

Since the RASP was completed, each airport within the San Diego Region has made significant improvements towards the various scenarios laid out in the RASP. While the forecasted operations, passengers, scenarios, and methods described in the RASP have evolved, additional analysis can be found in Section 5 of this Report.

# Section 4—System Capacity

## 4.1 Airport System Capacity

The entire aviation industry has evolved since the 2011 RASP was developed. Airlines operate under different business models (i.e. up-gauging the fleet mix, and maximum occupancy flights) and there has been significant consolidation of the industry. Airports across Southern California have undergone major capacity upgrades and each airport in the San Diego Region has undergone improvements.

### 4.1.1 National System Capacity

The 2011 RASP cited the FAA's 2007 Future Airport Capacity Task (FACT) 2, which stated that the San Diego Region would need aviation capacity after 2025. It also said SAN should be closely monitored to gauge the effects of a swiftly-changing industry, which could expedite the need for additional capacity. The FAA's 2015 FACT3: Airport Capacity Needs in the National Airspace System no longer considers SAN to be capacity constrained. It should be noted that Los Angeles International (LAX) is also no longer constrained.

In 2020, the FACT3 report was replaced by the FAA with the NPIAS, which utilizes a new evaluation methodology to determine capacity constrained airports across the country. Generally, these analyses focus on commercial passenger operations. Across the country, general aviation operation are expected to maintain similar numbers as today with slight increases in business jets and experimental aircraft. Using the new methodology in the 2020 NPIAS, both SAN and LAX are designated as constrained through 2030. Going forward, the biennial NPIAS will be a valuable tool to continue to monitor airport capacity constraints within the San Diego Region and across the broader Southern California area to track changes in aviation forecasts and related variables (i.e. aircraft up-gauging and load factors).

### 4.1.2 Southern California System Capacity

Many Southern California airports were modeled to also reach capacity during the RASP forecast period. LAX was modeled to reach capacity during the RASP forecast period (through 2030), spreading commercial service passengers to the other Southern California airports. LAX was anticipated to reach capacity around 2015 at approximately 133-176 operations per hour (depending on weather conditions), theoretically triggering the need to shift operations to other nearby airports. While the current NPIAS anticipates potential commercial passenger service constraints at SAN and LAX, other Southern California airports, including John Wayne/Orange County, Long Beach, Ontario International, and Burbank are not considered constrained within the planning horizon. In addition, all Southern California airports in some way are pursuing airfield and/or operational improvements that help proactively address the area's long-term capacity constraints.

### 4.1.3 Regional System Capacity

The RASP predicted more demand for commercial air service than the San Diego Region's airports could supply. The San Diego Region was expected to reach commercial service capacity during the RASP planning horizon (2030) at approximately 28 million annual passengers. The RASP demand model indicated that between 2020 and 2025, the effects of the capacity constraints would result in diminished levels of service, increased operating delays, and higher airline fares. As highlighted earlier in this Implementation Report, SAN is now not expected to reach its airfield capacity until at least 2040, well beyond the 2011 RASP projections.

## Implementation Report Finding

Since the 2011 RASP was completed, the FAA determined that SAN was no longer constrained in 2015. Then after updating the metrics to evaluate constraints, the 2020 NPIAS again designated SAN as constrained. It should be noted that LAX was also removed from the FAA's constrained airport list in 2015, but is again considered constrained today.

Despite the FAA's recent re-designation, SAN is not anticipated to reach capacity during the RASP planning period. SAN's capacity is now estimated to be 40 million annual passengers (as opposed to 28 million in the 2011 RASP) due to up-gauged aircraft and changes in industry practices.

# Section 5—Demand Forecast

## 5.1 Introduction

An obligation of SB-10 was that the RASP's forecasts were to consider opportunities and constraints for accommodating future aviation demand. This report was prepared to present a compilation of the latest available forecast projections for the Region, with a review of the 2011 RASP forecast, changes in air traffic through 2018, and changes in the aviation industry that may impact demand.

The current forecast of aviation demand for the San Diego Region is summarized below. The aviation demand forecast considers the same areas and airports in the 2011 RASP against completed and planned improvements in the regional airport system. Updated forecasts are critical to ensuring that future aviation demand can still be accommodated given the existing and future capacities at the San Diego Region's airports.

## 5.2 2011 RASP Forecast Review

The RASP was prepared to assess the long-range capabilities of all public-use airports in the Region with the goal of improving the performance of the San Diego Regional Airport System. Forecasts of aviation traffic demand were prepared for the RASP study for each of the 12 public-use airports of the San Diego Region.

The forecasts provided future projections primarily of commercial passengers and aircraft operations (commercial, general aviation/air taxi, military) for comparison to airport capacities and future infrastructure developments.

The forecast summary projected that commercial passenger traffic for the Region would increase from 18,439,750 passengers in 2007 to 28,313,494 passengers in 2030, representing a 1.8% average annual growth rate (AAGR). San Diego International would handle nearly all of the expected commercial passenger traffic, with 100,000 annual passengers projected for McClellan-Palomar by 2030. The forecast summary projected an increase from 1,349,203 total operations in 2007 to 1,769,525 operations by 2030, representing a 1.2% AAGR.

## 5.3 2018 Air Traffic Review

From 2007 through 2018, San Diego regional airports experienced some general declines in traffic of air taxi and general aviation aircraft operations, generally following the same national trends of reduced small aircraft usage for personal or business use. Conversely, commercial passenger levels continued to increase, notably exceeding the forecast for 2018. The 12 airports have maintained their same aviation roles in the regional system with SAN still serving as the Region's primary commercial service airport.

The RASP forecast estimated commercial passengers would increase from 18.3 million annual passengers (MAP) at SAN in 2007 to 21.7 million by 2018. Actual passenger levels at SAN in 2018 were reported at 24.2 million, representing growth at 11.6% higher than projected, or an average annual growth of 2.6% actual compared to 1.5% forecasted.

Passengers at CRQ were estimated to increase in the RASP from 93,818 in 2007 to 100,000 in 2018, but due to United Airlines dropping feeder service to Los Angeles in 2015, only 15,975 total passengers were reported for CRQ in 2018, which is 84 percent lower than projected.

Not included in the previous 2011 RASP forecast, but important to the 2019 RASP forecast review, is the impact of traffic growth at the TIJ and the CBX facility, which adds another international entry point via San Diego or Tijuana. After its completion and service launch in 2015, traffic through the CBX facility had reached nearly 2.3 million passengers in 2018 and almost 3 million passengers in 2019. Roughly 29% of passenger to/from TIJ used the CBX facility for access to/from the San Diego Region.

The success of the CBX facility and growth at TIJ, compared to the faster than projected traffic growth at SAN, should suggest even more total demand for the San Diego Region than previously forecast. **Table 5.1** below shows the comparison of 2018 passenger traffic levels as estimated in the RASP and reported for the San Diego Region.

### Table 5.1 — 2018 Passenger Forecast Comparison

| San Diego Region Airports | Airport Type | Total Passengers | | |
|---|---|---|---|---|
| | | RASP Estimate | 2018 Actual | % Variance |
| **San Diego International (SAN)** | Commercial | 21,724,000 | 24,238,300 | +11.6% |
| **Tijuana Rodríguez International Airport (TIJ)** | Commercial | - | 7,835,100 | |
| **McClellan-Palomar (CRQ)** | Commercial | 100,000 | 15,974 | -84.0% |
| **Montgomery-Gibbs Executive (MYF)** | Non-Comm | - | 394 | |
| **Gillespie Field (SEE)** | Non-Comm | - | - | |
| **Brown Field Municipal (SDM)** | Non-Comm | - | 46 | |
| **Ramona (RNM)** | Non-Comm | - | - | |
| **Bob Maxwell Memorial Airfield (OKB)** | Non-Comm | - | - | |
| **Fallbrook Community Airpark (L18)** | Non-Comm | - | - | |
| **Borrego Valley (L08)** | Non-Comm | - | - | |
| **Agua Caliente (L54)** | Non-Comm | - | - | |
| **Ocotillo (L90)** | Non-Comm | - | - | |
| **Jacumba (L78)** | Non-Comm | - | - | |
| **Total** | | **29,659,100** | **32,089,814** | **+8.2%** |

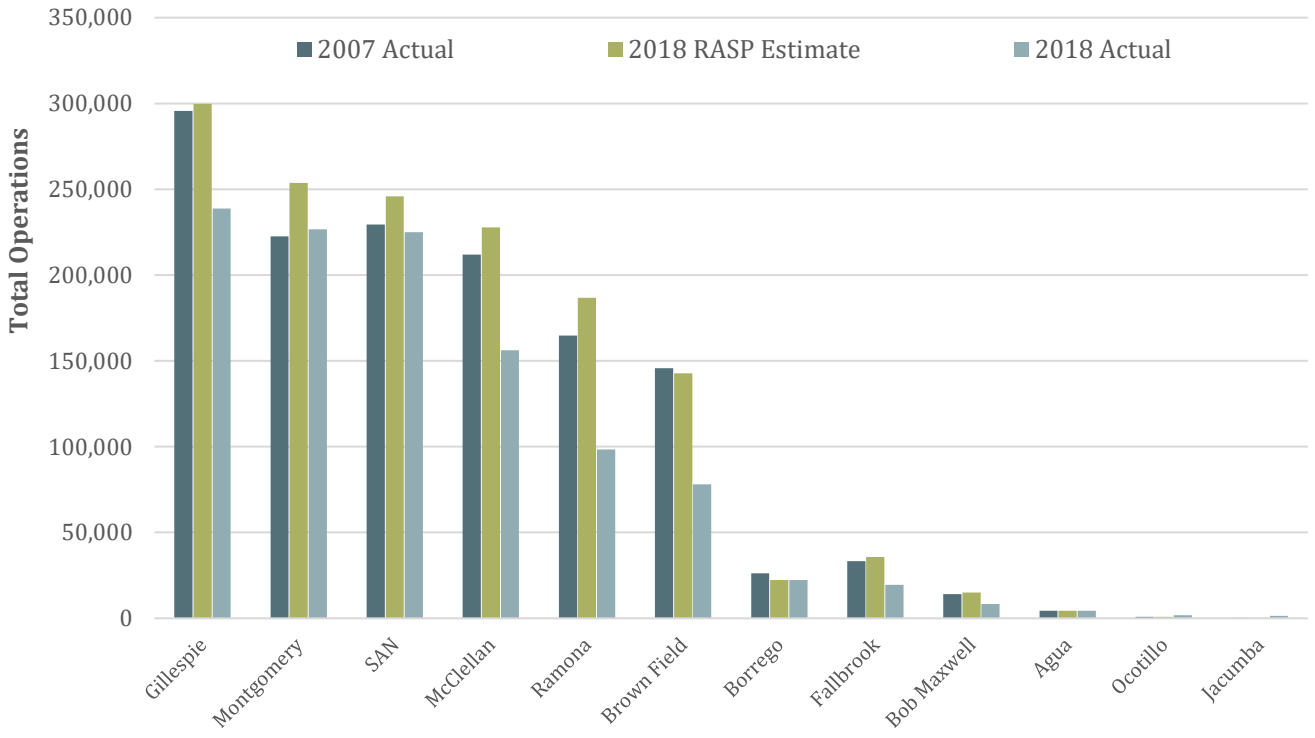
Note: TIJ passenger estimate was not part of the 2011 RASP study
Source: Consultant Team, 2020

The RASP forecast estimated total operations (commercial, air taxi, general aviation and military) would increase from 1,349,203 total aircraft operations in 2007 to 1,435,482 operations in 2018. Actual reported total operations at the San Diego Regional airports in 2018 was 1,080,880, representing traffic levels 25% less than projected, and 20% below the baseline in 2007.

The decrease in total Regional aircraft operations from 2007 to 2018 is mainly due to reduced demand for air taxi and general aviation operations at CRQ, Brown Field (SDM), Gillespie Field (SEE), and Ramona (RNM). Total operations at SAN were also less than projected in 2018 at 225,058 aircraft operations compared to 245,908 aircraft operations due to use of larger commercial passenger aircraft with more available seats, and essentially there was no growth in total operations at SAN since the RASP Report was prepared.

**Figure 5.1 and Table 5.2** present the comparison of 2018 total operations levels as estimated in the RASP and as actually reported for the San Diego Region.

**Figure 5.1— Change in Operations Levels at San Diego Airports**




Source: Consultant Team, 2020

**Table 5.2 — Operations Forecast Comparison**

| San Diego Region Airports | Airport Type | Total Operations | | |
|---|---|---|---|---|
| | | RASP Estimate | 2018 Actual | % Variance |
| **San Diego International (SAN)** | Commercial | 245,908 | 225,058 | -8.5% |
| **McClellan-Palomar (CRQ)** | Commercial | 227,847 | 156,113 | -31.5% |
| **Montgomery-Gibbs Executive (MYF)** | Non-Comm | 253,769 | 226,599 | -10.7% |
| **Gillespie Field (SEE)** | Non-Comm | 299,686 | 238,876 | -20.3% |
| **Brown Field Municipal (SDM)** | Non-Comm | 142,820 | 78,046 | -45.4% |
| **Ramona (RNM)** | Non-Comm | 186,715 | 98,419 | -47.3% |
| **Bob Maxwell Memorial Airfield (OKB)** | Non-Comm | 15,092 | 8,300 | -45.0% |
| **Fallbrook Community Airpark (L18)** | Non-Comm | 35,720 | 19,594 | -45.1% |
| **Borrego Valley (L08)** | Non-Comm | 22,400 | 22,250 | -0.7% |
| **Agua Caliente (L54)** | Non-Comm | 4,400 | 4,455 | +1.3% |
| **Ocotillo (L90)** | Non-Comm | 800 | 1,800 | +125% |
| **Jacumba (L78)** | Non-Comm | 325 | 1,370 | +321.5% |
| **Total** | | **29,659,100** | **32,089,814** | **+8.2%** |

Note: TIJ total operations data not available
Source: Consultant Team, 2020

The three smallest airports (Agua Caliente Springs, Jacumba, and Ocotillo), in terms of the fewest number of operations, were the only airports to show any increase in operations from 2007 to 2018, and the only airports to achieve traffic activity above the RASP estimates.

## Implementation Report Finding

The long-term passenger demand at SAN now shows an increased projection due to a larger anticipated aircraft fleet and the addition of flights during non-peak, mid-day periods. Long-term passenger growth at SAN is still estimated to be capped at around 40 million passengers, with the FAA TAF estimating that constraint will be reached by 2040.

Although no traffic forecast for TIJ was available, long-term passenger demand at TIJ was assumed to grow at an average annual rate of five percent during the forecast period. Increased usage of the CBX facility for international traffic flows is also assumed to increase and grow with strong demand for border crossings between San Diego and Tijuana.

The 2018 Master Plan forecast for McClellan-Palomar shows an aggressive increase in demand based on assumptions that commercial service will not only return, but grow considerably in the future. The FAA projection does not currently include the local optimism yet in the 2019 FAA TAF, in which estimated passenger demand for 2038 is still just 22,254 passengers.

Total operations demand for the San Diego Regional airports is now projected at 1,221,142 in 2030 based on the consolidation of the more recent forecasts. This total operational level is considerably less than the 1,847,225 operations in 2030 as estimated in the RASP forecast report.

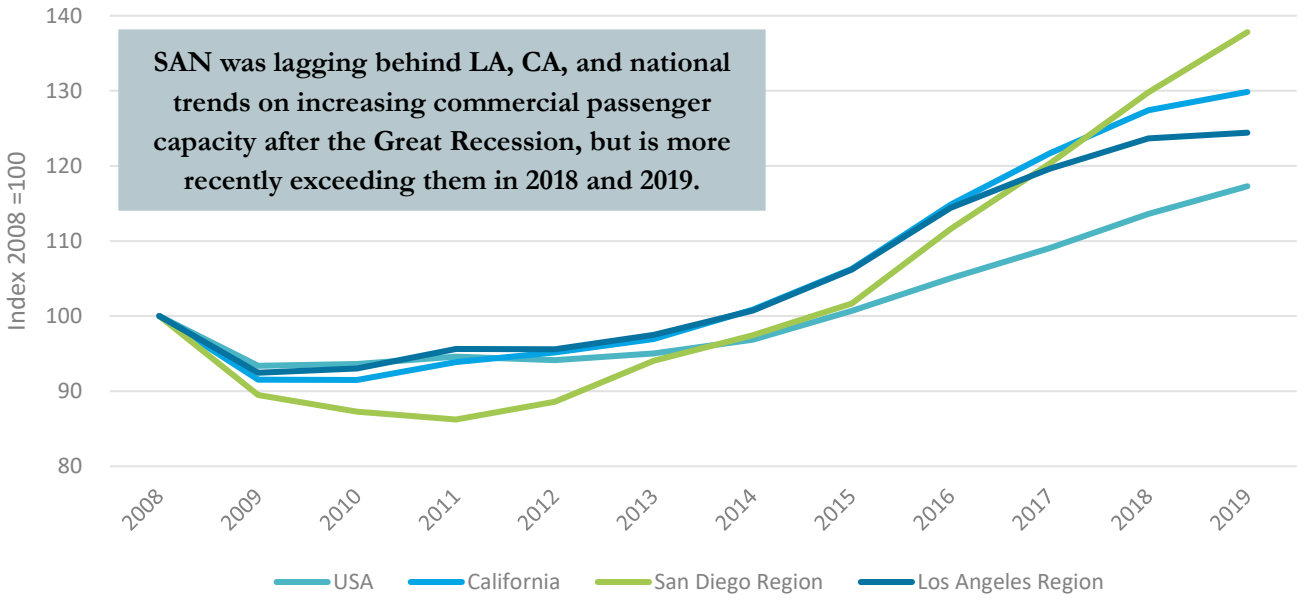
## 5.4 Aviation Industry and Socioeconomic Trends

The RASP forecast and latest forecast projections of traffic demand for San Diego Region airports were based on different periods of historical data (RASP: through 2007 + partial 2008; latest forecasts: through 2015 – 2017) and reflect some variances with broader aviation industry trends.

In an effort to reflect the trends in the aviation industry and in the socioeconomic sector, the following benchmarking charts were prepared to show how certain aviation components and metrics in the San Diego region compared to Los Angeles (LA), the State of California (CA), and the United States.

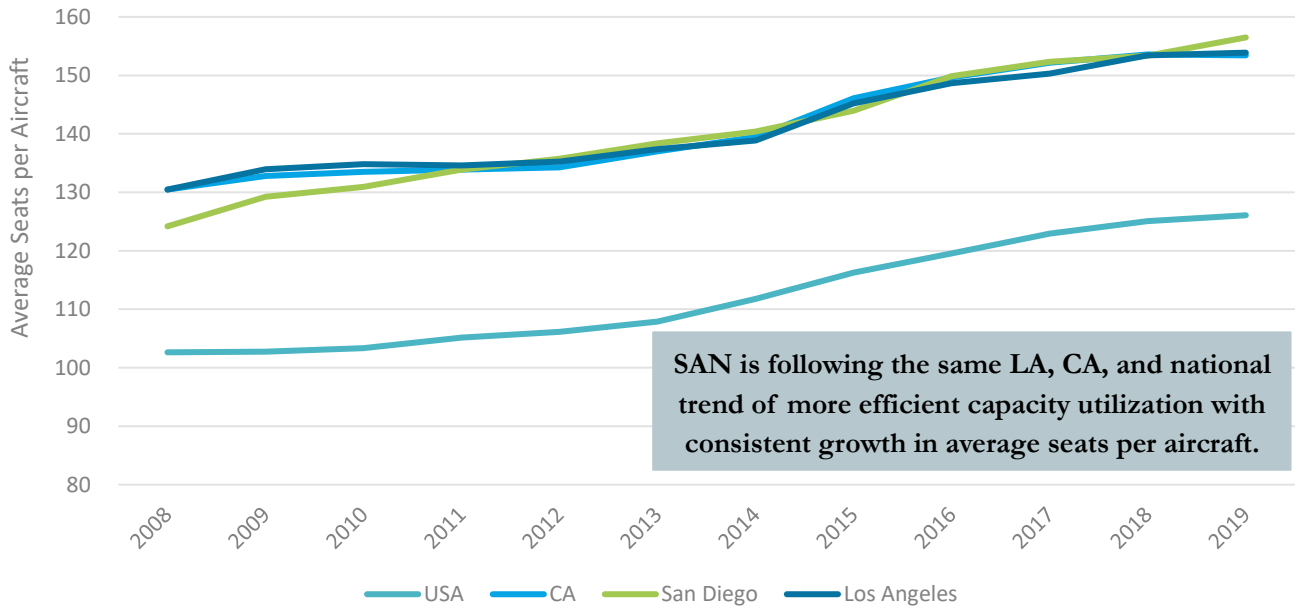
Trends in commercial passenger traffic activity were observed and reviewed for scheduled seats, average seat gauge (seats/per aircraft), reported ticketed passengers on commercial aircraft, and scheduled commercial passenger aircraft operations. As can be observed in **Figures 5.2 – 5.5**, the San Diego Region generally exhibited similar trends from 2008 – 2019 with these benchmark regions, and thus it can be reasonably expected the San Diego Region will continue to follow local, state and national trends. **Figure 5.4** depicts the T-100 data, or data reported by United States carriers operating between domestic airports.

**Figure 5.2— Scheduled Commercial Passenger Seats Comparison**



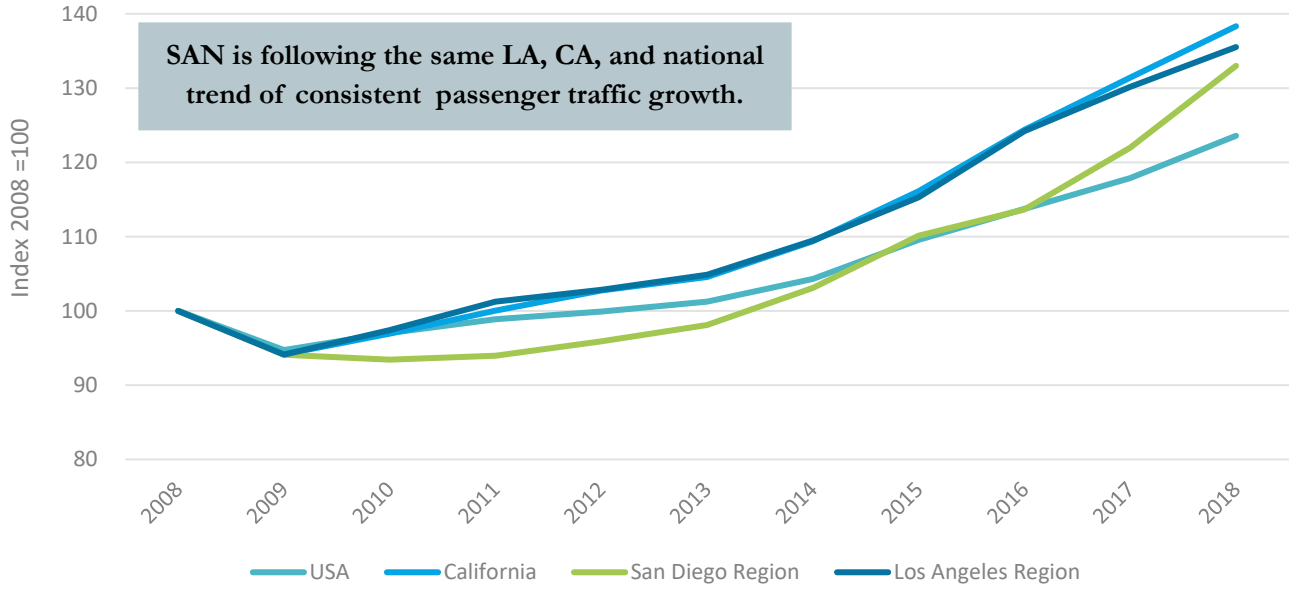
Source: Consultant Team; Official Airline Guide (OAG) data, 2020

**Figure 5.3— Average Scheduled Seat Gauge Comparison**



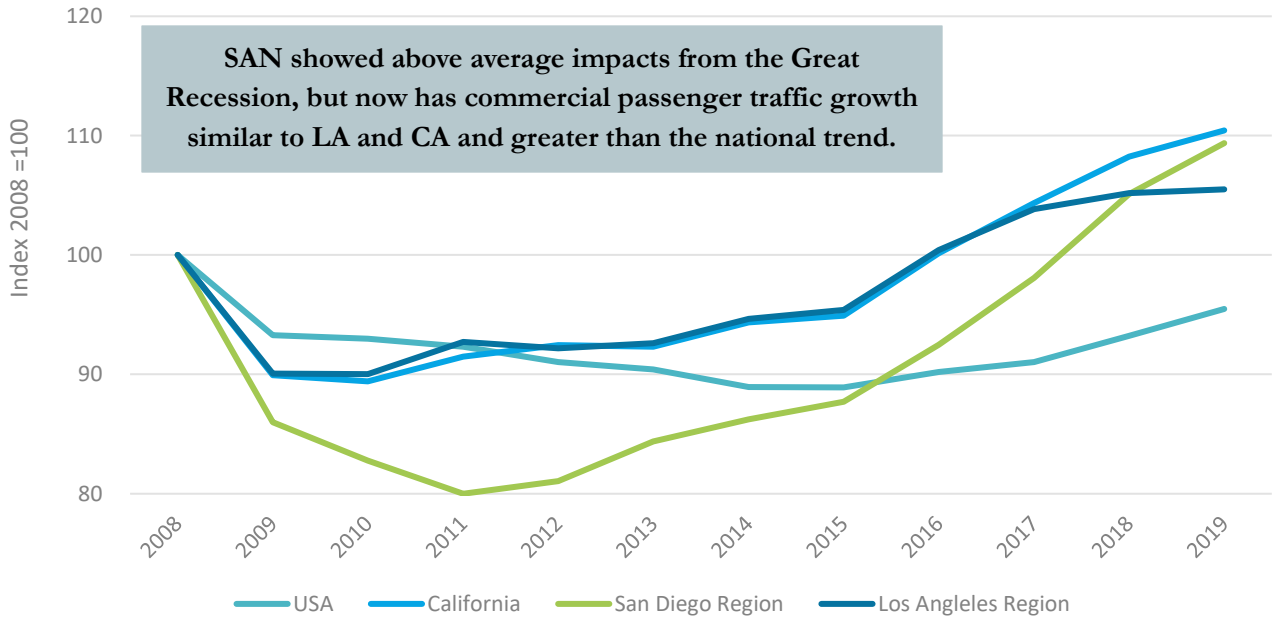

Source: Consultant Team; Official Airline Guide (OAG) data, 2020

**Figure 5.4— Reported T-100 Total Passengers Comparison**




Source: Consultant Team; U.S. DOT Schedule T-100 data, 2020

**Figure 5.5— Scheduled Commercial Passenger Operations Comparison**




Source: Consultant Team; Official Airline Guide (OAG) data, 2020

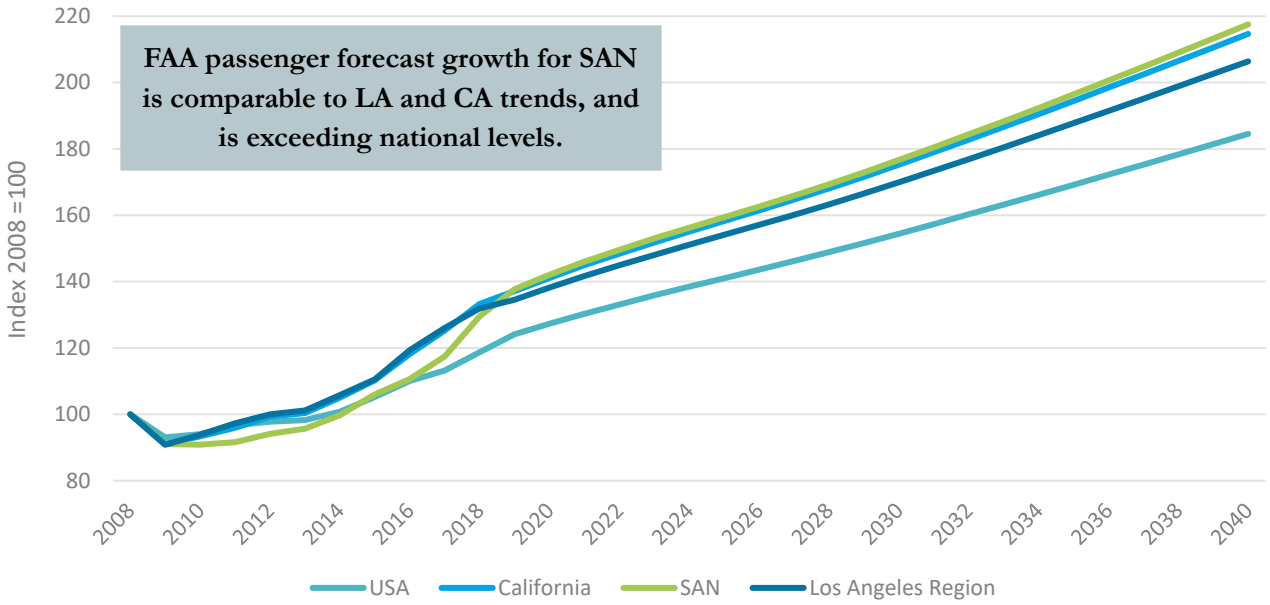
Other than in seat gauge, commercial passenger segments of seats, passengers, and operations all reflected the decline in traffic and demand in 2009 as an impact from the "Great Recession" financial crisis in 2008-2009, with a return to slow and gradual growth within a few years thereafter. The aviation industry has shown resiliency in the past and typical recovery times from major system shocks are usually less than three years before a return to the previous normal demand levels and growth conditions.

The 2019 FAA TAF projections for SAN, the San Diego Region, Los Angeles Region, State of California, and the U.S. are also exhibiting very similar and consistent trends; historically from 2008 – 2018, and for future growth from 2018 to 2040.

Enplanements shown in **Figure 5.6** are estimated to have very similar long-term growth rates through 2040, with SAN having a slightly higher estimate at 2.4% Compound Annual Growth Rate (CAGR) than the other benchmark regions (Los Angeles = 2.1% CAGR, California = 2.2% CAGR, and U.S. = 2.0% CAGR).

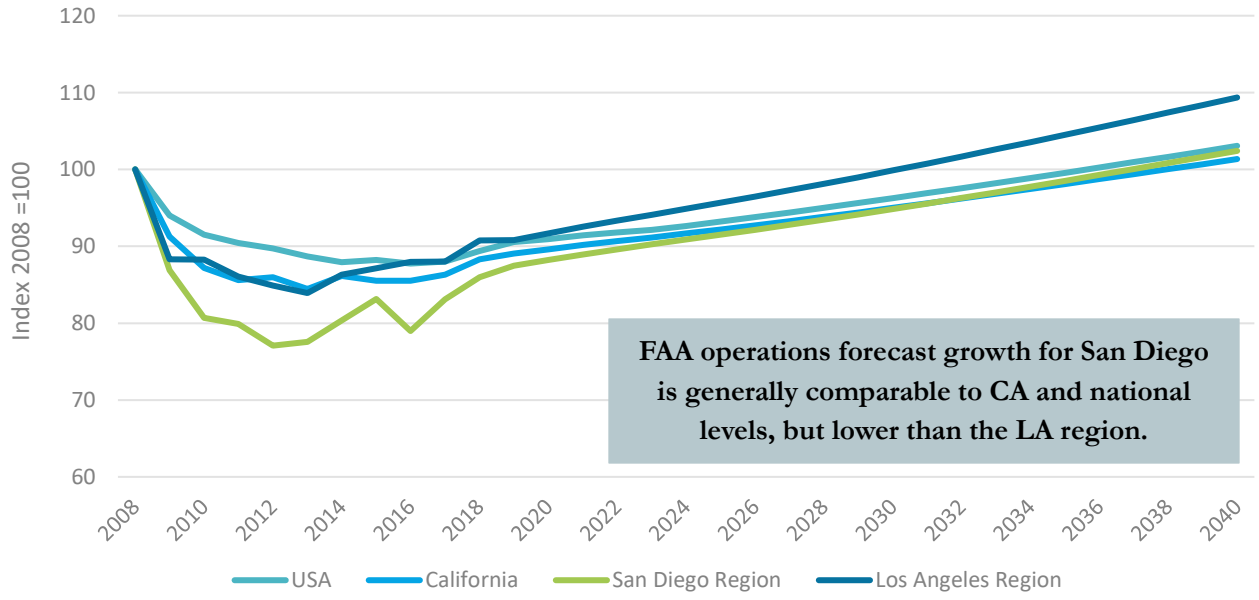
**Figure 5.7** presents an indexed comparison of total operations projections for the benchmark regions with a small variance in average growth rates, having a range of 0.6% - 0.9% CAGR from 2018 to 2040 (San Diego = 0.8% CAGR, Los Angeles = 0.9% CAGR, California = 0.6% CAGR, and U.S. = 0.6% CAGR).

**Figure 5.6 — FAA TAF Benchmark Enplanement Forecast Comparison**




Source: Consultant Team; FAA 2019 Terminal Area Forecast, 2020

**Figure 5.7 — FAA TAF Benchmark Total Operations Forecast Comparison**



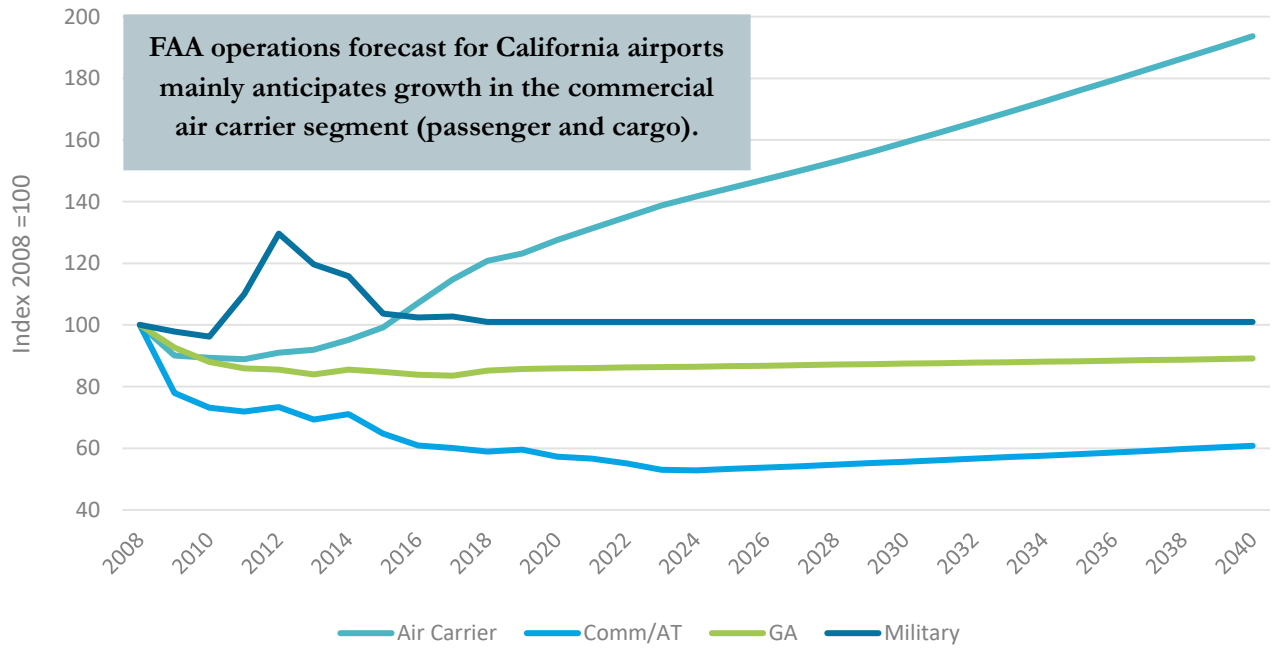

Source: Consultant Team; FAA 2019 Terminal Area Forecast, 2020

The TAF projections for total enplanements and total operations for the benchmark regions exhibited obvious similarities reflecting some consistency in expected growth in passenger traffic and total aviation operations traffic, but each segment of aviation is not expected to change (increase/decrease) in the same manner. **Figures 5.8** and **5.9** present the forecasts of operations for each segment of the TAF for California airports and all U.S. airports.

Most commercial passenger and freighter activity are provided by Air Carrier or Commuter aircraft with a general shift to larger aircraft as demand increases and efforts for greater efficiency are implemented. Since the "Great Recession" and even earlier back to 2004, demand for general aviation traffic has been decreasing due to higher oil and fuel costs.

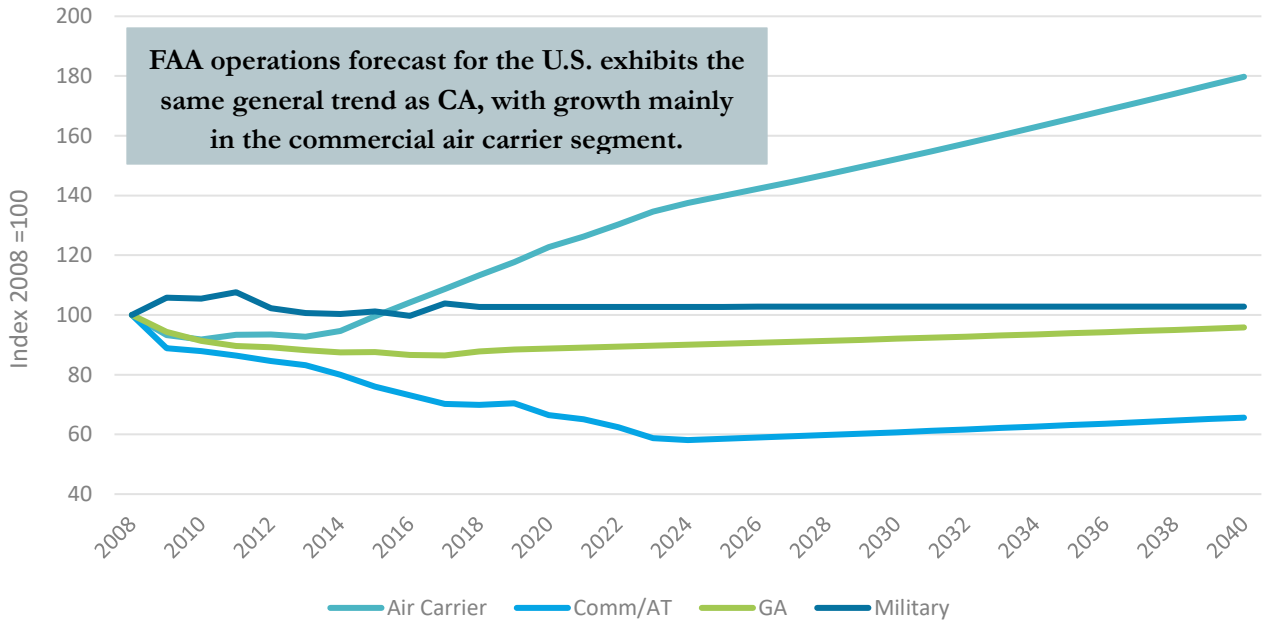
The TAF essentially expects only commercial traffic on Air Carrier aircraft to show real observable growth in the forecast. Business Aviation, the larger jet segment of Air Taxi operations and GA operations, is also expected to increase, while the other smaller aircraft within the GA segment is expected to be mostly flat, as is the military segment.

**Figure 5.8 — FAA TAF Benchmark Operations - CALIFORNIA Segments Forecast Comparison**




Source: Consultant Team; FAA 2019 Terminal Area Forecast, 2020

**Figure 5.9— FAA TAF Benchmark Operations – U.S. Segments Forecast Comparison**

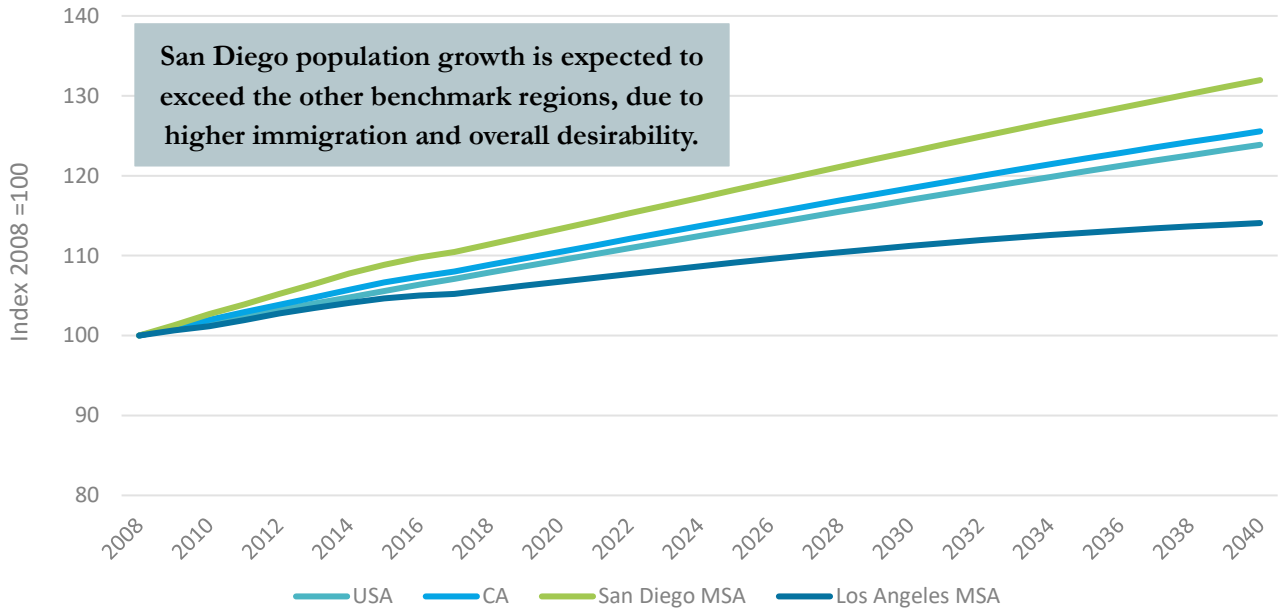



Source: Consultant Team; FAA 2019 Terminal Area Forecast, 2020

In addition to trends in aviation, socioeconomic conditions are typically good indicators of what drives or influences demand for aviation. Trends in common socioeconomic factors such as population, employment, and economic output (represented by gross domestic or regional product) were reviewed for comparison among the benchmark regions to understand how the San Diego Region has compared historically and how similar are future projections. Population growth for the San Diego Metropolitan Statistical Area (MSA) was observed to be higher than the benchmark regions since 2008 and is projected to maintain a higher growth rate through 2040, likely due to the proximity to the Mexico border and its status as a leisure market.

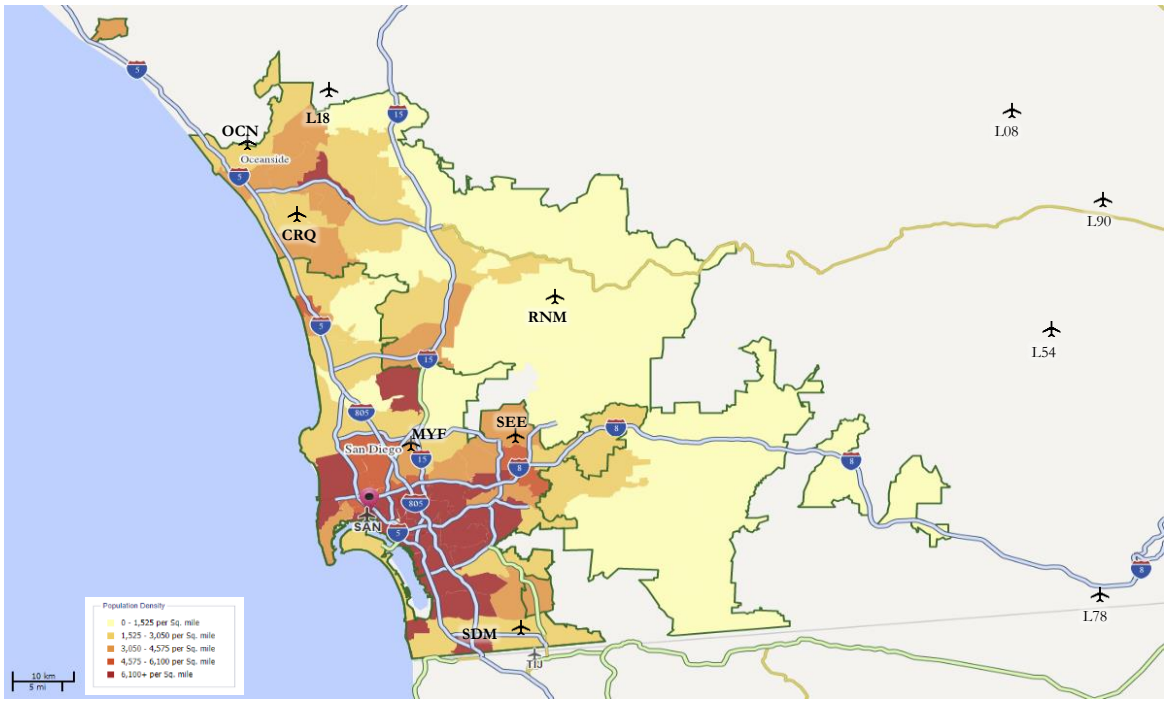
**Figure 5.10** exhibits growth in all regions and represents a range of long-term growth rates from 0.3% CAGR for the Los Angeles MSA to 0.8% for the San Diego MSA (California = 0.7% CAGR and U.S. = 0.6% CAGR). **Figure 5.11** presents the population densities of the San Diego aviation region and locations of all the regional airports. Population growth tends to be slower than growth in employment, which is more closely linked to economic growth. Improvements in the broader economy typically suggests business travel and personal travel will also increase with a stronger and growing economy. This growth impacts both the commercial and general aviation segments of the aviation industry. Military traffic is mostly independent and does not necessarily follow the same trends as the other segments in relation to demand from economic conditions.

**Figure 5.10 — Benchmark Population Forecasts Comparison**




Sources: Consultant Team, Woods & Poole Complete Economic and Demographic Data Source (CEDDS), 2019

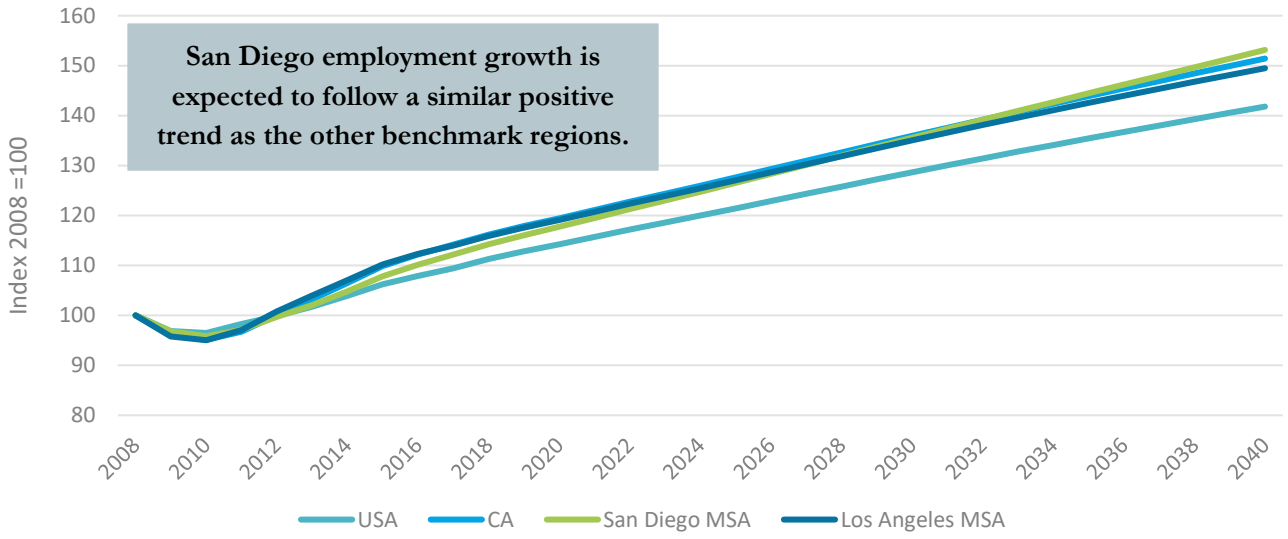
**Figure 5.11 — Population Density Map for San Diego Region (2011 RASP)**




Sources: RASP, 2011

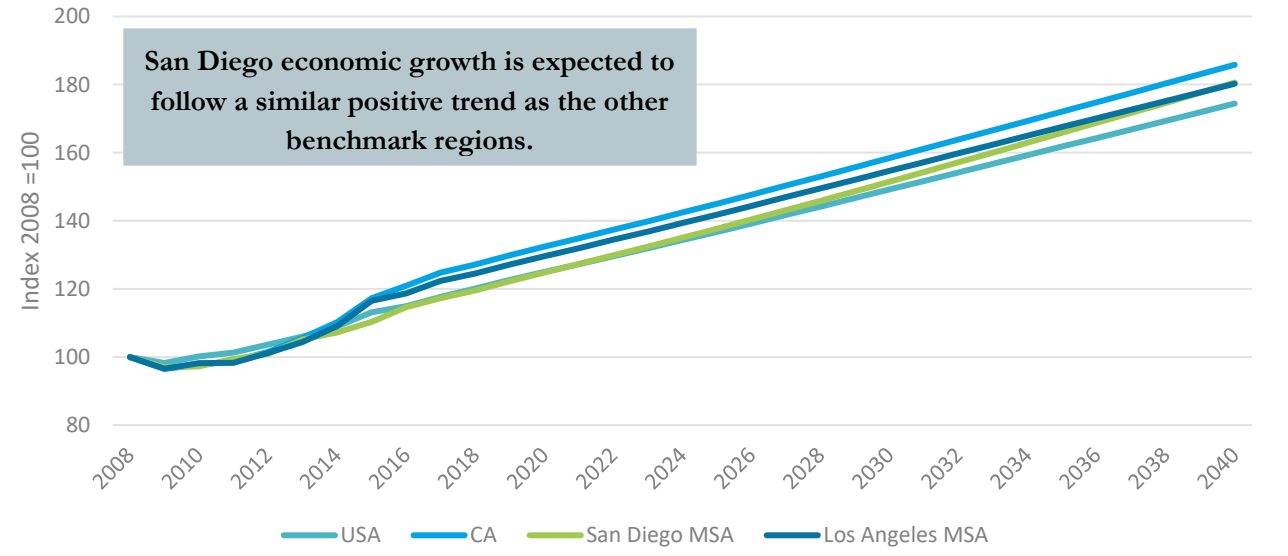
**Figures 5.12** and **5.13** show the expected growth in employment and gross domestic product (GDP)/ gross rating point (GRP) for each of the benchmark Regions. Employment growth in the long-term forecast comparisons suggest growth at roughly 1.3% CAGR for the San Diego MSA with 1.2% CAGR for the other Regions. GDP/GRP growth follows the same relationship with 1.9% CAGR projected for the San Diego MSA and 1.7% CAGR for the other regions.

### Figure 5.12 — Benchmark Employment Forecasts Comparison




Sources: Consultant Team, Woods & Poole Complete Economic and Demographic Data Source (CEDDS), 2019

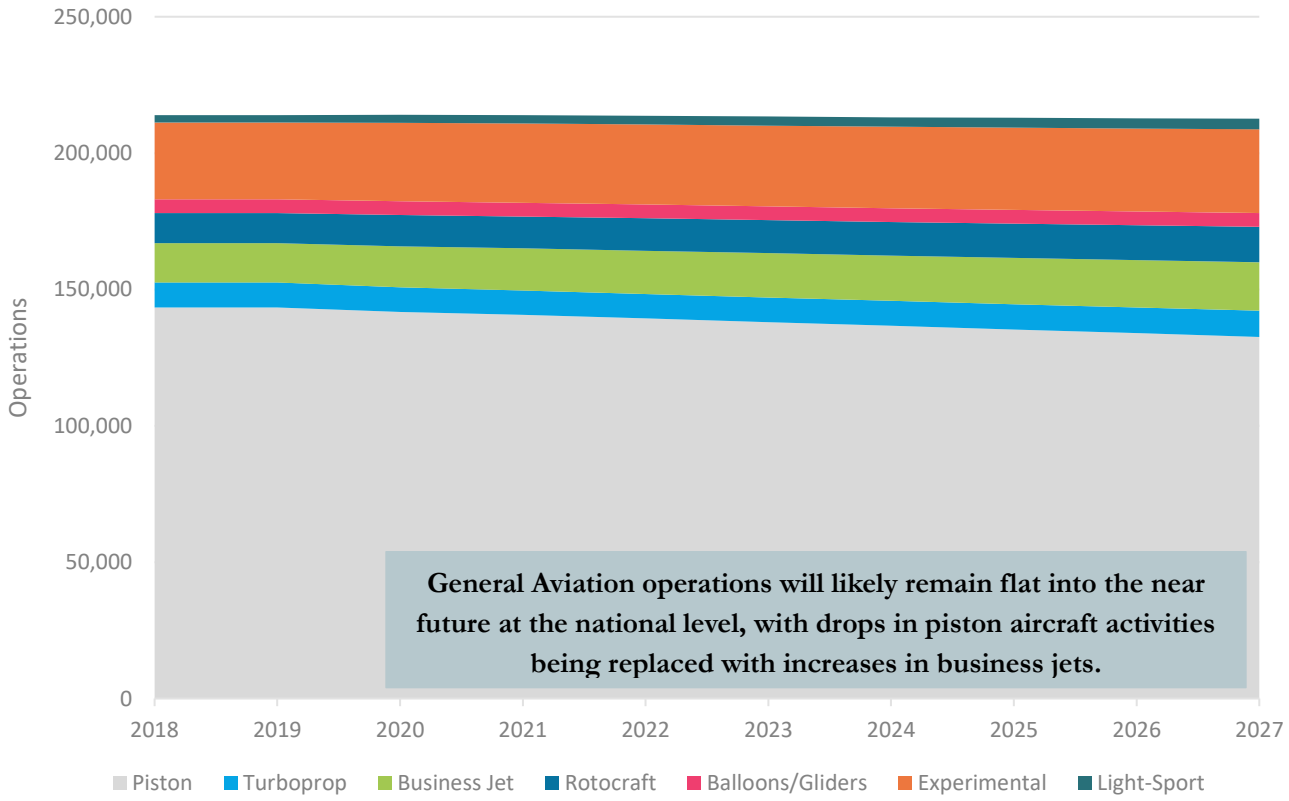
### Figure 5.13 — Benchmark GDP/GRP Employment Forecasts Comparison




Sources: Consultant Team, Woods & Poole Complete Economic and Demographic Data Source (CEDDS), 2019

Trends in the General Aviation segment as summarized in the 2018 Annual Report of the General Aviation Manufactures Association (GAMA) projects a flat outlook of demand for general aviation aircraft in terms of the number of aircraft. The size of the U.S. GA fleet is expected to maintain similar numbers, but with slight increases in Business Jets and Experimental Aircraft amid continued reductions in Piston Aircraft. **Figure 5.14** shows the forecast of general aviation aircraft levels by segment through 2027.

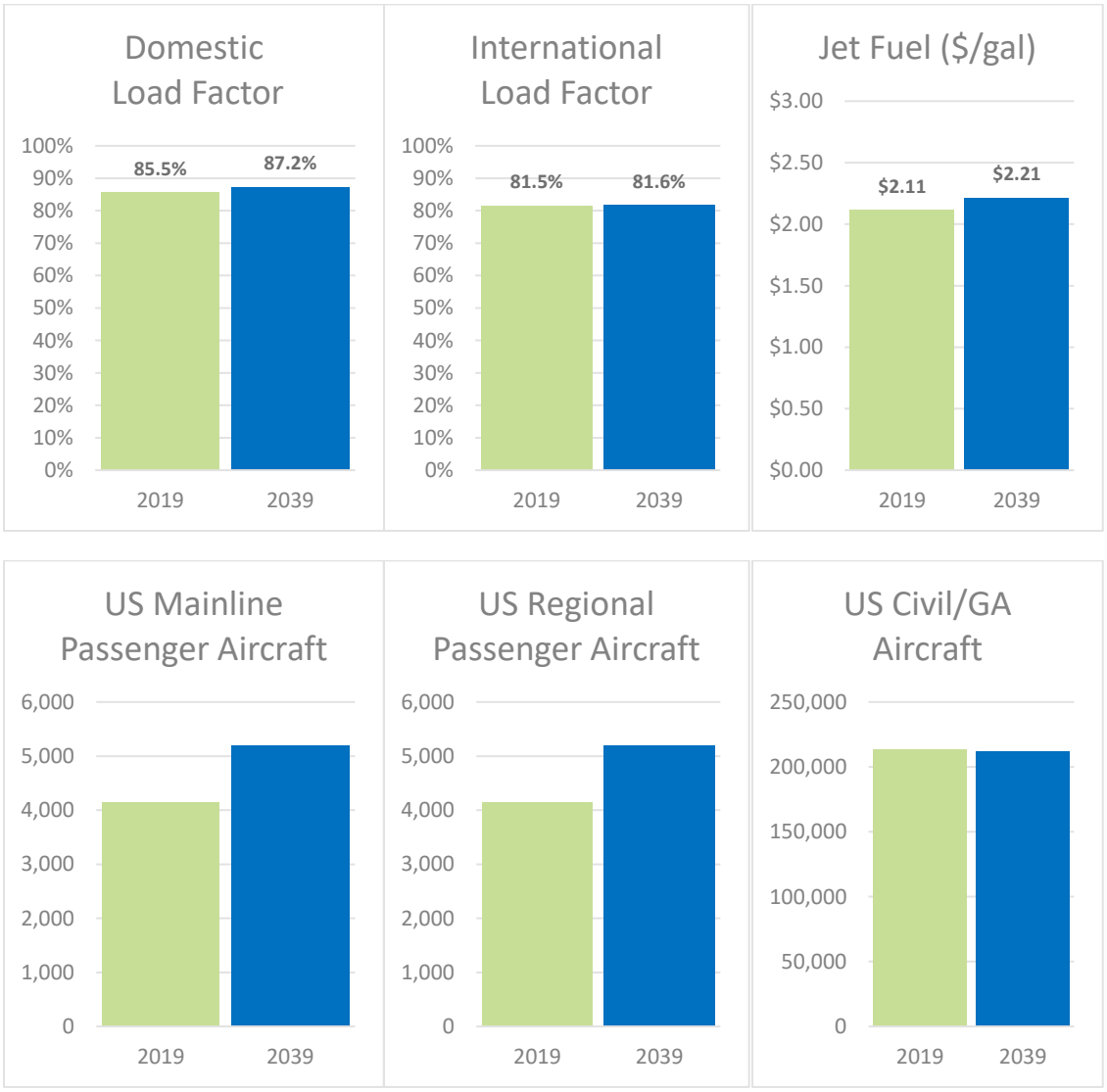
**Figure 5.14 — 2018 General Aviation Aircraft Forecast for the United States**




Sources: Consultant Team, GAMA 2018 Annual Report data

In the latest FAA Aerospace Forecast Report for Fiscal Years 2019-2039, the FAA projections and assumptions for changes in the aviation industry depict modest growth in the overall industry based in the U.S. with minor increases in jet fuel costs and already high domestic load factor, no real change in international load factor and a continual shift to larger aircraft including more jets versus piston aircraft. Overall from 2019 to 2039, U.S. enplanements are forecast to grow at an average annual rate of 1.6% per year for domestic traffic and 3.0% per year for international traffic. Total U.S. airport operations are projected to grow at 0.8% per year on average. **Figure 5.15** and **Figure 5.16** provide the overall changes in key aviation industry metrics between 2019 and 2039 as provided in the 2019-2039 FAA Aerospace Forecast.

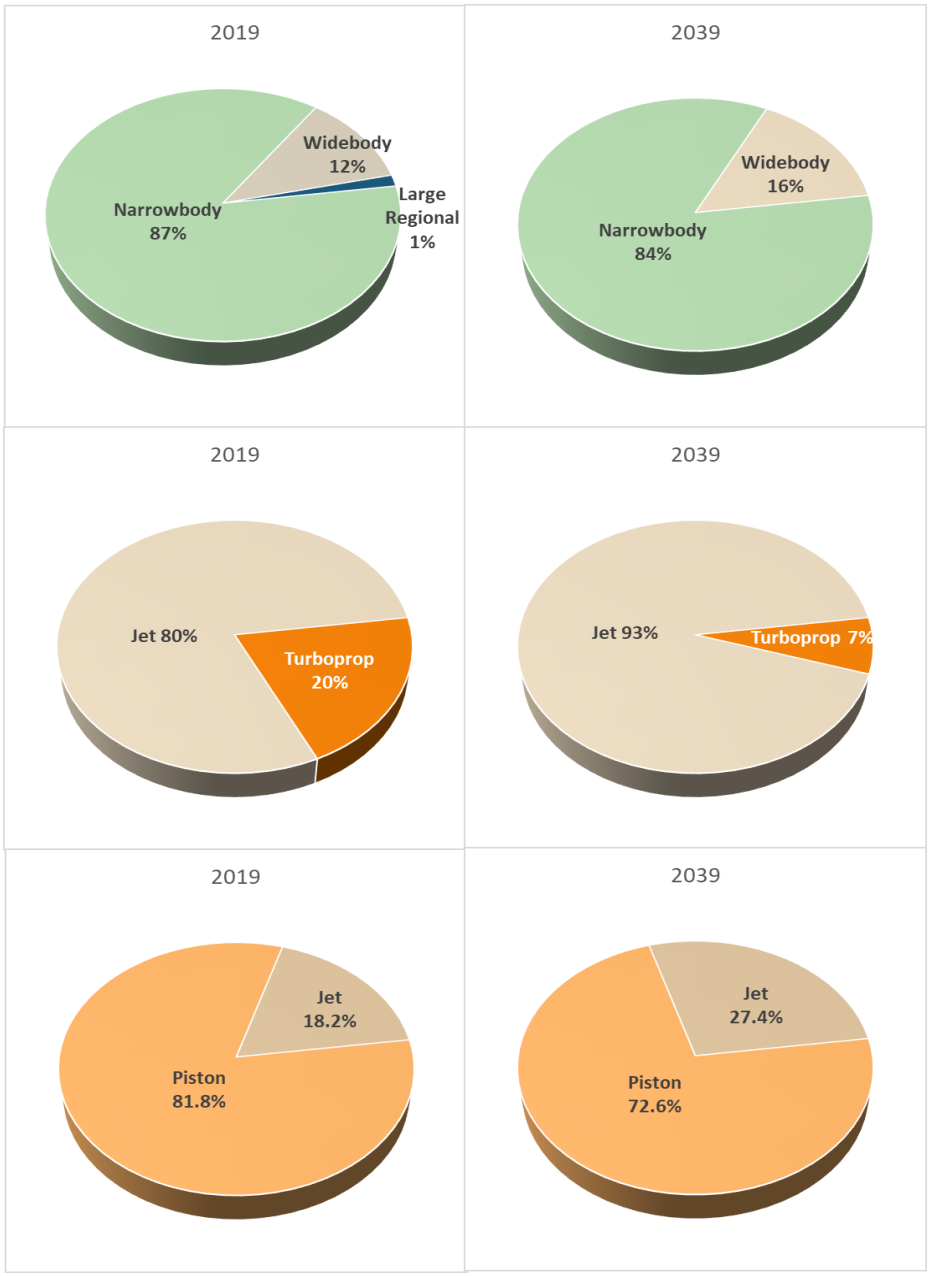
**Figure 5.15 — 2019 FAA Aerospace Forecast - Key Industry Metrics Projections**




Sources: Consultant Team, FAA Aerospace Forecast, Fiscal Years 2019-2039

The 2019 FAA Aerospace Forecast for Fiscal Years 2019-2039 projects that commercial passenger aircraft will be represented by 16% widebody and 84% narrowbody aircraft by 2039, up from just 12% widebody in 2019. Business aviation is expected to increase from 80% to 93% usage of jet aircraft by 2039, and overall the general aviation segment is expected to be 27.4% jet aircraft in 2039 up from 18.2% in 2019.

**Figure 5.16 — 2019 FAA Aerospace Forecast - Commercial Passenger Aircraft Fleet Mix**




Sources: Consultant Team, FAA Aerospace Forecast, Fiscal Years 2019-2039

## Implementation Report Finding

The San Diego Region is historically consistent with trends in aviation, and socioeconomic conditions seen both nationally and in California. These are typically good indicators of what drives or influences demand for aviation. Trends in common socioeconomic factors such as population, employment, and economic output (represented by gross domestic or regional product) were reviewed for comparison among the benchmark regions to understand that the San Diego Region has compared historically to these trends and will continue to follow future projections.

## 5.5 Current Forecasts

Since the RASP was completed and finalized in 2011, new forecasts were prepared independently for six of the 12 San Diego Regional airports, and the remaining six airport traffic forecasts were collectively developed as part of the San Diego County Regional Airport Authority's Airport Land Use Compatibility Plans (ALUCPs).

The following list establishes the specific documents (and their completion dates) reviewed to derive the forecasts consolidated in this RASP Implementation Report:

- San Diego International Airport, Airport Development Plan (ADP) – 2019
- McClellan-Palomar Airport, Master Plan Update – 2018
- Bob Maxwell Field – Oceanside, Master Plan Study – 2016
- Gillespie Field, Airfield Demand/Capacity Analysis & Safety and Efficiency Study – 2015
- Brown Field Municipal Airport, Master Plan – 2017
- Montgomery-Gibbs Executive Airport, Master Plan – 2017
- FAA Terminal Area Forecast (TAF) – 2019

For the airports not directly listed above, the following forecast was used:

- San Diego County Airports Land Use Compatibility Plan, Appendix C – 2018

Upon review and consolidation of the available forecasts for the San Diego Regional airports, **Table 5.3** and **Table 5.4** were prepared and show the comparison of the previous RASP forecast projections for 2030 and the new updated forecasts for 2030; additionally the new forecasts now have projections through 2038. FAA projections from the 2019 Terminal Area Forecast for the year 2038 are also included as a reference point for the latest long-term comparisons.

### Table 5.3—Updated Passengers Forecast Comparison

| | Total Passengers 2030 | | | Total Passengers 2038 | | |
|---|---|---|---|---|---|---|
| Airport | 2011 RASP | 2020 Update | % Variance | FAA TAF | 2020 Update | % Variance |
| San Diego International (SAN) | 28,213,494 | 35,390,567 | +25.4% | 38,725,820 | 38,653,535 | 0.2% |
| Tijuana Rodríguez International Airport* (TIJ) | - | 14,070,714 | - | - | 20,788,853 | - |
| McClellan-Palomar (CRQ) | 100,000 | 274,670 | +174.7% | 22,254 | 283,722 | -92.2% |
| Montgomery-Gibbs Executive (MYF) | - | - | - | - | - | - |
| Gillespie Field (SEE) | - | - | - | - | - | - |
| Brown Field Municipal (SDM) | - | - | - | - | - | - |
| Ramona (RNM) | - | - | - | - | - | - |
| Bob Maxwell Memorial Airfield (OKB) | - | - | - | - | - | - |
| Fallbrook Community Airpark (L18) | - | - | - | - | - | - |
| Borrego Valley (L08) | - | - | - | - | - | - |
| Agua Caliente (L54) | - | - | - | - | - | - |
| Ocotillo (L90) | - | - | - | - | - | - |
| Jacumba (L78) | - | - | - | - | - | - |
| **Total** | **28,313,494** | **49,735,951** | **+17.3%** | **38,748,074** | **59,726,110** | **-0.3%** |

Notes: *TIJ passenger estimates were not part of the 2011 RASP study; TIJ is also not part of the FAA TAF
Source: Consultant Team, 2020

### Table 5.4—Updated Operations Forecast Comparison

| | Total Operations 2030 | | | Total Operations 2038 | | |
|---|---|---|---|---|---|---|
| Airport | 2011 RASP | 2020 Update | % Variance | FAA TAF | 2020 Update | % Variance |
| San Diego International (SAN) | 309,800 | 280,955 | -9.3% | 343,427 | 377,230 | -9.0% |
| McClellan-Palomar (CRQ) | 268,700 | 188,324 | -29.9% | 162,768 | 195,050 | -16.6% |
| Montgomery-Gibbs Executive (MYF) | 271,800 | 214,582 | -21.1% | 238,497 | 221,896 | +7.5% |
| Gillespie Field (SEE) | 489,600 | 261,081 | -46.7% | 276,746 | 276,746 | - |
| Brown Field Municipal (SDM) | 175,900 | 86,625 | -50.8% | 82,199 | 87,050 | -5.6% |
| Ramona (RNM) | 242,100 | 114,946 | -52.5% | 104,948 | 123,120 | -14.8% |
| Bob Maxwell Memorial Airfield (OKB) | 18,200 | 23,050 | +26.6% | 16,246 | 24,300 | -33.1% |
| Fallbrook Community Airpark (L18) | 43,200 | 20,618 | -52.3% | 19,594 | 21,300 | -8.0% |
| Borrego Valley (L08) | 22,400 | 23,120 | +3.2% | 22,250 | 23,700 | -6.1% |
| Agua Caliente (L54) | 4,400 | 4,575 | +4.0% | n/a | 4,655 | n.c. |
| Ocotillo (L90) | 800 | 1,818 | +127.3% | n/a | 1,830 | n.c. |
| Jacumba (L78) | 325 | 1,448 | +345.5% | n/a | 1,500 | n.c. |
| **Total** | **1,847,225** | **1,221,142** | **-33.9%** | **1,266,675** | **1,358,377** | **6.9%** |

Notes: TIJ operations were not part of the 2011 RASP and no operation forecasts were estimated
Source: Consultant Team, 2020

## Implementation Report Finding

The RASP forecasts were based on data through 2007 and partial 2008 traffic data, which did not yet foresee the global financial crisis in 2008-2009, lasting spikes in oil prices from 2008-2014, and the resulting decline in general aviation demand that occurred in the following years.

The current forecasts' consolidated estimate of 1,221,242 operations in 2030 represents a decrease in total regional operations demand of 9.5% below the baseline in 2007 (or 1,349,203 operations) and 34% lower than the previous RASP forecast estimate for 2030.

The current consolidated operations forecast for 2038 of 1,358,277 is also 7.2% higher than the latest FAA TAF estimate of 1,266,675 total operations for 2038[1]. Total operations demand is projected to increase at 1.1% during the long-term forecast period of 2018 to 2038. See forecast comparisons in **Table 5.3** and **Table 5.4**

[1] The 2019 FAA TAF does not include estimates for three non-listed public airports (Agua Caliente, Jacumba Airport and Ocotillo Airport), which each had very limited activity reported at less than 1,000 operations in the RASP study.

# Section 6—Implementation Scenarios

## 6.1 Introduction

In 2011, a wide range of reasonable concepts were evaluated in the RASP. Some remain valid today, some have been completed, and others are now considered less feasible than originally thought. Each scenario is reviewed below and updated to reflect 2020 considerations.

The scenarios included individual measures that could be taken to optimize markets and use types – which if enacted could optimize the broader San Diego Regional Airport System. While no single measure was anticipated to make a significant impact on its own, the collective effect of multiple scenarios was expected to lead to worthwhile system optimization.

In 2020, most of the scenarios are still viable, but, in most cases, the individual measures originally envisioned to support the scenarios are no longer feasible.

## 6.2 Scenario One – Commercial Passenger Optimization

This scenario seeks to address capacity limitations at SAN by developing future facilities, enhancing airline service at other regional airports, preserving capacity at SAN for commercial service, and adjusting the size of aircraft at the Airport.

**Figure 6.1— Scenario One**


Source: Consultant Team, 2020

### Full Build-out of the ITC and North Side Terminal at San Diego International

The 2011 RASP envisioned the expansion of terminal facilities onto the Airport's north side, in conjunction with an Intermodal Transit Center (ITC) to better connect to the regional transit network. This would accommodate between 1.2 and 1.8 million additional annual passengers.

While siting terminals on SAN's north side has been found to be infeasible due to airfield operational constraints, several transit and mobility improvements have been made at SAN and more improvements are planned as part of Airport Development Plan implementation. Some improvements and developments towards this measure include:

- Vehicle parking facilities were expanded in 2018 with a 2,901-space parking garage.
- The new consolidated rental car facility was completed in 2016, reducing traffic congestion on North Harbor Drive.
- A "Trolley-to-Terminal" shuttle connection was launched in 2016, linking Middletown Trolley Station to both airport terminals
- A new on-airport entry roadway with multi-use path is planned as part of the ADP
- New shuttle service between Old Town Transit Center and airport terminal areas is planned as part of the ADP

The scenario also considered the preservation of the SAN airfield for commercial service.

- As part of the ADP, SAN is developing a new taxiway and implementing other airfield upgrades, which will increase airfield functionality.

## Enhance Commercial Passenger Service at McClellan-Palomar

This measure seeks to maximize the use of CRQ for commercial passenger activity by increasing Airport capacity from approximately 500,000 to 750,000 annual passenger enplanements, and to offer non-stop/direct services to markets within a 1,500-mile radius.

Two subsets of air service "drivers" were considered:

(1) McClellan-Palomar infrastructure enhancements where facility expansion attracts more activity; and

(2) San Diego International capacity constraints where the lack of capacity causes aviation activity to go elsewhere.

In 2020, CRQ is undertaking airfield improvements that will further support commercial service aircraft using the Airport. Not all of the specific projects outlined in the RASP at CRQ are currently planned (terminal and parking expansion) in the near-term horizon, but could be considered when demand dictates. As the operator of CRQ, the County of San Diego continuously works to bring commercial service to the airport and is undertaking an EMAS project. While these improvements are not the measures outlined in this scenario, they continue to support and enhance commercial passenger service opportunities at CRQ.

## Enhance Commercial Passenger Service at Brown Field

This measure looks to introduce commercial passenger service at SDM. The current airfield would not restrict the type of aircraft operating at the facility, but service would most likely be provided by regional jets (e.g., greater than 70 seat aircraft).

Several major improvements, which are not currently planned in the short term at the airport, would also be necessary to facilitate air service at SDN:

- New passenger terminal building
- Access/entrance roadway improvements
- 2,800 automobile parking spaces
- Facilities for Code of Federal Regulations Part 139 certification (e.g., requirements for commercial passenger services, including security fencing, firefighting facilities)
- Various utility upgrades

There are several other factors that must be considered for this scenario to be successful:

- The proximity of Brown Field to two existing commercial service airports (San Diego and Tijuana Rodriguez International Airports) negatively impacts the viability of this scenario
- The remote location in the southern portion of San Diego County is not desirable for commercial passenger operators, as compared to norther San Diego County and CRQ.
- Terrain and airspace complications hinder the implementation of precision approaches – necessary facilities for the initiation of commercial service

As such, the City of San Diego continues to focus solely on general aviation at Brown field Municipal Airport in 2020.

## Up-gauge San Diego International's Aircraft Fleet Mix

This measure encourages air carriers to reduce the use of regional jet or smaller aircraft at SAN; aircraft operations would be replaced by narrow-body type aircraft with an average seat capacity of 140 seats. Additionally, it encourage air carriers to deploy large capacity aircraft at SAN.

The Authority has no legal jurisdiction to dictate the type of aircraft operated by its users. However, market forces normally prevail; air carriers "right size" seat capacity based on the characteristics of their overall network, including destinations served, services, and demand. This has generally occurred at SAN since the RASP, with airlines transitioning from operating limited-capacity regional jets to larger aircraft and resulting in the closure of SAN's Commuter Terminal in mid-2015.

### Implementation Report Finding

*Commercial Service Optimization Scenario*: SAN has completed some improvements proposed in this scenario, such as a consolidated rental car center on its northside. The SAN Airport Development Plan (ADP) is currently underway, which includes a new taxiway and a replacement terminal. The airlines using SAN have also successfully upgraded their fleets, although the Authority does not play a role in this decision. Several commercial service airlines have provided service from CRQ since 2011 and the County is working to restart commercial passenger service at the Airport. Commercial service is not currently being considered at SDM.

In terms of optimizing ground access to commercial service airports, SANDAG is working towards a Central Mobility Hub to better connect SAN to the regional transit system, via an automated people mover. New shuttle service between the Old Town Transit Center and the airport terminal areas is also being launched in the near term as part of the SAN ADP.

While many of the original measures under this scenario have yet to materialize at CRQ and SDM, the region continues to be able to support commercial service at more than one facility and this is expected to continue. Furthermore, this scenario remains valid as SAN continues to make improvements, maximizes the intermodal efficiencies, and air carriers up-gauge the fleet mix.

## 6.3 Scenario Two – Enhanced Utilization of Tijuana Rodriguez International Airport

This scenario focuses on improving access to Tijuana Rodriguez International Airport to assist in accommodating the region's passenger demand. The scenario focuses on facilitating border crossings, an aviation passenger cross border facility, and a cross border airport terminal.

**Figure 6.2— Scenario Two**

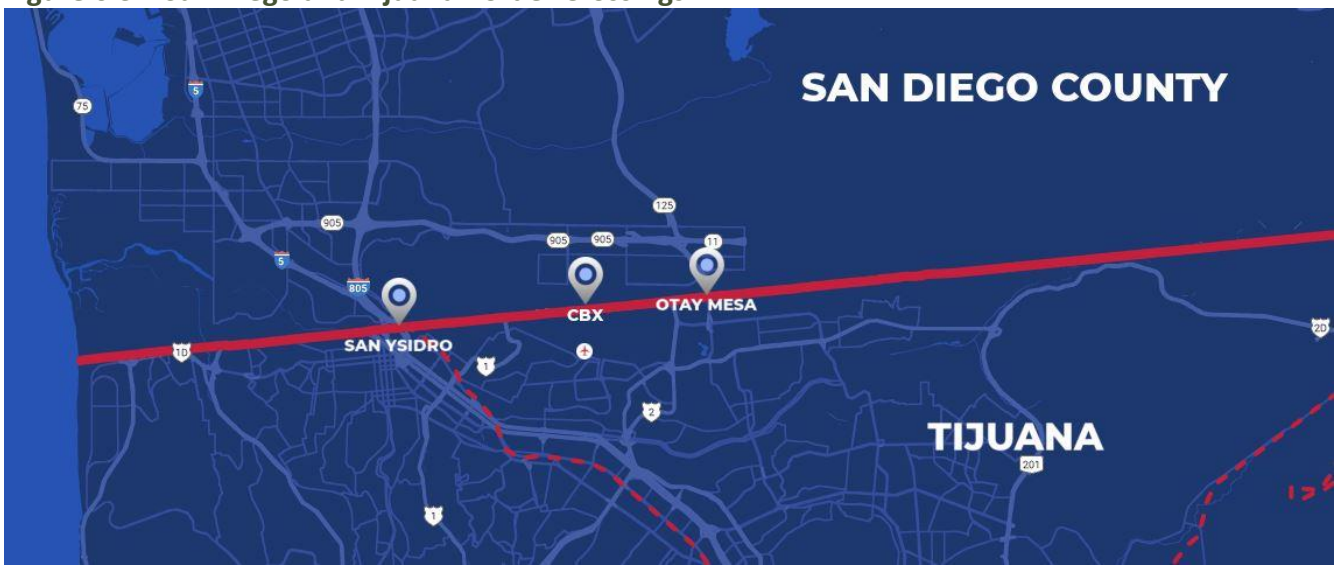

Source: Consultant Team, 2020

### Facilitate Border Crossings

This measure focused on increasing access to TIJ by improving existing Otay Mesa and San Ysidro international border crossings. The Otay Mesa Port of Entry connects San Diego with the Otay Centenario borough of Tijuana. It was constructed in 1983 to divert commercial truck traffic from the San Ysidro Port of Entry. The San Ysidro Port of Entry is the largest land border crossing between San Diego and Tijuana. Both ports of entry have undergone roadway and facility improvements to facility faster border crossings and more upgrades are planned.

This measure assumed the implementation of *Project Smart Border 2010*, a San Diego Regional Chamber of Commerce initiative. These improvements focused on reducing border crossing times by 40%, increase shuttle and bus service to Tijuana from the Los Angeles and San Diego Regions, increasing air service to Mexican international markets and limited increases in air service to U.S. markets, and facility improvements at TIJ.

**Figure 6.3—San Diego and Tijuana Border Crossings**




Source: Smart Border Coalition, 2020.

In 2020, this effort is now led by the Smart Border Coalition, an organization with the aim to bring together San Diego and Tijuana businesses, government, agency and civic society leaders to advocate for improvements at the U.S. ports of entry. Since 2014, this effort is independent of the Chamber of Commerce.

## Aviation Passenger Cross Border Facility

This scenario proposed the increased use of TIJ by offering a cross border facility, allowing U.S. ticketed passengers' access into the Airport.

As of 2015, this scenario has been successfully achieved. Cross Border Xpress (CBX) is a terminal facility located in the United States, which allows passengers in the U.S. to access the Tijuana International Airport via a bridge that connects to the concourse, so passengers can take flights to destinations within Mexico or internationally as if they were domestic passengers once past border security.

For passengers entering the United States, there are four "double-stack" booths at CBX accommodating up to 8 Custom and Border Patrol (CBP) officers. Due to the high demand, this is now being doubled, so that 16 CBP officers can work at one time. In addition, a new processing facility is being built at TIJ, so that inbound International passengers will no longer have to clear Mexican customs before clearing U.S. customs.

## Cross Border Airport Terminal

This scenario proposes a passenger cross border terminal on the U.S. side of the border to facilitate processing of U.S. passengers utilizing TIJ. As opposed to the passenger cross border facility measure (see above), this facility would also include passenger processing facilities (i.e. ticketing, bag checks, security screening, etc). In 2020, no such facility is being contemplated and the current cross border facility (CBX) has likely adequately addressed this need in the Region.

## Implementation Report Finding

*Enhanced Utilization of Tijuana Scenario*: Opened in December 2015, Cross Border Xpress (CBX) provides a pedestrian bridge for passengers to more easily access the Tijuana Rodriguez International Airport from the United States. The 390-foot bridge directly connects to the foreign airport terminal, which mainly provides air service to other destinations within Mexico. In addition, border crossing improvements have been successfully completed to reduce wait times at San Ysidro and Otay Mesa and more upgrades are planned. A regional transit connection to CBX is under consideration by SANDAG, which would improve ground access between CBX and SAN.

The CBX facility is one of the measures from the RASP that has been successfully implemented as envisioned. As seen in the forecast section of this Report, the CBX facility allows commercial passengers direct access to markets not directly served by SAN. Improvements made at the three border crossings facilitate travel from San Diego to Tijuana and all support this scenario's goal of optimizing the utilization of TIJ.

## 6.4 Scenario Three – California High Speed Rail (HSR)

This scenario identified high speed rail to offer passengers an alternative transportation resources to reach cities within

California. The scenario identified stations and alignments in downtown San Diego and SAN. Additionally, the Region's residents could use HSR to access other Southern California airports and their ultimate destination.

**Figure 6.4— Scenario Three**


Source: Consultant Team, 2020

When the RASP was in development, the HSR was conceptual in nature and planned to connect from Sacramento and the Bay Area, through central California to San Diego. When all segments of the project are completed, HSR can be used an alternative or replacement for intra-California air travel or to access another airport within California. This scenario would not only provide San Diego residents an alternative to intra-California air travel, but also an alternative ground transportation method to access SAN.

In 2020, the future of high-speed rail throughout California is still conceptual. Current focus is on developing Phase 1 of the State's HSR network connecting Anaheim to the San Francisco via the Central Valley. No concrete plans have been made for construction in the San Diego Region. This segment of the project is planned to be one of the last phases of the HSR project. While there is not a published timeline for completion of the entire HSR, it is anticipated to fall outside of the RASP planning period.

### Implementation Report Finding

*California High Speed Rail Scenario*: When the RASP was in development, California High Speed Rail (HSR) was expected to start service in the San Diego Region in 2027. Currently, the California HSR Authority is focusing on the Phase 1 segments of the statewide alignment. In Southern California, the HSR Authority is working to identify the best configuration for the Los Angeles to San Diego section. However, this HSR section is a later phase of the project and no specific date is published for its estimated completion.

High-speed rail may still alleviate commercial passenger service demand when it is implemented, but cannot be counted on to be implemented within the RASP planning period. In the 2011 RASP, this scenario had the highest potential to ease commercial service passenger constraints for the Region, yet HSR is sponsored by the State of California's High-Speed Rail Authority – not the Region's airport sponsors.

## 6.5 Scenario Four – General Aviation Optimization

This scenario focuses on enhancing the Region's high-end general aviation airports, thus providing an alternative to SAN. The scenario suggests a regional redistribution of general aviation activity with based aircraft shifted away from airports that offer commercial passenger service. Under these assumptions, facility improvements at each facility would incentivize aircraft owners to relocate or increase their utilization of the airport being improved. This scenario also assumes a "coordinated" regional FBO and general aviation policy between all the Airport Operators in the Region to facilitate and shift the traffic.

**Figure 6.5— Scenario Four**


Source: Consultant Team, 2020

### Enhance CRQ for High-end/Corporate General Aviation

The McClellan-Palomar Airport would shift its role to solely focus on general aviation. Its existing terminal would be converted into a high-end FBO facility and the runway extended 1,000 feet to accommodate a full range of high-end general aviation traffic (general aviation traffic such as corporate travel and jet flights). Today, CRQ continues to focus on improvement and development that would benefit all users, both general aviation and commercial service.

### Enhance SDM for High-end/Corporate General Aviation

Consistent with the Airport's current development, this measure anticipated the construction of an additional FBO facility, corporate hangars, and t-hangars at Brown Field Municipal Airport in order to accommodate the Region's high-end general aviation traffic.

### Enhance SEE for Mixed Use General Aviation

Gillespie Field continues to develop its facilities to support the Region's general aviation activity. Additional apron and airfield improvements increase the demand for recreational and corporate general aviation activity.

### Implementation Report Finding

*General Aviation Optimization Scenario*: This scenario assumed that these three airports would focus only on the general aviation market. Although CRQ continues to pursue commercial passenger service, the County has made improvements that support the general aviation markets at the airport. Likewise, the City of San Diego is finalizing a new master plan for Brownfield Municipal that will expand its general aviation amenities. There are no current efforts for a regional approach to a FBO and general aviation policy, which is an important component to this scenario. Finally, the lower-than-forecasted operational levels for the Region's airports suggests that there is not currently a need to shift the general aviation traffic between the airports within the Region, as originally predicted in the RASP.

## 6.6 Scenario Five – Air Cargo Optimization

This scenario looked to relocate air cargo services away from SAN, but was identified as flawed in the RASP for the following reasons:

- Air cargo operators are unwilling to operate from facilities other than San Diego International due to increased distance from air cargo sorting infrastructure.
- Most of the San Diego International air cargo is accommodated on integrated/express air cargo carriers (90%) and originates in or is destined for downtown San Diego.
- There is a significant lack of cargo infrastructure located near Brown Field, whereas this type of supporting infrastructure is already in place near San Diego International.
- Terrain surrounding the Airport, as well as its proximity to Mexican airspace, limits the ability for instrument approaches, which would be needed to air cargo operations in all weather situations.

**Figure 6.6— Scenario Five**


Source: Consultant Team, 2020

### Implementation Report Finding

*Air Cargo Optimization Scenario*: When the RASP was in development, this alternative was identified as flawed due to airspace and logistical constraints. There also continues to be no regional desire, demand, or need to relocate cargo from SAN to another airport. It should be noted that SAN has included planned improvements to its northside cargo facilities in its airport master plan to enhance air cargo service for the Region. Consistent with the RASP, this scenario is still unlikely to happen. All of the constraints identified in the 2011 RASP still exist in 2020.

# Section 7—Conclusion

## 7.1 Overview

The airport operators in the San Diego Region – San Diego County Regional Airport Authority, County of San Diego, City of San Diego, City of Oceanside, as well as the operators of the CrossBorder Xpress and Tijuana International Airport – have collectively made significant progress in implementing the 2011 Regional Aviation Strategic Plan. Since 2011, capital improvements and operational modifications have been completed at nearly all 12 public use airports, plus CBX/TIJ, which help to optimize the San Diego Regional Airport System. The RASP's five scenarios to help balance and meet the regional demand for commercial and general aviation traffic remain valid, but many of the individual measures identified under each scenario have evolved and will likely continue to do so. The 2011 RASP also continues to inform SANDAG's regional transportation planning efforts, including the current preparation of the 2021 Regional Transportation Plan ("San Diego Forward: The Regional Plan") to ensure efficient and effective ground access to the region's airports.

**Table 7.1 – RASP Scenario Summary**

| Scenario | 2011 RASP | | 2020 Implementation Report | |
|---|---|---|---|---|
| | Valid | Not Valid | Valid | Not Valid |
| 1. Commercial Service Optimization | ✓ | | ✓ | |
| 2. Enhanced Utilization of Tijuana | ✓ | | ✓ | |
| 3. California High Speed Rail | ✓ | | ✓ | |
| 4. General Aviation Optimization | ✓ | | ✓ | |
| 5. Air Cargo Optimization | ✓ | | ✓ | |

Source: Consultant Team, 2020

Passenger demand in the San Diego Region has grown at a rate well above the values, which were projected in the 2011 RASP, while overall operation levels has not grown due to a decrease in general aviation traffic demand and the up-gauging of commercial service aircraft. Therefore, commercial service capacity in the San Diego Region is no longer considered constrained within the RASP's planning horizon. The updated airport forecasts consolidated in this Implementation Report predict that roughly 1.35 million annual operations are expected for the San Diego Region (excluding Tijuana International) in 2038. Concurrently, total commercial passengers (excluding Tijuana International) for the San Diego Region are forecast to increase to 38.9 million annual passengers by 2038. Nearly all of this commercial passenger growth is assumed to occur at San Diego International Airport, where runway capacity limits passenger traffic to approximately 40 million annual passengers. Excess passenger demand after 2038 in the San Diego Region could result in "leakage" to airports in the Los Angeles region or to Tijuana International Airport, via the Cross Border Xpress facility.

As such, the need remains for continuing a coordinated and collective approach, as successfully done through the 2011 RASP and this Implementation Report, to optimize the San Diego Regional Airport System. The RASP will be reevaluated periodically by the San Diego County Regional Airport Authority, in collaboration with the other airport operators. It is likely that the 2011 RASP scenarios will need to be formally updated at some point in the future. When this occurs, emerging technologies such as urban air mobility, unmanned aircraft systems, electric aircraft and vehicles, and other new innovations will need to be assessed to better understand opportunities and challenges with integrating them into the region's airport infrastructure.

**For additional information about the Region's Airports, the RASP, and this Report, please visit the RASP's website.**