



➔ Airport Economic Impact Analysis

McClellan-Palomar Airport

Prepared by ICF

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Table of Acronyms/Glossary

Term	Definition
CAPEX	Capital Expenditures
Direct Impacts	Impacts in the primary industries where spending by the Airport and its visitors are focused, such as operations, airport employment, lodging, and restaurant/food purchases.
EMAS	Engineered Materials Arresting System
Employment	Represents the jobs created in each industry, based on the output per worker for each industry.
IMPLAN	Impact Analysis for Planning – economic modeling tool
Indirect Impacts	Impacts in the industries that supply or interact with the primary industries, for example when Airport capital projects require the purchase of construction-related building materials.
Induced Impacts	The increased spending by workers who earn money due to the proposed projects, such as when laborers use their wages at local restaurants.
Industry Activity	Represents the total value of industry activity generated by the direct spending.
Labor Income	Includes all forms of employment income generated by the direct input, including employee compensation (wages and benefits) and proprietor income.
Multiplier	Coefficients that describe the response of the economy to a stimulus (a change in demand or production).
Off Airport Activity	Activity related to the business park tenants in the Palomar Commons and off airport businesses like the Weston Solutions, Inc., along with off-airport spending by both leisure and business travelers on transportation, lodging, food, attractions, and other retail items. For example, hotels near the airport, taxi companies, wholesalers, or shipping services.
On Airport Activity	Activity related to the Airport's annual operational expenditure and capital expenditures along with the total employment, average annual capital expenditures, and annual fuel expenditures of all on-airport tenants
Regions of Analysis	<p>Base Regions:</p> <ul style="list-style-type: none"> San Diego County San Diego Region (Five-county region of San Diego, Riverside, Los Angeles, Orange, and San Bernardino counties) North County (Zip Codes in North of San Diego County) <p>Additional Regions:</p> <ul style="list-style-type: none"> City of Carlsbad
Visitor Spending	Purchases made by visitors to the San Diego region in categories such as ground transportation, lodging, or retail expenditures.

Executive Summary

McClellan-Palomar Airport (Airport) acts as a significant contributor of economic activity in the North County and the broader San Diego region.¹ Airport-related capital investment, operational employment, visitor spending and airport-owned business park activity contribute directly to regional employment, industry activity and tax revenues. Moreover, this direct spending creates additional secondary (indirect and induced) impacts across the broader economy as direct spending drives purchases in related industry sectors. Economic impact analysis quantifies the “multiplier effect” of economic activity, calculating the total (direct and secondary) impact created by multiple rounds of spending across a regional economy. This analysis uses the modeling software IMPLAN (2019 data) to calculate these inter-industry impacts. IMPLAN is an economic input-output model that combines a set of extensive databases related to economic factors, economic multipliers, and demographic statistics with a refined and detailed system of modeling software. As the community considers future airport facility improvements, it is valuable to understand both its current economic contribution as well as the potential benefit to the region under various growth scenarios and timeframes as discussed in the 2018 McClellan-Palomar Airport Master Plan Update.² To that effect, this study analyzed the Airport’s impact under three scenarios:

- **2019 Baseline:** represents current economic impact
- **No Development Scenario:** forecasted economic impact in 2026 and 2036 without further development and no additional commercial air service. This represents the most constrained economic scenario³
- **Full Development Scenario:** forecasted economic impact in 2026 and 2036 under the development recommended by the Airport Master Plan to facilitate current and forecasted aviation activity and accommodate commercial air service. This represents the least constrained economic scenario.⁴

The analysis reports economic impacts in terms of jobs, labor income, total industry activity and tax impact. As seen in Figure 1 below, the impact of McClellan-Palomar Airport to the San Diego Region is significant. The Airports operational and capital expenditure, tenant activity, and passenger spending supports approximately 2,590 jobs, drives \$461 million in industry activity, and generates \$72 million in federal, state, and local tax revenue. These findings do not include the economic impact generated from off-airport business park activity, which was modeled separately to allow for an accurate comparison across scenarios. In 2019, this off-airport business park activity generated an additional 620 jobs, \$82.6 million in industry activity and \$14.9 million in tax revenue.

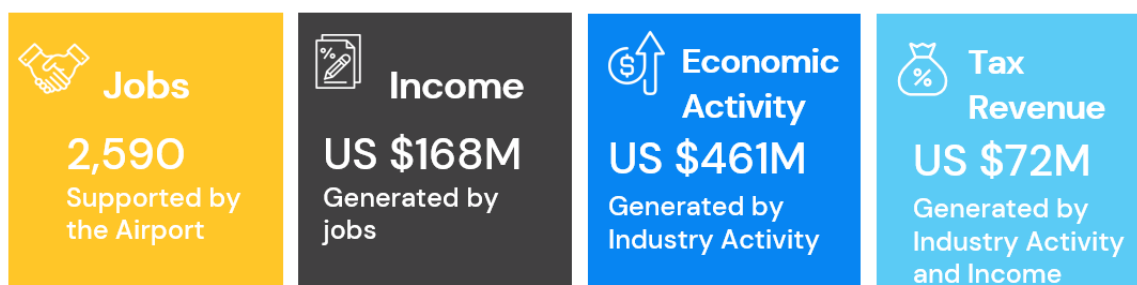
¹ The San Diego Region includes the five-county area of San Diego, Riverside, Los Angeles, Orange, and San Bernardino counties.

² County of San Diego. (2018). McClellan-Palomar Airport Master Plan Update

³ The No Development Scenario accounts for no change in airport classification, no runway extension, and no additional commercial service.

⁴ The Full Development Scenario is the Preferred Airport Alternative as described in the Master Plan Update (including but not limited to D-III design standards, shifting the runway 123 feet to the north, extending it 800 feet, and installing Emergency Material Arresting System-EMAS) to facilitate current based aircraft and forecasted Planning Activity Level 2 commercial air service demand, as also described in the Master Plan Update.

Figure 1: 2019 Baseline Impact - San Diego Region

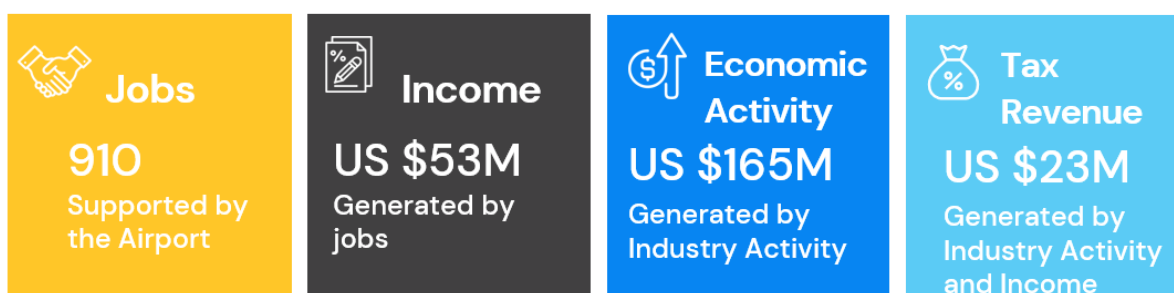


Source: ICF IMPLAN analysis. Employment is reported in terms of annual number of jobs and rounded to the nearest tenth. All labor income and industry values are in 2021 dollars.

A significant portion of the Airport's economic impact on the San Diego region is felt in the North County. Of the total regional impact for the 2019 Baseline, 63% of the total employment impact (1,640 jobs), and 52% of total industry activity impact (\$242 million) occurs in North County. The North County employment impact is primarily driven by direct employment in aviation and tourism-related sectors, which include sightseeing transportation and support activities for transportation (21% of jobs created), hotels, motels, and other accommodation (18% of jobs created), and air transportation (12% of jobs created). Additionally, induced employment impacts stem from the change in earnings of those employed in sectors of direct and indirect employment growth are primarily felt in the retail and health services sectors. On-airport Air Transportation occupations which include airline pilots, flight engineers, aircraft mechanics and service technicians, and flight attendants have an average annual compensation of \$74,972, which is above the North County average of \$66,698. Similarly, on-airport occupations in the Sightseeing Transportation and Support Activities for Transportation sector like air traffic control, hangar rental, and parking have an average annual employee compensation of \$64,507 which is on par with the average compensation in North County.

Moreover, of the 2019 Baseline regional impact, 35% of the total employment (910 jobs), and 36% of total industry activity (\$165 million) occurs in the City of Carlsbad. Figure 2 below provides an overview of the Airport's 2019 Baseline impact in the City of Carlsbad. These findings do not include the economic impact generated from off-airport business park activity.

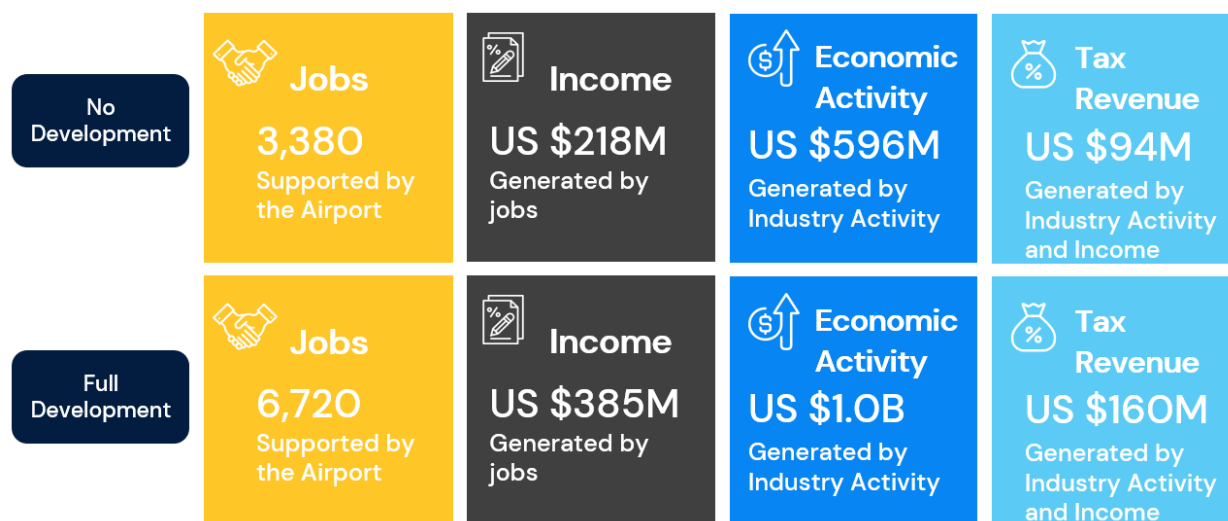
Figure 2: 2019 Baseline Impact - City of Carlsbad



Source: ICF IMPLAN analysis. Employment is reported in terms of annual number of jobs and rounded to the nearest tenth. All labor income and industry values are in 2021 dollars.

As seen in Figure 3 below, the difference between the 2036 No Development and Full Development Scenarios is significant. Under the 2036 Full Development Scenario, the Airport's operational and capital expenditure, tenant activity, and passenger spending supports approximately 6,720 jobs, drives approximately \$1.0 billion in industry activity, and generates \$160 million in federal, state, and local tax revenue.

Figure 3: 2036 No and Full Development Scenarios - San Diego Region



Source: ICF IMPLAN analysis. Employment is reported in terms of annual number of jobs and rounded to the nearest tenth. All labor income and industry values are in 2021 dollars.

Based on the analysis, the Airport's total impact is estimated to increase 19% by 2026 under the No Development Scenario and as much as 92% under the Full Development Scenario. Similarly, in 2036 the total economic impact of the Airport is estimated to increase 29% under the No Development Scenario, or up to 121% under the Full Development scenario. Again, the majority of the airport's economic impact under the Full Development Scenarios in 2026 and 2036 is felt locally in North County; 69% of the total employment impact and 55% of the total industry activity. Table 1 below presents the total economic impact across the scenarios for the San Diego Region.

Table 1: Summary of Economic Impact by Scenario

Impact Category	2019 Baseline	2026		2036	
		No Development	Full Development	No Development	Full Development
Employment (Jobs)	2,594	3,083	5,756	3,377	6,724
Labor Income (\$Millions)	\$168.1	\$200.0	\$334.2	\$218.0	\$385.4
Industry Activity (\$Millions)	\$460.6	\$547.5	\$886.1	\$595.5	\$1,017.5
Federal, State & Local Tax (\$Millions)	\$72.2	\$85.9	\$139.1	\$93.5	\$159.8

Source: ICF IMPLAN analysis. Employment is reported in terms of annual number of jobs. All labor income and industry values are in 2021 dollars.

In addition to the ongoing annual activity, there are short-term construction expenditures related to capital improvements associated with the reclassification of the airport to a D-III design standard,

shifting the runway to the north, and a runway extension that could have significant economic impact. The impact of this construction activity is not included in the annualized 2026 or 2036 Scenarios because of its multi-year duration and thus should be considered additive to the annualized impacts. Table 2 below presents these impacts over the construction periods.

Table 2: Economic Impact of Full Development Scenario

Impact Category	2019 – 2026	2026 – 2036
Employment (Jobs)	483	831
Labor Income (\$Millions)	\$33.9	\$58.4
Industry Activity (\$Millions)	\$89.9	\$154.7
Federal, State & Local Tax (\$Millions)	\$11.4	\$19.6

Source: ICF IMPLAN analysis. Employment is reported in terms of annual number of jobs. All labor income and industry values are in 2021 dollars.

It should be noted that the economic multipliers are larger for San Diego region than for San Diego County, North County, and the City of Carlsbad because the regional economy has larger supply-chains and labor markets, and thus secondary (indirect and induced) effects are more significant. For example, a dollar of direct spending supports \$1.15 of impact in North County compared to \$1.91 in the region. These trends are consistent for the employment and labor income impacts as well. The multipliers for airport activity and tenant activity are generally higher than those for visitor spending and business park activity because retail sectors have a higher portion of initial spending that “leaks” out of the study area.

As part of the analysis, ICF also assessed how the Airport’s services affect the competitiveness of industries in North County. ICF conducted stakeholder interviews with businesses in the leisure and business market segments to get a better understanding of how local industries benefit from the Airport’s presence. ICF reached out to a total of 14 identified contacts and conducted interviews with 10 total stakeholders. Beyond its impacts in terms of employment and spending, the Airport provides value to the region’s economy by connecting local firms with strategic partners, and critical markets. The Airport provides large regional firms with a local airport from which to efficiently travel to business meetings and access markets across the country and overseas. The Airport plays an important role in the North County’s growing leisure industry, enabling visitors to conveniently fly into the region to attend conferences, sports events, theme parks, and other recreational activities which drives subsequent economic spending in the region. Interview feedback confirmed that there is considerable demand for commercial passenger service that would support local technology and life sciences corporate travel and leisure tourism. A catchment study conducted last year for the Airport showed that there were approximately 7,000 airline passengers per day each way, or 14,000 total passengers, that reside or were visiting a destination within 15 miles of the Airport.⁵ New commercial air service at the Airport would not only provide a more convenient option for many of these travelers but would also stimulate additional air service demand. In addition to business and leisure market benefits, the Airport is a valuable potential asset for the emergency service providers in the region.

⁵ Zip Code Market Study 2019, conducted by ASM Global Route Development for Carlsbad McClellan-Palomar Airport.

Notes on Methodology

Regional economic modeling is founded on the principle that industry sectors are interdependent: one industry purchases inputs from other industries and households (e.g., labor) and then sells outputs to other industries, households, and government entities. Therefore, economic activity in one sector causes an increased flow of money throughout the economy.

This analysis uses the modeling software IMPLAN (2019 data) to calculate these inter-industry impacts. IMPLAN is an economic input-output model that combines a set of extensive databases related to economic factors, economic multipliers, and demographic statistics with a refined and detailed system of modeling software. There are three primary types of impacts in IMPLAN:

- **Direct** – refers to the impacts on the industries that the Airport, its operators, and visitors directly interact with, such as aviation services, food and beverage establishments, retail stores, etc.
- **Indirect** – refers to the impacts in inter-industry purchases resulting from direct spending on materials, equipment, and labor. These results represent the upstream supply chain impacts that are created due to the industry linkages caused by project-related industries purchasing from other industries such as raw materials sectors supplying the directly impacted industry.
- **Induced** – refers to the downstream impacts created in all local industries due to consumers' consumption expenditures arising from changes in personal income caused by the direct and indirect effects.

IMPLAN is widely used by municipalities and other entities throughout North America and thus the results of this analysis are comparable to other assessments. Results are reported using four commonly used metrics, consistent with best practices across economic impact analysis. A summary of each metric is provided below:

- **Employment:** Represents the jobs created in each industry, based on the output per worker for each industry.
- **Labor Income:** Includes all forms of employment income generated by the direct input, including employee compensation (wages and benefits) and proprietor income.
- **Industry Activity:** Represents the total value of industry activity generated by the direct spending.
- **Tax Impact:** Represents the total value of the region's share of federal, state and local taxes.

In addition to the modeled quantitative economic impacts, ICF examined how access to the Airport provides a benefit to local businesses, residents, and the broader economy in terms of connectivity. To capture these impacts, ICF conducted stakeholder interviews with businesses in the leisure and business market segments to get a better understanding of how local industries benefit from the Airport's presence. Based on the information obtained during the interviews, ICF constructed short vignettes that demonstrate qualitatively the broader impacts of the airport on regional competitiveness.