

5.4 SECONDARY (INDUCED) IMPACTS

Major development proposals often involve the potential for induced or secondary impacts on surrounding communities. Examples of these impacts include: shifts in patterns of population movement and growth; public service demands; and changes in business and economic activity to the extent influenced by airport development. Induced impacts will normally not be significant except where there are also significant impacts in other categories, especially noise, land use, or direct social impacts.

5.4.1 INDUCED AIRPORT ACTIVITY

Airport development projects may have the potential to induce additional and/or different types of aircraft activity at an airport. This section assesses the potential induced aircraft activity associated with this project.

5.4.1.1 Existing Conditions

Gross Field Airport (DVO) had approximately 98,000 aircraft operations in 2009. The aircraft operating at DVO are small general aviation aircraft. The dimensions of the existing airfield are consistent with the existing category of aircraft in terms of runway length, runway width, runway to taxiway separation, and runway safety areas. These dimensions limit the size of aircraft that can operate on a regular basis.

5.4.1.2 Future Conditions: 2018

Alternative A: No Action

Alternative A (No Action) includes no development. Therefore, Alternative A would not result in induced airport activity.

Alternative B: Extend Runway to the Northwest by 1,100 Feet (Sponsor's Proposed Project)

Alternative B would extend the runway length to 4,400 feet and resolve existing runway safety area deficiencies to allow for the more efficient use of the Airport by existing aircraft. However, extending the runway and improving runway safety areas would not induce a larger category of aircraft because the runway width and runway to taxiway separation would remain the same as today. For an airport like DVO, the amount of runway length is less of a factor in determining which aircraft would use the airport than the width of the runway and runway to taxiway separation because as aircraft increase in size their wingspans grow as well. Alternative B does not include improvements that would widen the runway or the

runway to taxiway separation. Therefore, it is concluded that this alternative would not induce larger aircraft to operate at the Airport due to the limitation in runway width and runway to taxiway separation.

The number of aircraft operations at a general aviation airport is less of a function of runway length and more related to the socioeconomic conditions of the area, demand for air travel in the local airport area, and other facilities at the airport such as hangar space. This type of information was taken into account during the preparation of the aircraft aviation forecast that was approved for use by the FAA in this EIS (See Appendix C). Because Alternative B would not change the underlying socioeconomic conditions of the area and would not address other facility improvements such as hangar space, it is concluded that no additional demand beyond what is already forecasted for DVO would occur as a result of this Alternative.

Alternative D:

Extend Runway to the Southeast by 240 Feet and to the Northwest by 860 Feet

Like Alternative B, Alternative D would extend the runway length to 4,400 feet and resolve existing runway safety area deficiencies to allow for the more efficient use of the Airport by existing aircraft. Therefore, the conclusion that Alternative B would not induce larger or more aircraft to operate at DVO would also apply to Alternative D.

5.4.2 PATTERNS OF POPULATION AND GROWTH

5.4.2.1 Existing Conditions

Marin County encompasses approximately 820 square miles. Based on the 2008 estimates by the American Community Survey Marin County had a total estimated population of over 246,500 in 2007.¹ The San Francisco Bay Area, which includes nine counties including Marin, is currently experiencing a growth in population. Between 1990 and 2008, the population of the San Francisco Bay Area grew by 17 percent compared to a growth rate of 23.5 percent statewide.² The population of Marin County did not grow at the same rate as the rest of the San Francisco Bay Area with an increase at a rate of 8.1 percent. Marin County is projected to grow by an additional 9.8 percent between 2008 and 2030. While the number of residents increased in Marin County, employment decreased seven percent between 2000 and 2007. The jurisdictions within the General Study Area (GSA) are expected to experience population growth at 23 percent and employment growth at nearly 29 percent during the same timeframe. **Table 5.4-1** and **Table 5.4-2** show these estimates for each jurisdiction within the GSA.

¹ U.S. Census Bureau, 2008 American Community Survey, Annual Population Estimates, 2008.

² U.S. Census Bureau, 1990 and 2000 Population Counts.

**Table 5.4-1
POPULATION ESTIMATES, 2000 TO 2030
Gross Field Airport**

PLACE	POPULATION			PERCENT GROWTH, 2000-2030
	2000	2008	2030 (projected)	
Marin County	247,289	248,794	273,151	9.8%
Sonoma County	458,614	466,741	606,346	29.9%
General Study Area Total	705,903	715,535	879,497	22.9%

Sources: U.S. Census Bureau, on-line at www.census.gov
State of California, Department of Finance, *Population Projections for California and Its Counties 2000-2050*, Sacramento, California, July 2007. Marin Countywide Plan Update, November 2007.

**Table 5.4-2
EMPLOYMENT ESTIMATES, 2000 TO 2030
Gross Field Airport**

PLACE	EMPLOYMENT			PERCENT GROWTH, 2000-2030
	2000	2008	2030 (projected)	
Marin County	107,760	108,590	128,490	19.2%
Sonoma County	186,190	191,690	249,640	34.1%
General Study Area Total	293,950	300,280	378,130	28.6%

Source: *California County Economic Forecasts: 2008 - 2030*, August 2008, California Department of Transportation (CALTRANS) accessed at <http://www.caltrans.ca.gov/hq/tpp/offices/ote/socio-economic.html>

5.4.2.2 Future Conditions: 2018

**Alternative A:
No Action**

Alternative A (No Action) includes no development. Therefore, Alternative A would not result in significant shifts in patterns of population movement or growth inside or outside of the GSA.

**Alternative B:
Extend Runway to the Northwest by 1,100 Feet (Sponsor's Proposed Project)**

The extension of Runway 13/31 1,100 feet to the northwest would not require the acquisition of residential properties. Therefore, Alternative B (Sponsor's Proposed Project) would not result in significant shifts in patterns of population movement or growth inside or outside of the GSA.

**Alternative D:
Extend Runway to the Southeast by 240 Feet and to the Northwest by 860 Feet**

The extension of Runway 13/31 860 feet to the northwest and 240 feet to the southeast would not require the acquisition of residential properties. Therefore, Alternative D would not result in significant shifts in patterns of population movement or growth inside or outside of the GSA.

5.4.3 PUBLIC SERVICE DEMANDS

5.4.3.1 Existing Conditions

Fire protection services are provided by the Novato Fire Department. Station 2 is the only fire department station located within the GSA and is located approximately five miles to the southeast of the Airport. The station staff includes a one to three person Type I Paramedic Engine, an ALS Paramedic Ambulance, and a Rescue Boat. Additional support can be supplied by any of the other four stations within the Novato Fire Department. The Novato Police Department staffs 59 officers and is located approximately three miles to the south of the Airport in the center of Novato. There are no hospitals within the GSA. The closest hospital to DVO is the Novato Community Hospital located approximately three miles to the south of the Airport.

5.4.3.2 Future Conditions: 2018

**Alternative A:
No Action**

Alternative A includes no development. Therefore, Alternative A would not result in significant impacts to public service demands.

**Alternative B:
Extend Runway to the Northwest by 1,100 Feet (Sponsor's Proposed Project)**

The extension of Runway 13/31 1,100 feet to the northwest would have no impact on emergency vehicles attempting to access the Airport or surrounding areas or hospitals in the area. Representatives of the Novato Fire Protection District attended the Agency Scoping Meeting held in August 2008 and submitted a written comment letter recommending further study of current and future access to the areas surrounding the runway for emergency response vehicles in accordance with all the pertinent Federal Aviation Administration (FAA) and National Fire Protection Association (NFPA) guidelines (see Appendix A, *Agency Scoping and Coordination*). From a physical impact and access perspective, under Alternative B, emergency vehicle access to both ends of the runway and the taxiway would be improved over Existing Conditions (2008) due to the lengthening and widening of the Runway

Safety Area (RSA). Access beyond the runway to areas surrounding the Airport would not change from Existing Conditions (2008). Therefore, Alternative B would not result in significant impacts to public service demands.

Alternative D:

Extend Runway to the Southeast by 240 Feet and to the Northwest by 860 Feet

The extension of Runway 13/31 860 feet to the northwest and 240 feet to the southeast would have no impact on emergency vehicles attempting to access the Airport or surrounding areas or hospitals in the area. Similar to Alternative B, under Alternative D, emergency vehicle access to both ends of the runway and the taxiway would be improved over Existing Conditions (2008) due to the lengthening and widening of the RSA. Access beyond the runway to areas surrounding the Airport would not change from Existing Conditions (2008). Therefore, Alternative D would not result in significant impacts to public service demands.

5.4.4 BUSINESS AND ECONOMIC ACTIVITY

5.4.4.1 Existing Conditions

The City of Novato's labor force was 24,300 as of May 2009.³ Major employers include the Fireman's Fund Insurance Company, the Buck Institute for Age Research, small biotech firms, such as Biosearch Technologies and BioMarin Pharmaceutical, and several small technology companies, including 2K Marin, Radiant Logic, Imagemovers Digital, and Sonic Solutions.

The workforce in Marin County has decreased from 137,700 in 2000 to 128,400 in 2007.⁴ This reflects a seven percent decrease in the total number of Marin County resident workers. The Service Providing sector comprises the largest share of workforce in the area. The largest growth has been in the Professional, Scientific and Technical Services sector with a 14.0 percent increase between 2003 and 2007. The most significant decrease has been in the number of people employed in the Durable Goods sector with a 40.0 percent decrease between 2003 and 2007.⁵

5.4.4.2 Future Conditions: 2018

Alternative A:

No Action

Alternative A includes no new construction or changes in operating procedures. Therefore, this alternative would not result in significant impacts to business and economic activity.

³ Labor Force and Unemployment Rate for Cities and Census Designated Places, *California Employment Development Department*, online at www.labormarketinfo.edd.ca.gov

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⁵ *California Employment Development Department*, online at www.labormarketinfo.edd.ca.gov.

**Alternative B:
Extend Runway to the Northwest by 1,100 Feet (Sponsor's Proposed Project)**

The extension of Runway 13/31 1,100 feet to the northwest would result in a temporary increase in business and economic activity due to construction of the runway extension and associated taxiway extension, RSA, and levee and drainage ditch realignment. This increase in economic activity would end after the construction was complete. Alternative B would have the effect of allowing existing aircraft that use the Airport that are currently weight restricted by the runway length to depart fully loaded. The project is not intended or expected to cause an unforecasted growth in aircraft operations at DVO. There are other airport facilities throughout the Bay Area region and since the availability of air service is not frequently cited as a constraint to the development of new housing or commercial areas, the extension of the runway would not be considered an action that would remove a significant constraint to regional development. Alternative B would not involve additional expansion or extension of infrastructure facilities or roadways that could induce unplanned growth adjacent to DVO. Thus, Alternative B is not anticipated to induce additional growth in the region.

**Alternative D:
Extend Runway to the Southeast by 240 Feet and to the Northwest by 860 Feet**

The extension of Runway 13/31 860 feet to the northwest and 240 feet to the southeast would result in a temporary increase in business and economic activity due to construction of the runway extension and associated taxiway extension, RSA, and levee and drainage ditch realignment. This increase in economic activity would end after the construction was complete. Alternative D would have the effect of allowing existing aircraft that use the Airport that are currently weight restricted by the runway length to depart fully loaded. The project is not intended or expected to cause an unforecasted growth in aircraft operations at DVO. There are other airport facilities throughout the Bay Area region and since the availability of air service is not frequently cited as a constraint to the development of new housing or commercial areas, the extension of the runway would not be considered an action that would remove a significant constraint to regional development. Alternative D would not involve additional expansion or extension of infrastructure facilities or roadways that could induce unplanned growth adjacent to DVO. Thus, Alternative D is not anticipated to induce additional growth in the region.