

The Economic, Demographic and Fiscal Impacts of Closing Hill Air Force Base

Summary and Conclusions

The upcoming round of Defense Base Realignment and Closure (BRAC) is threatening the existence of Hill Air Force Base (Hill AFB). The Department of Defense is aggressively approaching this round of BRAC in its attempt to eliminate 20% to 25% of its current capacity. The purpose of this study is to assess the economic, demographic and fiscal impacts of closing Hill AFB on the state of Utah and the Davis/Weber region. These impacts, which have been generated by the REMI model, project the employment, population, earnings, income and value-added impacts of closing Hill AFB.¹

Hill AFB is located in northern Utah approximately 30 miles north of Salt Lake City and eight miles south of Ogden. The base currently covers almost 6,700 acres and stretches across two counties--Davis and Weber. Hill has had a presence in Utah since 1920 when the War department established the Ogden Arsenal Army Reserve Depot in the area now occupied by the northwestern portion of Hill AFB. Over time, Hill's missions have changed and expanded. Today, the missions of Hill AFB encompass supply and repair of aircraft and missile parts, including munitions storage and handling. The base is one of three air logistics centers in the USAF Materiel Command, serving as home to the Ogden Air Logistics Center which provides worldwide engineering and logistics management for the F-16, A-10, Minuteman III and Peacekeeper intercontinental ballistic missiles.

Hill AFB has been the largest component of Utah's defense sector, and one of the largest employers in the state for decades. Long established as an engine of economic growth, Hill AFB pumps more than \$1.0 billion into Utah's economy each year. The direct operations include a Utah payroll of \$962.2 million, direct employment of about 20,000 workers and local purchases totaling \$152.9 million.² In 2003, Utah's defense industry (primarily Hill AFB) was a mainstay that helped steady the Utah economy. Clearly, Hill's economic contributions are substantial and an important source of economic activity in the state of Utah.

¹ Regional Economic Models, Inc. REMI simulates the growth path, structure and characteristics of the economy and population into the future. This is the baseline projection and models the future that is most likely to occur given our current understanding of economic and demographic trends. To calculate the impact of closing Hill AFB, an alternative projection is generated that models the new growth path with the absence of Hill AFB. The results of the alternative projection are compared with the baseline projection. The impacts are the difference between these two projections.

The baseline referred to in this study has been developed in conjunction with the Governor's Office of Planning and Budget and are not yet official projections.

² The personnel data include only those individuals that are paid directly by Hill AFB or by the Department of Defense. It does not include the 4,000 to 4,500 employees who may work on base but are employed by private contractors.

Key Findings

The information presented here assumes a phased shutdown of Hill AFB that begins in 2006 and is completed in 2008. For most of the analysis, the impacts are presented for 2009 and 2020. The year 2009 was selected in order to capture the full impact of the base closure after all military personnel and their dependents are realigned but before market adjustments begin. The year 2020 was chosen to show the permanent impact after markets adjust to the closure of Hill.

Statewide Impacts

(Financial projections are in constant 2001 dollars)

Short-Term Impacts

In 2009, the impact of closing Hill AFB will be a loss of 47,000 jobs and an annual decline of \$2.35 billion in earnings and \$2.29 billion in personal income. The economy will shrink by \$3.58 billion (a decline of 2.6%) and incur a loss of \$192.4 million in state tax revenue.^{3,4}

The population impact of closing Hill AFB will be 31,000 fewer people living in the state than if Hill remained in operation. The population impact includes about 7,600 school age children, or about 1.3% of the projected school age population baseline. This means there will be about 7,600 fewer children attending schools in Utah in 2009 than if Hill remained open.

Closing Hill AFB will lower per capita personal income by \$542 in 2009; this means that each person in Utah will have \$542 less to spend than if Hill AFB remained in operation.

The federal civilian jobs lost are some of the best jobs in Utah. They are high-paying, stable jobs with benefits. To offset the job loss of closing Hill AFB in 2009 will require the creation of almost 48,000 new jobs. Since the earnings of *civilians* working at Hill AFB are almost double the state average it will take almost 68,000 new jobs to offset the loss of \$2.35 billion in earnings. On an annual basis Utah has not experienced annual job growth at this level since the mid-1990s.

The population impact of 31,000 in 2009 (which includes the departure of 5,178 military and 10,022 dependents) is primarily working age persons and their children which lowers the number of tax-payers and the number of school age children. The impact on school age population moderates but does not eliminate the upcoming school population boom.

³ "Earnings" in this study include: wages and salaries, proprietors income and other labor income as defined by the Bureau of Economic Analysis. Personal Income includes earnings, rental income, dividend and interest income and transfer payments.

⁴ "Employment" in this study includes all full-time and part-time jobs (including wage and salary, agriculture, and military), sole proprietors and active partners as defined by the Bureau of Economic Analysis. It is more inclusive than the wage and salary payroll jobs as reported by the Utah Department of Workforce Services.

Long-Term Impacts

The long-term (2020), statewide impact of closing Hill AFB will be a permanent loss of 41,700 jobs, an annual decline of \$2.50 billion in earnings, and \$2.65 billion in personal income. The economy will be \$3.43 billion smaller (a decline of 1.7%) and incur a loss of \$199 million annually in state tax revenue. In robust economic times, the long-term impacts equate to about one to three years of economic growth.

The resident population in Utah will be 50,400 less than if Hill remained open. The long-term impact on the school age population is 15,400, or about 2.1% of the projected school age population baseline. This means there will be 15,400 fewer children in the education system in 2020 than would be enrolled if Hill remained in operation.

Statewide, the losses generated by closing Hill AFB are not trivial but Utah's economy will expand throughout the closure period and beyond. Closing Hill AFB permanently, but not significantly, changes the state's economic growth path. What *does* change is the structure of the Utah economy due to the loss of federal military and civilian jobs.

Davis/Weber Region Impacts (Financial projections are in constant 2001 dollars)

The Davis/Weber region has an estimated population of 462,436 and employment of 234,763.^{5,6} Unlike some regions in the country with military bases, the Davis/Weber region is not rural or isolated from other population centers. Geographically (and economically) the region is part of the Greater Wasatch Area that includes a ten-county commuter shed including Salt Lake County which has long been the center of employment in the state.

Employment in the region is heavily concentrated in two industries—services and government. Together these two sectors account for almost half of all employment in the region. Measured by total earnings, government is by far the most important sector, accounting for almost 32% of total earnings in the region. Federal government is the largest segment of the government sector and accounts for 10% of total employment and 20% of total earnings in the region. The disparity between the share of employment and share of earnings attributable to federal employment occurs because the wages of most civilian employees at Hill AFB is almost double the average wage of all workers in the region.

The presence of the federal government in the region is considerable. Compared to the nation, both counties in the region have higher-than-average concentrations of federal employment. In Weber County, federal employment is three times the national concentration due primarily to the presence of the IRS. In Davis County federal civilian employment is five times the national concentration and military employment is three times the national concentration due entirely to the presence of Hill AFB.

⁵ Population as of July 1, 2003: Population Estimates Committee.

⁶ Employment as of 2001: Bureau of Economic Analysis (BEA). This is the most recently available county employment data available from BEA.

The economic consequences of closing Hill AFB on the Davis/Weber region will be unparalleled since the Great Depression. Each year, Hill AFB pumps almost \$1.0 billion into the region. Nine out of ten people who work at the base live, and spend most of their disposable income in the region. The departure of Hill will have enduring, large-scale impacts on the size, structure and composition of the region's economic base leading initially to declining employment, population, earnings and income, and eventually culminating in a regional economy that is permanently smaller.

Short-Term Impacts

In 2009, the short-term impact of closing of Hill AFB on the region will be a loss of almost 35,000 jobs, a decline of \$1.81 billion in earnings and \$1.58 billion in personal income. The region's economy will shrink by \$2.54 billion (a decline of 11.1%). The annual loss of sales and selective tax revenue will be \$7.7 million.

The population impact of closing Hill AFB will be about 21,400 fewer people living in the region than if Hill remained in operation. The population impact includes about 5,300 school age children, or about 4.7% of the projected school age population baseline. This means there will be 5,300 fewer school age children living and attending school in region in 2009 than if Hill remained in operation.

An estimated 10,800 homes in the region are owned by Hill AFB employees (1,700 homes owned by military personnel and 9,100 homes owned by civilians). Based on the region's housing stock in 2004, one in every 14 homes in Davis or Weber County is owned by an employee of the base. Assuming that all military personnel leave the region and half of the civilians who own homes in the region relocate, about 6,200 homes will be on the market over a two-to three-year period.

The sudden loss of jobs and declining population in the region could significantly impact the real estate market. The experience of other communities that have lost military bases is that residential construction comes to a standstill and real estate values decline. Assuming the experience in the Davis/Weber region is similar to that in other areas, residential construction will drop off almost immediately and property values decline between 5% and 25% in 2006. These conditions should start to improve by 2009.

Long-Term Impacts

- The long-term impact on the Davis/Weber region will be a permanent loss of 32,000 jobs, an annual decline of \$2.06 billion in earnings and \$1.89 billion in personal income. The region's economy will be permanently \$2.54 billion smaller. The annual loss in tax revenue (sales and selective tax revenue) will be \$8.8 million.
- The population impact of closing Hill will be 33,000, including 10,013 fewer school age children living in the region, a decrease of 7.7% from the projected school age population baseline of 74,355.
- Based on annual job growth in the region over the past 10 years, the employment impact equates to a loss of about five years of economic growth. To offset the employment impact of closing Hill AFB the region will need to create at least 33,000 new jobs. On an annual basis, this has never happened. The last year of strong employment growth in the area was in 1996 with the creation of about 12,600 new jobs.

Impacts on Davis County (financial projections are in constant 2001 dollars)

The impacts of closing Hill AFB disproportionately affect Davis County. The closure of Hill AFB represents the loss of an industry that has been the foundation of the Davis County economy for the past 60 years. Since WWII, not only has Hill been a dominant influence in the county's economic growth, it has also been *the* defining factor in establishing Davis as one of the most prosperous counties in Utah due to the large number of stable, high-paying civilian jobs at the base. The impacts of closing Hill AFB on the economy of Davis County will be large-scale and enduring.

Short-Term Impacts

- During the first year of the three-year phased closing of Hill AFB, employment and population in Davis County actually decline. In 2006, the *net* effect on employment is a loss of about 15,000 jobs which increases to 19,000 by 2008.⁷ These losses are so large that employment in Davis County will not return to the 2005 pre-base closure level of 136,170 until 2014.
- Even more significant is the 1.4% decline (net decline of about 3,800 people) in Davis County's population base that occurs in 2006. This decrease will be the only time since the late 1940s that an urban county in Utah has sustained a population loss. Population in Davis does not reach its pre-base closure level until 2009, and then is fueled by natural increase (births minus deaths) rather than net in-migration.
- At *full* base closure in 2009, the employment impact in Davis County is 30,000 (one in five jobs), a decrease of \$1.62 billion in earnings (32% of the projected earnings baseline) and \$1.15 billion in personal income (14% of the projected income baseline). On a per capita basis, the decline in personal income translates to a loss of \$2,629 (per person). The county's economy will be \$2.18 billion smaller (a reduction of 18%). The annual loss of sales and selective tax revenue will be \$6.3 million.
- By 2009, the population impact is 15,100, which includes 3,800 school age children, or about 6% of the projected school age population baseline of 63,000. The population impact means that there will be about 15,100 fewer people living in the county than if Hill remain open.
- It will be difficult, if not impossible for Davis County to mitigate the employment and earnings losses in less than eight years. To offset the employment loss alone will take 30,000 new jobs. Because the earnings of most *civilians* working at Hill are about double the county average, it will take more than 47,600 jobs to offset the loss of earnings. Davis County has never experienced annual job growth at these levels. Further, over the past ten years, job growth in the county has averaged about 3,700 annually. At this level, it will take eight years to offset the employment loss and almost 13 years to offset the earnings loss.

⁷ These are not impact projections. The closure of Hill has such a large-scale impact that total employment in the county will be lower by 15,000 jobs in 2006 than in 2005.

Long-Term Impacts

- The long-term impact on Davis County will be a permanent loss of about 28,000 jobs, an annual decline of \$1.89 billion in earnings and \$1.38 billion in income. The County's economy will be permanently smaller by \$2.21 billion. Annual, the loss in tax revenue (sales and selective tax revenue) will be \$7.3 million.
- The population will be smaller by about 21,000 than if Hill remained in operation. This includes about 6,300 fewer school age children, or about 8.5 percent of the projected school age population baseline in 2020 of 74,355.
- In Davis County, the closure of Hill AFB represents a loss of an entire industry—one that provides high-paying, stable jobs. Closing the base accelerates the trend of job creation in lower paying sectors (such as services) creating an employment structure in the county that is substantially different from the present composition. Without viable job opportunities Davis County residents who choose to remain in Utah will be forced to seek jobs outside the county.
- Several factors play a role in determining the fate of the county's economy and its economic recovery. A growing economy is one factor. The presence of other local industries that can soften the impact of losing a large employer is another. Currently, the economy in Davis County is best characterized as stable rather than expanding (growth in payroll employment is less than 1%). Further, Hill is by far the largest employer in the county and the single most important component of the county's economic base. There are simply no other basic employers of any size in Davis County.⁸ While the impact of closing Hill moderates over time, it could take a decade (or longer) for Davis County to recover its economic vitality.

⁸ Basic employment is generally any employment serving markets outside the region or that is independent of the local market. Non-basic employment serves the needs of the residents in the region. The financial flows from a non-basic employer represent redistribution of existing income.

Table 1
Hill Air Force Base Closure Analysis
Economic, Demographic and Fiscal Impact Summary: 2009 and 2020
State of Utah, Davis/Weber Region and Davis County
(2001 \$)

Variable	State		Davis/Weber Region		Davis County	
	2009	2020	2009	2020	2009	2020
Employment	-47,430	-41,730	-34,996	-32,273	-30,020	-28,150
Earnings (Bil.)	-\$2.35	-\$2.50	-\$1.81	-\$2.06	-\$1.62	-\$1.89
Personal Income (Bil.)	-\$2.29	-\$2.65	-\$1.58	-\$1.89	-\$1.15	-\$1.38
Gross State or Gross Regional Product (Bil.)	-\$3.58	-\$3.43	-\$2.54	-\$2.54	-\$2.18	-\$2.21
Population	-31,000	-50,480	-21,489	-33,130	-15,150	-21,070
School Age Population	-7,555	-15,405	-5,308	-10,011	-3,807	-6,340
Tax Revenue (Mil.) ¹	-\$192.4	-\$199.1	-\$7.7	-\$8.8	-\$6.3	-\$7.3

¹ Includes Sales and selective tax revenue only.

Source: Bureau of Economic and Business Research, University of Utah.

Table 2
Hill Air Force Base Closure Analysis
Impacts as a Percentage of the Projected Baseline: 2009 and 2020
State of Utah, Davis/Weber Region and Davis County

Variable	State		Davis/Weber Region		Davis County	
	2009	2020	2009	2020	2009	2020
Employment	-2.9%	-2.1%	-12.7%	-9.7%	-19.9%	-15.2%
Earnings	-4.1%	-3.0%	-19.7%	-15.3%	-31.6%	-25.2%
Personal Income	-3.1%	-2.4%	-10.8%	-8.9%	-13.8%	-11.2%
Gross State/Regional Product	-2.6%	-1.7%	-11.1%	-7.5%	-17.8%	-12.1%
Population	-1.2%	-1.6%	-4.2%	-5.5%	-5.4%	-6.2%
School Age Population	-1.3%	-2.1%	-4.7%	-7.7%	-6.0%	-8.5%

Source: Bureau of Economic and Business Research, University of Utah.