Utah's Defense Sector: Economic Impacts of the Military and Veterans

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Executive Summary:

The Utah Defense Alliance and the Utah Department of Veterans and Military Affairs commissioned the Kem C. Gardner Policy Institute to assess the economic impacts of Utah's defense industry. The Gardner Policy Institute analyzed the impacts of current operations of Hill Air Force Base, Dugway Proving Ground, Tooele Army Depot, the Utah National Guard, reserves, recruiting, ROTC and expenditures on behalf of veterans. The Institute also examined Department of Defense and Department of Veterans Affairs grants and contract expenditures that were not associated with one of the aforementioned installations. In addition, the Gardner Policy Institute modeled the long-run economic and demographic impacts on the state and local economies in the event of the closure of Hill Air Force Base, for which there are currently no known plans.

Economic Impacts

Utah's defense industry directly and indirectly supported over 109,000 jobs and $9.2 billion in economic activity in the state during 2015 (Table 1). That year, federal defense spending was responsible for 5.8 percent of Utah's jobs, 7.1 percent of its earnings and 6.2 percent of its GDP. This is roughly comparable to the state's construction industry, which directly provided 110,873 jobs, paid almost $6.9 billion in earnings and contributed nearly $8.3 billion to Utah's GDP.

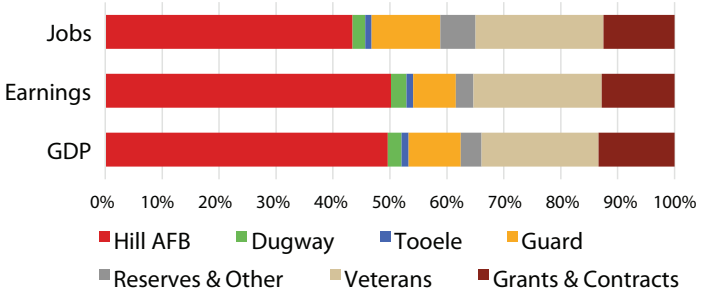
The state's defense sector includes Department of Defense (DOD) and Department of Veterans Affairs (VA) employment, pensions, contracts and grants. Much of this activity is associated with Air Force and Army installations, the Utah National Guard, reserves and veterans. Economic impacts include direct economic activity, as well as indirect and induced jobs, earnings and GDP. For example, 109,021 in total direct, indirect and induced employment resulted from direct economic activity of just under 33,000 federal defense jobs and sizeable federal outlays for contracts, grants and pensions in Utah. 2015 was selected as the principal year of study for these and other impacts because, at the time this research was undertaken, 2015 was the most recent common year for which authoritative information was available from the disparate sources required for the analysis.

Figure 1 shows the contribution of each defense component in Utah in terms of employment, earnings and GDP. Hill Air Force Base (Hill AFB) accounts for 43 to 50 percent of these economic impacts, followed by veterans at 21 to 23 percent, other contracts and grants at 13 percent, and the Utah National Guard at 8 to 12 percent.

Hill Air Force Base supported over 47,000 jobs and $4.5 billion in GDP for Utah in 2015. Hill AFB employed 16,732 military personnel and DOD civilians. Including contractors, nearly 20,000 people worked on base. The base spent $2.1 billion in Utah during 2015, including employee earnings, DOD contracts and other expenses.

Dugway Proving Ground (DPG) supported nearly 2,500 jobs and $225 million in GDP for Utah. DPG employed 689 people and spent an estimated $135.1 million in Utah during 2015. Including contractors, over 1,500 people worked on base.

Figure 1: Share of Economic Impacts by Utah Defense Sector Components, 2015



Note: Reserves & Other comprises the reserve branch of each military service, as well as military recruiting and ROTC.
Source: Kem C. Gardner Policy Institute analysis using the REMI PI+ model.

Table 1: Statewide Economic Impacts of Utah Defense Sector by Component, 2015
(Millions of Dollars)

Category	Hill Air Force Base	Dugway Proving Ground	Tooele Army Depot	Utah National Guard	Reserves, Recruiting & ROTC*	Veterans	Grants & Contracts*	Total
Total Employment	47,341	2,479	1,164	13,176	6,746	24,480	13,635	109,021
Total Earnings	$3,202.3	$175.9	$75.0	$477.3	$199.2	$1,437.8	$816.8	$6,384.3
Gross Domestic Product	$4,569.8	$225.0	$113.8	$841.9	$339.8	$1,891.9	$1,230.4	$9,212.7

* To avoid double counting, reserves, recruiting, contracts and grants impacts reported here include only additional economic activity not included under a Utah military installation or other defense component in this table.
Source: Kem C. Gardner Policy Institute analysis using the REMI PI+ model.

Tooele Army Depot (TEAD) supported 1,100 jobs and $114 million in GDP for Utah in 2015. TEAD employed 550 people and spent $56.8 million in Utah during 2015.

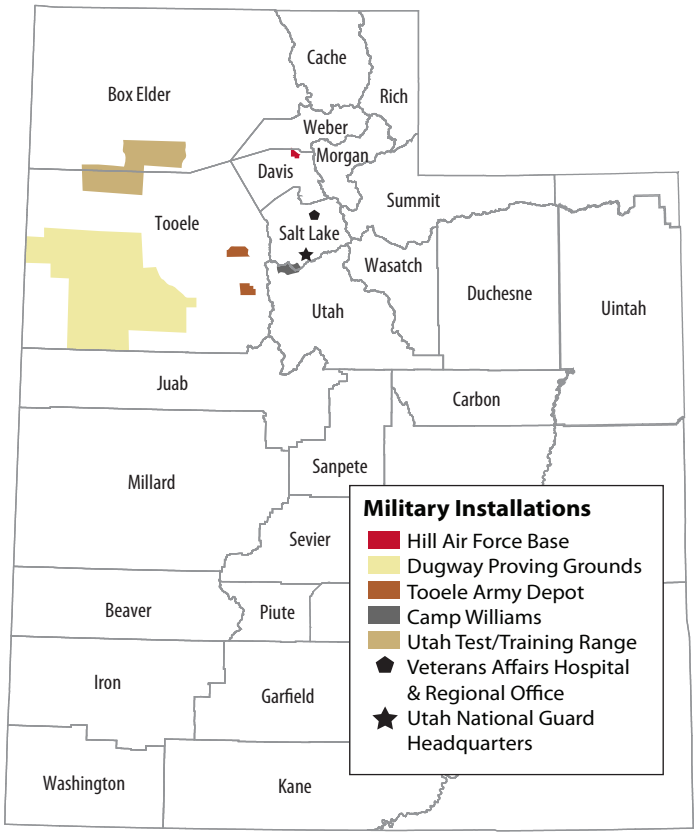
The **Utah National Guard** supported over 13,000 jobs and $840 million in GDP for Utah in 2015. The guard employed 2,383 people full-time, as well as 6,897 traditional guardmembers, in 2015. The guard spent an estimated $251.3 million in-state.

Reserves, recruiting and ROTC supported 6,700 jobs and $340 million in GDP for Utah in 2015, in addition to the economic impacts of reserve and recruiting efforts included under Hill AFB and the Utah National Guard. Altogether, Utah had 5,106 reservists and active-duty military personnel, plus at least 399 federal civilians, in the Air Force, Army, National Guard, Navy and Marine Corps reserve units. Recruiting efforts by the five services employed 289 military personnel and 53 federal civilians. Reserve Officer Training Corps (ROTC) staff at universities included 54 military personnel and 15 federal civilians.

Veterans in Utah attracted federal spending that supported over 24,000 jobs and $1.9 billion in GDP for Utah in 2015. During 2015, the VA employed 3,010 people in Utah. VA and DOD spending for Utah veterans was $1.8 billion, including employee earnings, health care, pensions for veterans and military retirees, federal contracts and grants, and other expenditures. There is a significant economic impact in Utah associated with the retirement income received by retired DOD civilians, many of whom are veterans. Data limitations preclude estimates as part of this study. The impact may exceed the 6,223 jobs and $474 million in GDP supported by military retiree pensions paid to Utahns.

Grants and contracts supported over 13,600 jobs and $1.2 billion in GDP for Utah in 2015, in addition to the separate impacts of grants and contracts analyzed as part of the operations of in-state defense organizations. The DOD and VA provided $891.4 million in grants and contracts to Utah recipients in 2015, besides those included in economic impacts for veterans, the Utah National Guard or any Utah military installation.

Figure 2: Major Military Installations in Utah



Source: State of Utah, SGID and Kem C. Gardner Policy Institute.

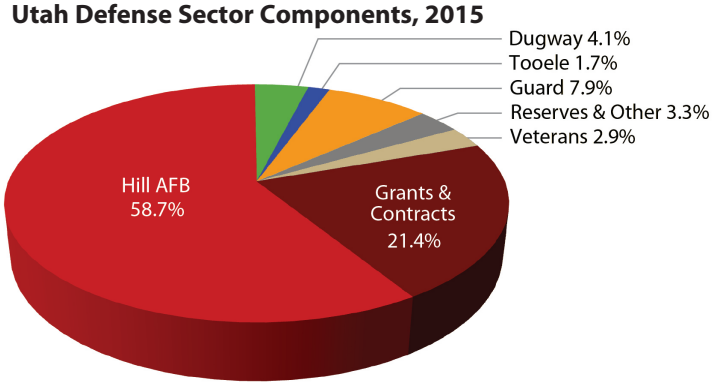
Hill Air Force Base Closure Scenario: The research team was asked to assess the economic role of Hill AFB in Utah's future by estimating short-term and long-term effects the state would sustain if the base were no longer operating. A hypothetical closure of Hill AFB by 2022 would have a significant impact on the state and, particularly, local economies. In the first year after closure, 2023, the state would lose an expected 35,184 jobs, $2.9 billion in earnings (in inflation-adjusted 2015 dollars) and $3.8 billion in GDP. These effects would persist through time. By 2040, there would likely still be 28,281 fewer jobs and $2.6 billion less of earnings, and GDP would be $3.7 billion smaller than it would otherwise have been.

Table 2: Statewide Fiscal Impacts of Utah's Defense Sector, 2015
(Millions of Dollars)

Category	Hill Air Force Base	Dugway Proving Ground	Tooele Army Depot	Utah National Guard	Reserves, Recruiting & ROTC*	Veterans	Grants & Contracts*	Total
Total State Revenues	$157.5	$8.8	$3.7	$24.8	$9.6	$130.9	$43.4	$378.7
Total State Operating Expenditures	$71.5	$2.8	$1.3	$13.3	$4.7	$126.7	$12.1	$232.4
Net State Operating Revenue	**$85.9**	**$6.0**	**$2.4**	**$11.5**	**$4.9**	**$4.2**	**$31.4**	**$146.3**

* To avoid double counting, reserves, recruiting, contracts and grants fiscal impacts reported here include only state revenue and expenses associated with economic activity not included under a Utah military installation or other defense component.
Source: Kem C. Gardner Policy Institute analysis using the REMI PI+ model and the Gardner Policy Institute fiscal model.

Figure 3: Share of State Net Revenue Impacts from Utah Defense Sector Components, 2015



Source: Kem C. Gardner Policy Institute analysis using the REMI PI+ model and the Gardner Policy Institute fiscal model.

Fiscal Impacts

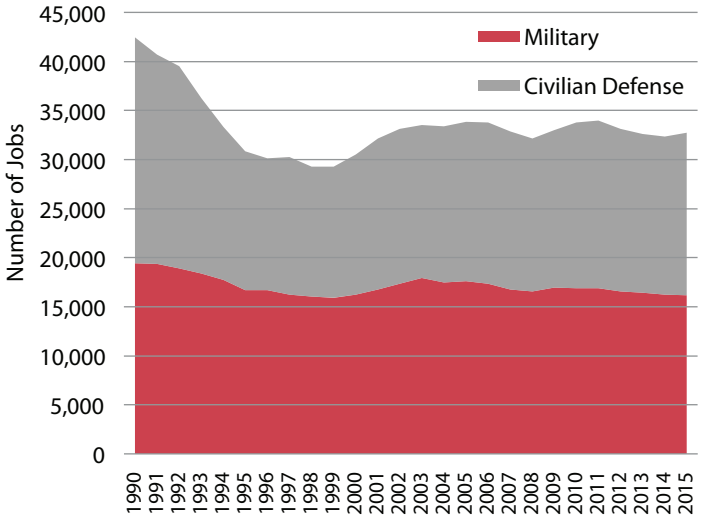
The $9.2 billion in Utah economic activity supported by the defense sector generated an estimated $378.7 million in state income and sales tax revenue during 2015 (Table 2). This activity also attracted economic migrants to Utah, spurring an estimated $232.4 million in state government operations spending for public and higher education, roads, public safety, etc. Subtracting operating expenditures from revenue results in a net fiscal impact of $146.3 million. Every component of Utah's defense sector generated net positive state fiscal impacts in 2015.

Hill AFB accounted for over half of the net state revenue generated by the defense industry in Utah (Figure 3). Veterans accounted for more than one-third of state tax revenue generated by defense-related economic activity in Utah (Table 2).

Federal Defense Employment

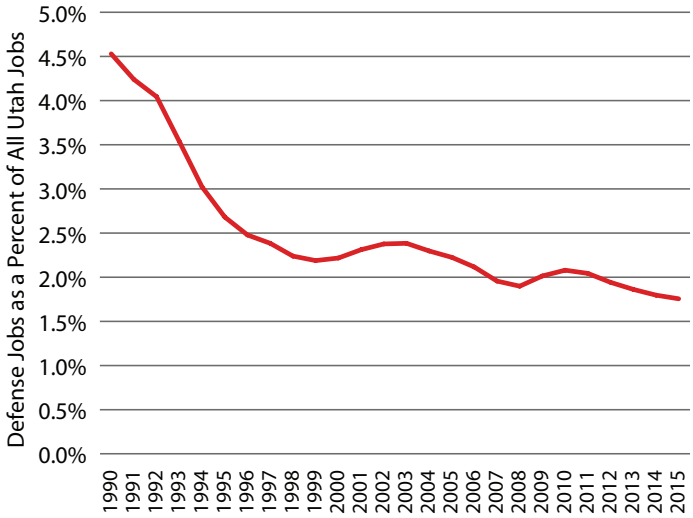
In 2015, military personnel and civilians with federal defense jobs made up about 1.8 percent of Utah's employment total, down from 2.2 percent in 2000 and 4.5 percent in 1990 (Figure 4). In recent decades, the number of military personnel serving in Utah has been more stable than the number of federal civilian jobs with the DOD or VA. After falling from a high of more than 42,000 jobs in 1990, total federal defense employment in the state held fairly steady above 30,000 jobs from 2000 to 2015 (Figure 5). During those years, while defense employment increased 7 percent, employment in the economy as a whole grew by 35 percent, leading to defense's shrinking share.

Figure 4: Military and Federal Civilian Defense Employment in Utah, 1990–2015



Source: Bureau of Economic Analysis, Bureau of Labor Statistics.

Figure 5: Defense Share of Total Employment in Utah, 1990–2015



Source: Bureau of Economic Analysis, Bureau of Labor Statistics.

Section 1: Study Methods

This section addresses how researchers collected information and analyzed data to estimate the economic and fiscal impacts of the many components of Utah's defense sector in 2015. It begins with a glossary of terms. Methods for the Hill AFB closure scenario are discussed in Section 10.

1.1 Terms Used in This Report

Military Personnel includes full-time active-duty personnel stationed in Utah as well as part-time members of the reserves and the Utah National Guard: airmen at Hill AFB, Army soldiers at Dugway, reservists at Hill AFB and Fort Douglas, traditional guardmembers and full-time personnel in Utah Air and Army National Guard units throughout the state, full-time recruiters for each military service, active-duty ROTC instructors, and all other officers and enlisted service personnel at major installations or smaller sites.

Civilian Defense Employee Federal government employees classified in NAICS sectors 92811, national defense; 6211, offices of physicians; or 622, hospitals. The latter two categories represent DOD and VA doctors and clinics, and employees of the VA hospital. See entry below for NAICS sector. DOD civilians include Department of Defense employees who are not military personnel. Civilian defense employees include DOD civilians, as well as people working for the Department of Veterans Affairs (VA) who are not military personnel.

Guardmember A member of the National Guard who fulfills part-time military service in addition to civilian employment or other pursuits. Guardmembers customarily report for duty one weekend per month and two weeks per year. Active-duty personnel and DOD civilians serve with guardmembers in the Utah National Guard.

Veteran A person who gave military service in combat or non-combat roles for any period of time in the U.S. armed forces.

Military Retiree An individual who served in the U.S. armed forces for at least 20 years of active duty or gave equivalent service in reserve or National Guard units. Military personnel may receive early retirement for medical or other special circumstances.

ROTC refers to the Reserve Officer Training Corps. Utah college students can join ROTC units for the Air Force, Army, Navy and Marine Corps. Cadets are educated and trained to become commissioned officers upon graduation.

Economic Impacts are the changes in the size and structure of a region's economy that occur when goods and services are purchased from vendors within the region with money generated outside the region. In the strictest interpretation, economic impacts occur only when "new" money enters the regional economy and is then spent locally. Such an inflow has the potential to expand the size and strength of the region's economy. Money spent outside the region is considered "leakage" and does not generate economic growth within the region. Likewise, purchases of goods and services by local residents from local vendors do not increase the economic base of the region; they simply reshuffle existing resources. In this report economic impacts are presented in terms of employment, earnings and gross domestic product (GDP). Although both are rendered in dollars, earnings and GDP cannot be combined as GDP includes earnings.

Direct Impacts are the changes in economic activity within the region during the first round of spending. In this study these include the direct federal military and civilian employment and payroll, and federal contract and other spending in the region.

Indirect Impacts are the changes in sales, labor income and employment within the region in backward-linked industries that supply goods and services to the business or industry under study. For example, jobs at a Utah defense contractor providing engineering services to the military would be included in the indirect employment impacts.

Induced Impacts are the increased sales within the region from household spending of the income earned from the business or industry under study and supporting businesses. These arise, for example, when Hill Air Force Base personnel and Northrop Grumman employees spend their earnings to buy groceries, movie tickets or car repairs from in-state establishments.

Fiscal Impacts are changes in state and county government revenues and expenditures resulting from the changes in economic activity. The estimated revenue impacts consist of state personal and corporate income taxes, state and county sales taxes, and property taxes. Estimated expenditure impacts comprise state and local public education expenditures, state higher education expenditures, and state and local non-education expenditures.

Employment is a measure of the number of full- and part-time jobs, including those of the self-employed. This is not the same as employed people, as a person may hold more than one job. Jobs are a "stock," meaning they are a point-in-time estimate and cannot be added over time. For state-level impacts, employment is reported by place of work; that is,

the number of jobs in Utah, regardless of whether or not they are held by residents of the state. For county-level impacts, employment is reported by place of residence. This is the number of direct, indirect and induced jobs held by residents of each county, after adjusting for commuting patterns.

Earnings are the sum of wage and salary disbursements, supplements to wages and salaries, and proprietors' income. Proprietors are self-employed workers, primarily in sole proprietorships or partnerships. In the case of government employees, the terms "earnings" and "compensation" are used interchangeably in this report. Earnings exceed compensation in non-governmental industries that include proprietors. Earnings are an economic "flow," meaning they can be summed from year to year in order to estimate total impacts over time. Most economic impacts throughout the report are given in earnings, rather than compensation or personal income. For state-level impacts, earnings are reported by place of work; that is, where the job is located. For county-level impacts, earnings by place of residence are reported, which adjusts for cross-county commuter flows.

Compensation is the sum of wage and salary disbursements and supplements to wages and salaries. As indicated above, compensation is a narrower concept than earnings since it does not include proprietors' income. Compensation is used in Section 9 to compare historical defense employment with non-defense employment in Utah.

Personal Income includes income a person receives from all sources: wage and salary disbursements, supplements to wages and salaries, proprietors' income, rent, dividends, interest and net transfer receipts. Personal income is a more expansive, less focused concept than earnings or compensation.

Gross Domestic Product (GDP) is the most commonly used measure of the contribution of a region to the national economy as it avoids double counting of intermediate sales and captures only the "value added" by the region (or business) to final products. Value added is the sum of total income and indirect business taxes; alternatively it can be thought of as total output or sales less the value of intermediate inputs purchased to produce that output. Value added is equivalent to the GDP measure.

NAICS Sector The North American Industry Classification System was developed by U.S., Canadian and Mexican statistical agencies as a way to classify business establishments into sectors based on their production methods. NAICS numbers range from two digits at the highest level of aggregation to six digits for the most detail. See www.census.gov/eos/www/naics.

Fiscal Year The federal fiscal year (FY) begins October 1 of the previous year and ends September 30 of the year indicated. Since FY 2015 shares nine months with calendar year 2015, and since defense organizations in Utah were limited in their ability to repeat for previous fiscal years their detailed responses to Gardner Policy Institute information requests, FY 2015 inputs were used directly to generate calendar year economic and fiscal impacts. The assumption is that federal employment and spending were similar in the first quarter of FY 2015 (October through December of 2014) as in the first quarter of FY 2016 (October through December of 2015). The State of Utah's fiscal year begins July 1 of the previous year and ends June 30 of the year indicated. As this study focused on federal government activity and did not include inputs by state fiscal year, no assumptions were needed to use or convert state fiscal year data for use in calendar year analysis.

1.2 Data Collection

Much of the data used in this study was obtained directly from defense organizations in Utah. The Gardner Policy Institute requested information on their employment, payroll and other in-state spending. The researchers' goal was to find reliable data on all economic activity related to defense in the state. Defense organizations provided totals and, in many cases, detail at the industry and county levels. We relied on numbers, explanations and context provided by helpful individuals at all levels of these organizations (see Section 1.5 Acknowledgments).

In some instances, workload or disclosure concerns at the organizations limited staff's ability to respond fully to Gardner Policy Institute requests. Published data and economic models were used to make conservative estimates to fill these gaps. In particular, the Department of the Treasury provides detailed records covering most federal expenditures at USAspending.gov, and the Department of Veterans Affairs (VA) releases county-level expenditure data. Public data and analysis also verified and supplemented complete responses.

The vintage of the most recent data available from the many sources needed for this study varied by source, generally between 2015 and 2016, calendar year or fiscal year. At the time the data collection process was undertaken, 2015 was the most recent common year for which complete, authoritative information could be obtained from the disparate published and unpublished sources employed.

For this study, Gardner Policy Institute researchers visited Hill Air Force Base, Dugway Proving Ground, Tooele Army Depot, Utah National Guard Headquarters and the regional VA benefits office. Onsite meetings included discussions of operations at each defense organization and data needed

for the study. Follow-up to clarify information requests and receive and interpret responses was conducted by phone and email, as well as a second in-person visit for Hill AFB and Dugway Proving Ground. Gardner Policy Institute researchers met with senior staff at the military installations, including commanders at all except Hill AFB. The research did not require on-site meetings for the many reserves, recruiting and ROTC units in Utah.

Employment and payroll data were provided by contacts at the three military installations (Hill AFB, Tooele and Dugway), the Utah National Guard, and the VA medical center and benefits office. For the other defense organizations with employees in Utah—20 reserve, recruiting or ROTC units—employment information was obtained directly, and payroll amounts were based on average pay for federal civilians and military personnel in Utah. Data collection and analysis resulted in counts and compensation (including benefits) for all part-time and full-time defense employees in Utah, generally by county.

The three military installations and the Utah National Guard provided non-payroll spending amounts for FY2015 in response to our information requests. Where necessary, these data were supplemented with publicly available federal spending data from USAspending.gov. USAspending.gov was also the principal source for VA grants and contracts, as well as DOD grants and contracts not directly tied to a Utah defense organization. DOD and VA retirement pensions and benefits received by Utahns were provided by the VA and USAspending.gov. This data collection and analysis determined the in-state portion of non-payroll defense spending by industry and often by county, for use in estimating economic impacts.

One defense installation not included in this study is the National Security Administration's (NSA) Utah Data Center in Bluffdale. News reports suggest construction expenditures, completed well before 2015, in excess of $1.0 billion and ongoing staffing needs in the range of 100 to 200 Utah jobs.[1] Due to NSA disclosure protocol, we were unable to verify employment information or determine payroll and non-payroll spending associated with the data center. Two hundred jobs would be 0.5 percent of direct defense employment in Utah.

While this study addresses Utah military retirees and their DOD pension income, similar information was not available for the number of retired DOD civilians and the amount of federal pension payments they received. In 2015, DOD civilian employees in Utah collectively received more than twice as much compensation as military personnel in the state, suggesting the economic impact of DOD civilian pensions may exceed military retiree pensions (see Table 9.2). Federal pensions represent an important source of income for thousands of retired DOD civilians, and associated spending generates significant economic impacts in Utah. DOD civilian pensions would likely add a few percentage points or more to the $9.2 billion in GDP impacts from defense shown in this study.

1.3 Estimating Economic Impacts

REMI PI+, developed by Regional Economic Models, Inc., is a dynamic, multi-regional simulation model that forecasts economic, population and labor market impacts for many years into the future. REMI provides year-by-year estimates of the regional effects of specific economic or policy changes. The model incorporates input-output relationships, general equilibrium effects, econometric relationships and economic geography effects.

Although REMI has many complex, interrelated submodels and features, the essential logic of the model derives from the cohort component, economic base and input-output submodels. The REMI model connects these submodels through labor, capital, financial and product markets. It simulates the size and composition of the population and economy over time. If there is an increase in the production of an export base industry to the region, the region employment and income increase as well. REMI produces estimates of these increases over multiple years.

REMI PI+ version 1.7.8 aided in the analysis of the economic impacts of defense activity in Utah. Much of the research was devoted to collecting information appropriate for the model and the research questions. Researchers entered county-level inputs, data permitting, and resorted to statewide inputs for a few defense components lacking local employment, payroll or spending information.

Direct defense employment was entered in REMI as military or federal civilian jobs, except for a few hundred state government employees receiving federally reimbursed pay. For most jobs, researchers specified pay reported by employers, making adjustments to capture benefits that were part of compensation. To fill gaps where precise pay information was lacking, researchers turned to 2015 Utah averages for each type of job. Personal income from veteran and military pensions was entered as transfers to veterans. Researchers inputted nonpayroll defense spending in Utah for each of 23 NAICS sectors to capture unique industry characteristics, including, for example, variation in supply chains and employee pay. In many cases, researchers were able to specify the county in Utah where nonpayroll spending occurred.

1 For example, see "NSA Utah Data Center: Frequently asked questions" by Nate Carlisle, September 30, 2013, Salt Lake Tribune.

The complexity of the economic activities of each in-state defense organization varied considerably. All required multiple model runs with reviews and adjustments to calibrate the software model and conform it to Utah defense realities and economic reason. Final specifications were organized into 12 model scenarios.

Caution was exercised not to overstate economic impacts. The study design avoided double-counting civilian jobs supported by federal outlays for contracts and grants. Researchers nullified REMI's government spending estimates when actual expenditure data were available. After verifying the locations of hundreds of companies, Utah defense spending going to out-of-state companies was excluded. Researchers modeled economic impacts only for defense employment and spending funded by sources originating outside Utah, essentially the federal government, since economic activity supported by dollars recirculating within the state does not generate a similar economic impact. Finally, analysts took into account the distinct prevalence of part-time military employment in reserve and National Guard units. These and other steps improved the accuracy of study results.

For REMI output, standard measures were selected to capture the direct, indirect and induced effects of defense operations and spending. The results focus on Utahns, their jobs and income in 2015, and the monetized value added they created. Researchers also generated an array of outputs to inform the fiscal impact estimates.

1.4 Estimating Fiscal Impacts

Personal income taxes and sales taxes were estimated from the personal income impacts calculated by the REMI PI+ model. Corporate income taxes were estimated from annual output (sales) impacts by industry calculated by REMI. These were multiplied by multi-year average ratios of tax revenues to personal income or output.

Government expenditures were calculated on a per-capita basis from the annual population impacts. Non-education expenditures are based on the total population impact and include all state budget operating expenditures except those for higher education and public education. Higher-education expenditures are based on the college-age population impacts, and public-education expenditures are based on the school-age population impacts. Expenditure estimates are based on multi-year averages of per capita budgeted amounts.

The fiscal impact model also estimates local sales and property tax revenues, county operating expenditures, and countywide public education expenditures (aggregated from district-level data). Sales and residential and personal property tax revenues are estimated from the personal income impacts; commercial and industrial property taxes are estimated from employment impacts. Expenditures are calculated on a per-capita basis from either the total population impacts or the school-age population impacts. As with state revenues and expenditures, county-level estimates are based on multi-year average ratios.

The fiscal impact estimates generated in this report should be viewed as broad measures. This methodology relies on historical data and assumes a linear relationship between taxes paid and personal income, industry output and employment.

1.5 Acknowledgments

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Col. Sean G. Kirschner, Commander
Aaron Goodman, Garrison Manager
Debbie Skillicorn, Budget Officer, Garrison Resource Management
Jenny Gillum, Director, Rapid Integration Acceptance Center

Tooele Army Depot:

Col. Roger L. McCreery, Commander
David Ayala, Business Development
Kathy Anderson, Public Affairs Officer
Traci Rydalch, Resource Management

Utah National Guard:

Maj. Gen. Jefferson S. Burton, Adjutant General
Col. Kenneth Verboncoeur, U.S. Property and Fiscal Officer
Lt. Col. Michael Czipka, Deputy U.S. Property and Fiscal Officer

Reserves:

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Maj. Peter Bermudez, Secretary to Senior Mission Commander, 76th Operational Response Command, Fort Douglas, U.S. Army
Cmdr. Kenneth Jensen, Navy Operational Support Center Salt Lake City

Kari Tilton, Chief of Public Affairs, 419th Fighter Wing, Hill Air Force Base
Staff Sgt. Vargas, Fox Company, 2nd Battalion, 23rd Marine Regiment, U.S. Marine Corps

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Leila Milliken, Administrative Assistant, Salt Lake City Military Entrance Processing Squadron, U.S. Army
Sgt. Daniel Wetzel, Public Affairs Representative, Marine Corps Recruiting Station Salt Lake City
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Daniel Puleio, Public Affairs, Denver Navy Recruiting Command

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Lt. Col. Angelique Brown, Commander, Air Force ROTC, University of Utah
Lt. Col. Steven Smith, Commander, Air Force ROTC, Utah State University
Jack Sturgeon, Recruiting Operations Officer, Army ROTC, Brigham Young University
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Rodney Haygood, Supply Officer, Naval ROTC, University of Utah

Veterans:

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General Assistance:

Kevin Sullivan, Executive Director, Utah Defense Alliance
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Ted Frederick, Director of Military Affairs, Utah Department of Veterans and Military Affairs
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Kori Ann Edwards, Senior Vice President, Logistic Specialties, Inc.
Douglas Friedli, Program Manager, Logistic Specialties, Inc.
Pam Pedersen, Government Procurement Consultant, Logistic Specialties, Inc.

Section 2: Hill Air Force Base Current Operations

Located on the border of Davis and Weber counties, 30 miles north of Salt Lake City, Hill Air Force Base is the largest military installation in Utah. Hill AFB was the state's sixth largest employer in 2015.[2] That year, Hill employed 3,787 active-duty military personnel, 1,140 Air Force Reserves and 11,805 federal civilians, representing 9.7 percent of total jobs in Davis County. There were also an additional 3,058 employees of government contractors and private businesses working on base. Most of the federal employees, 7,831 of them, live in Davis County with almost 400 of those living on base (Table 2.1). Another 4,423 live in neighboring Weber County, approximately 1,300 commute from 14 other counties, and for about 3,200 the county of residence is not known. Total federal civilian and military wages paid by Hill AFB amounted to more than $1.2 billion, 22.6 percent of all wages paid in Davis County. The average wage of federal employees at Hill AFB was $75,013, almost 75 percent above the countywide average of $43,109.

Table 2.1: Hill Air Force Base 2015 Federal Employees by County of Residence

County	Civilians[1]	Military[2]	Total
Box Elder	329	3	332
Cache	122	5	127
Davis	4,983	2,848	7,831
Iron	2	0	2
Millard	2	0	2
Morgan	180	11	191
Salt Lake	390	74	464
San Juan	1	0	1
Sanpete	1	0	1
Sevier	2	0	2
Summit	24	0	24
Tooele	44	5	49
Utah	54	19	73
Wasatch	1	1	2
Washington	3	2	5
Weber	3,988	435	4,423
None given	1,680	1,524	3,204
Total	**11,805**	**4,927**	**16,732**

1. Civilian employee numbers are rough estimates based on payroll amounts by county, with 86% of the data complete, assuming civilians from each county received the average pay (including benefits) of all Hill civilian employees. Counts include two civilians with the 368th Recruiting Squadron. Civilians do not include contractors or employees of private businesses.
2. The 1,524 military personnel for whom county information was not given either had a state of legal residence other than Utah, although they live in the state to work at Hill AFB, or no location was given. Counts include 16 military personnel with the 368th Recruiting Squadron.

Source: Kem C. Gardner Policy Institute analysis of data provided by Hill Air Force Base.

According to data from USAspending.gov, Hill Air Force Base's FY 2015 contract spending in Utah totaled almost $529.6 million. In addition, Hill AFB spent $170.7 million on healthcare (TRICARE) benefits in Utah, almost $4.1 million for temporary duty assignments (TDY) at the base, an estimated $29.6 million on in-state government purchase card (GPC) purchases, and $307,000 for education impact aid. Total in-state non-payroll spending amounted to $736.8 million (Table 2.2). More than one-third of all spending was for professional, scientific and technical services. Almost one-quarter went toward health care, and 14 percent went to the manufacturing sector.

Hill AFB's employment, payroll and operational expenditures supported over 47,000 full- and part-time jobs in the state in 2015 and $3.2 billion in earnings (Table 2.3). This consists of the 16,732 direct federal jobs (16,717 jobs in Davis County plus 15 recruiters with the 368th Recruiting Squadron working across the state) with $1.8 billion in earnings provided by the base itself plus an estimated additional 30,609 indirect and induced jobs and almost $1.4 billion in earnings. Hill AFB's operations also contributed nearly $4.6 billion to the state's GDP.

Hill AFB's activities also generate fiscal impacts for the state. These arise through the changes in income, employment, output and population that result from the economic

2 Source: Utah Department of Workforce Services, as reported in "Utah Informed: Visual Intellection for 2017," Kem C. Gardner Policy Institute, p. 36.

activity of the base. Hill AFB's activities directly and indirectly generated an estimated $157.5 million in state tax revenues (Table 2.4). This was partially offset by the additional population supported by the base, which consumes an estimated $71.5 million in state government expenditures. The net fiscal impact was $85.9 million in revenue.

While over 60 percent of Hill AFB's economic impacts accrued to Davis County, nearby counties also received large employment, earnings and GDP impacts in 2015 because of the base. Table 2.5 shows county-level direct, indirect and induced impacts that add up to the totals in Table 2.3. County-level jobs and earnings are based on where employees live and presumably spend most of their income, while GDP represents where work is performed.

Over 28,700 jobs held by Davis County residents in 2015 were either performed at Hill AFB or indirectly supported by its spending and the spending of its employees. Those jobs represented 19 percent of county employment and generated $2.1 billion in earnings for county residents, nearly two-thirds of the base's total earnings impact. An estimated $3.3 billion of GDP created in Davis County that year, nearly one-fourth of its total, can be attributed to Hill AFB's total economic impact.

Weber County residents filled an estimated 8,253 jobs that were part of Hill AFB's direct, indirect and induced employment impact in 2015. These jobs brought $566.3 million in income into the county, 6.8 percent of all earnings by Weber County employees. Hill AFB boosted Weber County's GDP by an estimated $380 million. Weber County shares of employment (17 percent) and earnings (18 percent) are much higher than the county's GDP share (8 percent), because many of the people whose jobs are supported directly or indirectly by Hill AFB commuted from Weber County to worksites in other counties, particularly Davis and Salt Lake.

Over 12 percent of the direct, indirect and induced employment created by Hill AFB in 2015 went to Salt Lake County residents: 5,719 jobs, $291.8 million in earnings and $587.0 million in GDP. Given the size of its economy, these large impacts amounted to only about 1 percent of Salt Lake County totals. Though somewhat more distant than Salt Lake, Utah County's benefits from Hill AFB operations included 1,666 jobs and $77.5 million in earnings for its residents, plus $102.6 million in local GDP. In each of five other counties, at least 210 jobs, $18 million in earnings and $10 million in GDP were part of Hill AFB's positive economic impact on county residents in 2015. Across the rest of the state the base's operations supported 460 jobs, $20.7 million in earnings and $42.0 million in GDP. Illustrating the importance of the base to nearby rural counties, a remarkable 8.3 percent of both employment and earnings by Morgan County residents are associated with Hill AFB.

Table 2.2: Hill Air Force Base Non-Payroll Spending in Utah, FY 2015

Sector	Amount
Mining	$546,812
Utilities	$11,740,727
Construction	$72,930,610
Manufacturing	$102,178,230
Wholesale Trade	$15,512,096
Retail Trade	$15,674,238
Transportation and Warehousing	$12,976,370
Information	$5,886,758
Real Estate, Rental and Leasing	$25,251
Professional, Scientific and Technical Services	$269,606,872
Administration and Waste Management	$37,003,760
Educational Services	$2,173,043
Health Care and Social Services	$174,840,185
Arts, Entertainment, and Recreation	$25,286
Accommodation and Food Services	$6,262,785
Other Services	$9,368,486
Total	**$736,751,510**

Note: Consists of contracts, TRICARE, TDY, GPC purchases and education impact aid.
Source: Kem C. Gardner Policy Institute analysis of data from USASpending.gov and Hill Air Force Base.

Table 2.3: Statewide Economic Impacts of Hill Air Force Base, 2015 (Millions of Dollars)

Category	Direct Federal*	Indirect & Induced	Total
Employment by Place of Work	16,732	30,609	47,341
Earnings by Place of Work	$1,825.2	$1,377.1	$3,202.3
Gross Domestic Product			$4,569.8

* Does not include jobs of contract civilians or private businesses on base. These are included in the indirect and induced jobs.
Source: Kem C. Gardner Policy Institute analysis using the REMI PI+ model.

Table 2.4: Statewide Fiscal Impacts of Hill Air Force Base, 2015 (Millions of Dollars)

Impact	Amount
Personal Income Tax Revenues	$69.4
Corporate Income Tax Revenues	$4.1
State Sales Tax Revenues	$84.0
Total State Revenues	**$157.5**
Non-Education Expenditures	$35.1
State Public Education Expenditures	$21.8
Higher Education Expenditures	$14.6
Total State Operating Expenditures	**$71.5**
Net State Operating Revenue	**$85.9**

Source: Kem C. Gardner Policy Institute analysis using the Gardner Policy Institute fiscal model.

Table 2.5: Economic Impacts of Hill Air Force Base by County, 2015
(Shares of County Totals, Millions of Dollars)

	Employment		Earnings		Gross Domestic Product	
County of Residence	Number	Share	Number	Share	Number	Share
Davis	28,780	18.6%	$2,072.2	21.4%	$3,326.6	24.7%
Weber	8,253	4.5%	$566.3	6.8%	$380.0	2.1%
Salt Lake	5,719	1.0%	$291.8	0.9%	$587.0	0.8%
Utah	1,666	0.6%	$77.5	0.6%	$102.6	0.5%
Box Elder	682	2.9%	$46.7	4.0%	$35.1	1.6%
Cache	615	1.1%	$27.1	1.1%	$32.5	0.7%
Morgan	386	8.3%	$30.6	8.3%	$10.1	4.5%
Tooele	343	1.2%	$18.2	1.2%	$18.3	0.8%
Summit	213	1.0%	$21.1	0.9%	$35.7	1.0%
All Others	460	0.3%	$20.7	0.2%	$42.0	0.2%
Out of State	223	NA	$30.1	NA	$0.0	NA
Total	**47,341**	**3.4%**	**$3,202.3**	**4.0%**	**$4,569.8**	**3.0%**

Note: The "none given" military personnel from Table 2.1 were distributed among the counties based on the known distribution of military personnel. Employment and earnings are by place of residence. Utah workers who commute across county lines are counted where they live. GDP is by place of work. Shares equal employment, earnings and GDP impacts divided by total employment, earnings and GDP in the county (or state for the "Total" row), respectively.
NA = not available
Source: Kem C. Gardner Policy Institute analysis using the REMI PI+ model, Bureau of Economic Analysis, Utah Department of Workforce Services.

Section 3: Dugway Proving Ground

Dugway Proving Ground (DPG) is located in the remote Skull Valley, 85 miles southwest of Salt Lake City in Utah's west desert. DPG tests detection and defensive equipment for chemical and biological agents with both live agents and nontoxic simulants. They also provide training in the use of this detection and defensive equipment. In addition, Michael Army Airfield features an 11,000-foot runway and is home to the Rapid Integration and Acceptance Center, which conducts unmanned aerial vehicle testing and training.

In 2015, Dugway Proving Ground directly employed 659 civilians and 30 military personnel, representing 3.1 percent of total jobs in Tooele County. Most of these employees, 487 of them, live in the county; the remainder commute from 12 other counties in Utah and from out of state (Table 3.1). Total direct civilian and military wages paid by DPG amounted to $58.7 million, 8.7 percent of all wages paid in Tooele County. The average wage of employees at DPG was $86,612, more than double the countywide average of $42,082. There are also an additional 856 military contractors and school, hotel, credit union and other on-base workers not paid directly by the Department of Defense.

Table 3.1: Dugway Proving Ground 2015 Employees by County of Residence

County	Employees
Tooele	487
Salt Lake	75
Utah	57
Juab	12
Davis	11
Weber	10
Millard	4
Cache	4
Box Elder	2
Sanpete	1
Washington	1
Emery	1
Summit	1
Outside Utah	23
DPG Total	**689**

Source: Dugway Proving Ground.

According to data from USAspending.gov, Dugway Proving Ground's FY 2015 contract spending in Utah totaled almost $56.2 million (Table 3.2). Nearly half of this was for professional, scientific and technical services, with another 40 percent going to facilities support and waste management services.

Table 3.2: Dugway Proving Ground Contract Spending in Utah by Industry, FY 2015

Sector	Amount
Construction	$1,921,337
Manufacturing	$2,843,593
Wholesale Trade	$102,507
Transportation	$205,740
Information	$234,106
Professional, Scientific and Technical Services	$27,725,050
Facilities Support and Waste Management	$22,832,306
Equipment Repair and Other Services	$347,176
Total	**$56,211,816**

Source: Kem C. Gardner Policy Institute analysis of data from USAspending.gov.

DPG's employment, payroll and operational expenditures supported approximately 2,480 full- and part-time jobs in the state in 2015 and $175.9 million in earnings (Table 3.3). This consists of the 689 direct jobs, with $78.9 million in earnings, at the Proving Ground itself, plus an estimated additional 1,790 indirect and induced jobs and $96.9 million in earnings. DPG's operations also contribute an estimated $225.0 million to the state's GDP.

Dugway Proving Ground's activities also generate fiscal impacts for the state. These arise through the changes in income, employment, output and population that result from

the economic activity of the Proving Ground. DPG's activities directly and indirectly generate an estimated $8.8 million in state tax revenues, consisting of almost $4.1 million in personal income taxes, $284,300 in corporate income taxes, and almost $4.5 million in state sales taxes (Table 3.4). The additional population due to DPG's economic contribution causes an estimated $2.8 million in state government expenditures, comprising $1.4 million in non-education expenditures, $758,600 in public education expenditures, and $603,300 in higher education expenditures. The net fiscal impact was $6.0 million in revenue.

Given the geographic distribution of DPG's spending and the residence of its employees, the Proving Ground has economic impacts beyond its home county of Tooele. Tooele captured the lion's share of the impacts, with DPG directly or indirectly providing 1,108 jobs and $75.7 million in earnings to county residents and adding $116.3 million to the county's GDP in 2015 (Table 3.5). About 5 percent of Tooele County earnings and GDP that year can be attributed to the installation. Salt Lake was the next largest beneficiary. DPG's operations directly and indirectly provided 769 jobs and $46.9 million in earnings to Salt Lake County residents, and added $75.6 million in GDP. These large impacts amount to only 0.1 percent of the county's thriving, diversified economy.

The next three counties with the largest impacts from DPG operations are all on the Wasatch Front. The Proving Ground directly and indirectly provided 216 jobs, $10.9 million in earnings and $11.7 million in GDP for Utah County residents in 2015. Davis County residents saw 144 jobs, almost $8.9 million in earnings and $6.9 million in GDP from DPG operations; and Weber County residents benefitted from 129 jobs, $6.2 million in earnings and $7.4 million in GDP. Another 17 counties have at least one resident whose job is supported by DPG. The installation supports between $36,200 and $1.5 million in GDP created at workplaces in each of these counties grouped under "All Others" in Table 3.5.

Table 3.3: Statewide Economic Impacts of Dugway Proving Ground Operations, 2015 (Thousands of Dollars)

Category	Direct	Indirect & Induced	Total
Employment by Place of Work	689	1,790	2,479
Earnings by Place of Work	$78,923.5	$96,949.9	$175,873.4
Gross Domestic Product			$224,990.2

Source: Kem C. Gardner Policy Institute analysis using the REMI PI+ model.

Table 3.4: Statewide Fiscal Impacts of Dugway Proving Ground, 2015 (Thousands of Dollars)

Impact	Amount
Personal Income Tax Revenues	$4,052.0
Corporate Income Tax Revenues	$284.3
State Sales Tax Revenues	$4,472.7
Total State Revenues	**$8,808.9**
Non-Education Expenditures	$1,438.5
State Public Education Expenditures	$758.6
Higher Education Expenditures	$603.3
Total State Operating Expenditures	**$2,800.4**
Net State Operating Revenue	**$6,008.5**

Source: Kem C. Gardner Policy Institute analysis using the Gardner Policy Institute fiscal model.

Table 3.5: Economic Impacts of Dugway Proving Ground by County, 2015
(Shares of County Totals, Thousands of Dollars)

	Employment		Earnings		Gross Domestic Product	
County of Residence	Number	Share	Amount	Share	Amount	Share
Tooele	1,108	3.9%	$75,724.4	5.0%	$116,297.1	5.4%
Salt Lake	769	0.1%	$46,869.9	0.1%	$75,630.7	0.1%
Utah	216	0.1%	$10,873.4	0.1%	$11,743.8	0.1%
Davis	144	0.1%	$8,861.9	0.1%	$6,907.6	0.1%
Weber	129	0.1%	$6,175.7	0.1%	$7,388.7	0.1%
All Others	91	0.0%	$5,953.3	0.0%	$7,022.3	0.0%
Out of State	23	NA	$21,414.8	NA	$0.0	NA
Total	**2,479**	**0.2%**	**$175,873.4**	**0.2%**	**$224,990.2**	**0.1%**

Note: Employment and earnings are by place of residence. Utah workers who commute across county lines are counted where they live. GDP is by place of work. Shares equal employment, earnings and GDP impacts divided by total employment, earnings and GDP in the county (or state for the "Total" row), respectively.
NA = not available
Source: Kem C. Gardner Policy Institute analysis using the REMI PI+ model, Bureau of Economic Analysis, Utah Department of Workforce Services.

Section 4: Tooele Army Depot

Tooele Army Depot (TEAD) is located on the west side of Tooele City in Tooele County, 37 miles southwest of Salt Lake City. TEAD issues, receives, stores, maintains, demilitarizes and tests ammunition. The Depot also designs, develops, fabricates and fields ammunition-related equipment. Among its capabilities, the Depot offers engineering services; explosives performance testing; logistical support; machining, fabrication, assembly and repair; munitions renovation, maintenance and storage; reclamation, demilitarization, disposal and recovery; research, development and prototyping; technical writing and training; testing of energetic materials; and shipping container maintenance and repair.

In 2015 the Tooele Army Depot had 549 civilian employees and one military employee (the commanding officer), representing about 2.5 percent of total employment in the county. Most of these employees, 446 of them, live in Tooele County; the remainder commute from Salt Lake, Utah, Davis, Weber and Juab counties (Table 4.1). Total payroll amounted to $41.0 million, about 4.5 percent of all earnings in Tooele County. Payroll consists of wages and salaries plus life insurance, health insurance and retirement benefits. The average earnings of employees of TEAD were $74,511 in 2015, 75 percent higher than the countywide average of $42,685.

Table 4.1: Tooele Army Depot 2015 Employees by County of Residence

County	Employees
Tooele	446
Salt Lake	63
Utah	22
Davis	11
Weber	7
Juab	1
Depot Total	**550**

Source: Tooele Army Depot.

Depot non-payroll expenditures totaled over $36.0 million. Of these, expenditures in Utah amounted to almost $15.8 million, consisting of over $13.5 million in contracts, government purchase card purchases of $662,000, and other purchases worth more than $1.5 million (Table 4.2). Over half (55 percent) of all non-payroll expenditures in Utah were for construction; another 14 percent went to utilities.

TEAD's employment, payroll and operational expenditures supported over 1,160 full- and part-time jobs in the state in 2015 and $75.0 million in earnings (Table 4.3). This consists of the 550 jobs, with $41.0 million in earnings, at the Depot itself plus an estimated additional 614 indirect and induced

Table 4.2: Tooele Army Depot Contract, Purchase Card and Other Spending in Utah by Industry, FY 2015

Sector	Amount
Utilities	$2,229,714
Construction	$8,626,575
Manufacturing	$346,566
Wholesale Trade	$441,537
Retail Trade	$165,463
Transportation	$55,300
Information	$341,907
Rental and Leasing Services	$1,295,342
Professional, Scientific and Technical Services	$124,900
Janitorial and Waste Management Services	$805,404
Educational Services	$43,536
Other Services	$1,296,508
Total	**$15,772,752**

Source: Tooele Army Depot.

Table 4.3: Statewide Economic Impacts of Tooele Army Depot Operations, 2015 (Thousands of Dollars)

Category	Direct	Indirect & Induced	Total
Employment by Place of Work	550	614	1,164
Earnings by Place of Work	$40,980.9	$33,991.9	$74,972.8
Gross Domestic Product			$113,804.6

Source: Kem C. Gardner Policy Institute analysis using the REMI PI+ model.

Table 4.4: Statewide Fiscal Impacts of Tooele Army Depot, 2015 (Thousands of Dollars)

Impact	Amount
Personal Income Tax Revenues	$1,715.1
Corporate Income Tax Revenues	$83.7
State Sales Tax Revenues	$1,880.1
Total State Revenues	**$3,678.9**
Non-Education Expenditures	$650.6
State Public Education Expenditures	$336.8
Higher Education Expenditures	$269.4
Total State Operating Expenditures	**$1,256.8**
Net State Operating Revenue	**$2,422.0**

Source: Kem C. Gardner Policy Institute analysis using the Gardner Policy Institute fiscal model.

jobs and $34.0 million in earnings. TEAD's operations also contributed an estimated $113.8 million to the state's GDP.

In addition to the economic impacts just noted, Tooele Army Depot has fiscal impacts on the state's finances. These arise through the changes in income, employment, output and population that result from the economic activity of the Depot. TEAD's activities directly and indirectly generate an estimated $3.7 million in state tax revenues, consisting of $1.7 million in personal income taxes, $83,700 in corporate income taxes, and almost $1.9 million in state sales taxes (Table 4.4). The additional population due to TEAD's economic contribution causes an estimated $1.2 million in state expenditures, comprising $650,600 in non-education expenditures, $336,800 of public education expenditures, and $269,400 of higher education expenditures. The estimated net fiscal impact is over $2.4 million in revenues.

Tooele Army Depot's economic impact extends far beyond its immediate vicinity. Economic linkages carry dollars and jobs from the military installation to most parts of Utah. Based on measures of employment, earnings and GDP in 2015, roughly one-third to one-half of TEAD's economic footprint falls outside its home county (Table 4.5). In 18 counties, at least one resident has a job supported directly or indirectly by TEAD.

Tooele County received the largest economic benefits from the Army Depot of any county in the state: 645 full- and part-time jobs and $35.5 million in earnings for its residents, plus $76.5 million in local GDP (Table 4.5). These impacts accounted for 2.3 percent of jobs held by Tooele County residents and 3.5 percent of the value added (GDP) created at workplaces there in 2015.

In 2015 four other counties each owed more than 50 jobs and $3.0million in earnings to Tooele Army Depot. Foremost, Salt Lake County received as its share of TEAD's total economic impact $19.2 million in GDP, 211 jobs and $13.3 million in earnings for county residents. As significant as they are to the individuals, households and businesses involved, these amounts make up less than 0.1 percent of the total jobs, earnings and GDP in the county's sizeable economy.

Rounding out the top five in 2015, Utah, Davis and Weber counties benefitted from economic opportunities TEAD generated for their residents and businesses. Because of the Army Depot, there were 107 jobs that year for people living in Utah County, compared with 94 jobs for Davis County and 61 for the more distant Weber County. Table 4.5 provides increased earnings due to TEAD's activities. Weber County can attribute $2.8 million of its 2015 GDP to TEAD, while Davis and Utah counties can credit TEAD with $6.8 million and $5.9 million, respectively, of their GDP. Thus, Davis County businesses benefitted somewhat more from TEAD that year than did businesses in Utah County in terms of GDP impacts, while Utah County's burgeoning population relied somewhat more on TEAD for employment than did workers living in Davis County.

Table 4.5: Economic Impacts of Tooele Army Depot by County, 2015
(Shares of County Totals, Thousands of Dollars)

	Employment		Earnings		Gross Domestic Product	
County of Residence	Number	Share	Amount	Share	Amount	Share
Tooele	645	2.3%	$35,453.8	2.3%	$76,471.5	3.5%
Salt Lake	211	0.0%	$13,310.6	0.0%	$19,208.2	0.0%
Utah	107	0.0%	$5,263.1	0.0%	$5,865.0	0.0%
Davis	94	0.1%	$4,901.0	0.1%	$6,753.1	0.1%
Weber	61	0.0%	$3,290.1	0.0%	$2,834.7	0.0%
All Others	35	0.0%	$2,303.4	0.0%	$2,672.1	0.0%
Out of State	10	NA	$10,450.8	NA	$0.0	NA
Total	**1,164**	**0.1%**	**$74,972.8**	**0.1%**	**$113,804.6**	**0.1%**

Note: Employment and earnings are by place of residence. Utah workers who commute across county lines are counted where they live. GDP is by place of work. Shares equal employment, earnings and GDP impacts divided by total employment, earnings and GDP in the county (or state for the "Total" row), respectively.
NA = not available
Source: Kem C. Gardner Policy Institute analysis using the REMI PI+ model, Bureau of Economic Analysis, Utah Department of Workforce Services.

Section 5: Utah National Guard

The Utah National Guard has an armory readiness center or air base in 15 of Utah's 29 counties (Table 5.1). Guard employees and personnel who report to these sites live in all parts of the state. Most employees work in Salt Lake County, where headquarters and four other facilities are located. There is also a strong presence in Utah County, with Camp Williams and several armories.

Nearly three-quarters of total National Guard employment consists of traditional guardmembers, of which there were 6,897 in 2015. The remainder is made up of federal civilians and federally funded state civilians (13 percent, 1,169 employees) and full-time military personnel (13 percent, 1,214 service members) (Figure 5.1).

The Utah National Guard spent $48.1 million of federal funds in Utah in FY 2015 (Table 5.2). This consists of contracts, government purchase card transactions and federal-reimbursed state spending. More than half, $27.4 million, was spent on construction. Professional, scientific and technical services received $8.6 million, almost 20 percent. The guard also purchased about $4.2 million of goods from in-state retailers.

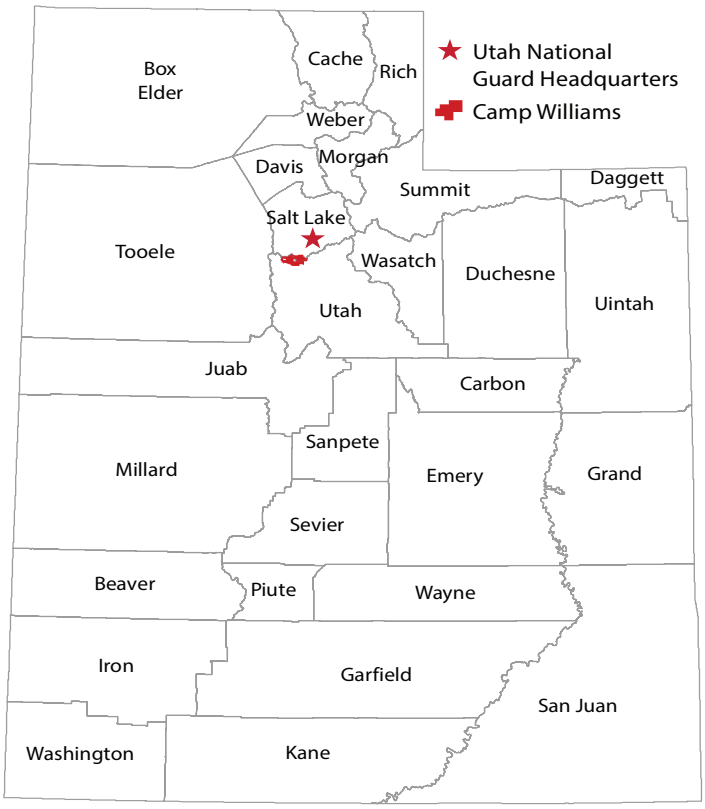
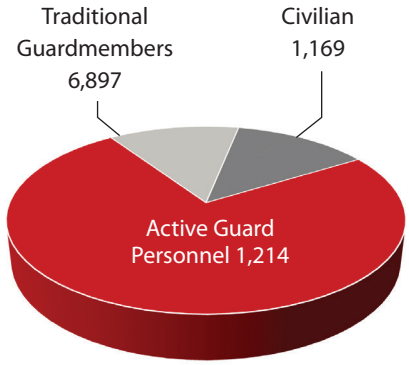


Table 5.1: Utah National Guard Employees by Place of Work, FY 2015

County	Civilian		Military	
	Federal Technicians	Fed-Reimbursed State Employees	Active Guard Personnel	Traditional Guardmembers
Beaver	3	0	2	34
Box Elder	0	0	2	36
Cache	2	1	6	137
Carbon	0	0	3	94
Iron	0	0	12	94
Millard	0	0	2	29
Salt Lake	765	152	598	3,169
San Juan	0	1	2	31
Sanpete	6	1	5	120
Sevier	3	0	3	66
Tooele	7	0	5	125
Uintah	3	1	2	42
Utah	24	32	68	938
Washington	11	2	9	278
Weber	12	1	15	312
Unknown	0	144	480	1,392
Total	**834**	**335**	**1,214**	**6,897**

Note: Many military and civilian personnel commute to neighboring counties for guard employment. For example, Davis County guardmembers drill in Salt Lake and Weber counties.
Source: Kem C. Gardner Policy Institute analysis of Utah National Guard data.

Figure 5.1: Utah National Guard Employees by Type, FY 2015



Source: Kem C. Gardner Policy Institute analysis of Utah National Guard data.

Table 5.2: Utah National Guard Contract, Purchase Card and Federal-Reimbursed State Spending, FY 2015

Sector	Amount
Mining	$638
Utilities	$3,733,304
Construction	$27,434,881
Manufacturing	$804,650
Wholesale Trade	$360,409
Retail Trade	$4,171,344
Transportation and Warehousing	$51,503
Information	$87,919
Finance and Insurance	$243
Rental and Leasing Services	$735,383
Professional, Scientific and Technical Services	$8,642,955
Management of Companies and Enterprises	$1,572
Administration and Waste Management	$1,023,880
Educational Services	$144,905
Health Care and Social Assistance	$21,246
Arts, Entertainment and Recreation	$14,362
Accommodation and Food Services	$705,498
Other Services	$167,419
Total	**$48,102,109**

Source: Utah National Guard.

Table 5.3: Statewide Economic Impacts of Utah National Guard Operations, 2015 (Thousands of Dollars)

Category	Direct	Indirect & Induced	Total
Employment by Place of Work	9,280	3,896	13,176
Earnings by Place of Work	$245,718.8	$231,582.7	$477,301.5
Gross Domestic Product			$841,939.0

* Comprises active guard personnel, traditional guardmembers, federal civilian technicians and federal-supported state employees.
Source: Kem C. Gardner Policy Institute analysis using the REMI PI+ model.

Table 5.4: Statewide Fiscal Impacts of the Utah National Guard, 2015 (Thousands of Dollars)

Impact	Amount
Personal Income Tax Revenues	$11,609.6
Corporate Income Tax Revenues	$538.9
State Sales Tax Revenues	$12,701.1
Total State Revenues	**$24,849.5**
Non-Education Expenditures	$6,381.3
State Public Education Expenditures	$4,284.8
Higher Education Expenditures	$2,655.5
Total State Operating Expenditures	**$13,321.7**
Net State Operating Revenue	**$11,527.9**

Source: Kem C. Gardner Policy Institute analysis using the Gardner Policy Institute fiscal model.

This impact analysis considers federal military and civilian employees, federally reimbursed state employees, and federally funded spending. It does not consider state spending or employees. The Utah National Guard's employment, payroll and in-state spending supported over 13,000 jobs and $477.3 million in earnings in Utah in 2015 (Table 5.3). Of these, 9,280 jobs and $245.7 million in earnings were with the guard itself. There were also an additional 3,896 indirect and induced jobs and $231.6 million in earnings. The guard's federally funded operations contributed $841.9 million to the state's GDP.

National Guard activities also generate fiscal impacts for the state. These amounted to $24.8 million in income and sales tax revenues and $13.3 million in education and non-education expenditures in 2015 (Table 5.4). The net impact was $11.5 million in revenue.

Section 6: Reserves, Recruiting and ROTC

6.1 Reserves

The reserve branches of the armed forces employed 5,106 military personnel and at least 399 federal civilians in Utah in FY 2015 (Table 6.1). The Army had the largest presence, with 3,043 reservists and an estimated 338 full-time military and 184 civilian employees at Ft. Douglas. The Air Force employed 939 traditional reservists, 186 dual military/civilian reservists, three active guard reserves and an additional 28 civilians. There are 328 Navy reservists plus 21 full-time military and one civilian working for the Navy Reserves at Ft. Douglas. The Marine Corps 2nd Battalion consists of 95 reservists and 12 full-time military employees at Ft. Douglas. The 4th Battalion includes 141 military personnel associated with Camp Williams.

Table 6.1: Reserves Employment in Utah, FY 2015

Service	Military	Civilian	Location
Air Force[1]	1,128	214	Hill AFB
Reservists	1,125		
Full-Time	3		
Army	3,381	184	Ft Douglas
Reservists	3,043		
Full-Time	338		
Navy	349	1	Ft Douglas
Reservists	328		
Full-Time	21		
Marine Corps[2]	248	NA	
2nd Battalion	107	0	Ft Douglas
Reservists	95		
Full-Time	12		
4th Battalion	141	NA	Camp Williams
Total	**5,106**	**399**	

1. Air Force Reserve civilians include 214 dual civilian/military personnel, Air Reserve Technicians, who count in both columns. They are full-time civilian employees. On weekends and two weeks a year, they serve as reservists.
2. Military reserves in the 4th Battalion are calculated as the Marines total from Governing.com minus the number reported by the 2nd Battalion. After reviewing resources available online and attempting to make contact with Marine Corps representatives, the Gardner Policy Institute was unable to determine the number of civilian personnel working for the 4th Battalion, if any.

NA = not available

Source: Personal communications, 419th Fighter Wing Snapshot, 2015 U.S. Army Reserve At a Glance, Governing.com, Defense Manpower Data Center, Utah Military Community Support Conference November 18, 2016.

The statewide economic impact of military reserves employment included over 8,000 jobs and $226.7 million in earnings (Table 6.2). This consisted of the 5,505 direct jobs with $90.7 million in earnings, plus 2,513 indirect and induced jobs and $136.0 million in earnings. The presence of military reserve operations also contributed an estimated $377.0 million to the state's GDP in 2015.

Table 6.2: Statewide Impacts of Military Reserves, 2015 (Thousands of Dollars)

Category	Direct*	Indirect & Induced	Total
Employment by Place of Work	5,505	2,513	8,018
Earnings by Place of Work	$90,709.9	$136,026.7	$226,736.6
Gross Domestic Product			$377,045.0

* Direct earnings were estimated by the REMI PI+ model as we were unable to obtain actual payroll data.
Source: Kem C. Gardner Policy Institute analysis using the REMI PI+ model.

Table 6.3: Statewide Fiscal Impacts of Military Reserves, 2015 (Thousands of Dollars)

Impact	Amount
Personal Income Tax Revenues	$4,482.1
Corporate Income Tax Revenues	$275.5
State Sales Tax Revenues	$5,977.7
Total State Revenues	**$10,735.3**
Non-Education Expenditures	$2,605.5
State Public Education Expenditures	$1,664.0
Higher Education Expenditures	$1,083.2
Total State Operating Expenditures	**$5,352.7**
Net State Operating Revenue	**$5,382.6**

Source: Kem C. Gardner Policy Institute analysis using the Gardner Policy Institute fiscal model.

The associated fiscal impacts of the military reserves included $10.7 million in state tax revenues and $5.4 million in state expenditures (Table 6.3). The net fiscal impact on the state was almost $5.4 million in revenues in 2015.

6.2 Military Recruiting

All branches of the military services, except for the Coast Guard, have recruiters in Utah. The Army has the largest presence, with 94 military and 19 civilian personnel at 11 sites (Table 6.4). The Marines are the second largest, with 43 military and 2 civilian personnel, also at 11 sites. The Navy and Air Force each have 39 recruiting personnel, the Navy at nine sites and the Air Force at seven. In addition, the Utah National Guard employs 73 recruiters at six sites, and the Military Entrance Processing Squadron employs 33 military and civilian personnel in Utah.

The statewide impacts of 289 military and 53 federal civilian recruiting jobs in 2015 included 978 jobs and $53.2 million in earnings (Table 6.5). In addition to the 342 direct federal jobs with $16.9 million of earnings, this consists of 636 indirect and

induced jobs and almost $36.3 million of earnings. Recruiting activities also contributed $89.1 million to state GDP.

This activity also generated fiscal impacts of nearly $2.6 million in state income and sales tax revenues and $1.1 million in education and non-education expenditures (Table 6.6). The net impact was almost $1.5 million in revenue.

6.3 Reserve Officer Training Corps

The Army, Air Force and Navy all have Reserve Officer Training Corps (ROTC) programs in Utah. There are Army ROTC battalions at the University of Utah (U of U), Utah State University (USU), Weber State University (WSU) and Brigham Young University (BYU). The U of U battalion employs nine military personnel and five civilians, and has cross-town arrangements with Westminster College and Salt Lake Community College. The BYU battalion employs six military personnel and five civilians, and has cross-town arrangements with Utah Valley University, Southern Utah University and Dixie State University. USU's Army ROTC battalion employs seven military personnel and one civilian, and WSU's employs eight military personnel and four civilians.

There are Air Force ROTC detachments at the U of U, USU and BYU. The U of U detachment employs five military personnel and one civilian, and has cross-town arrangements with WSU, Westminster, Salt Lake Community College and LDS Business College. The BYU detachment employs nine military personnel and one civilian, and has a cross-town arrangement with UVU. USU's Air Force detachment employs five military personnel and one civilian.

Only the University of Utah has a Naval ROTC unit, which also serves the Marine Corps. It employs five military personnel and three civilians, and provides cross-town services for Westminster cadets.

All told, ROTC programs at Utah's universities employ 54 military personnel, 15 federal civilians and 6 state employees. Table 6.7 shows their distribution by county.

In 2015 an average of 585 ROTC cadets in Utah received an estimated $2.9 million in ROTC scholarships and stipends. Gardner Policy Institute was unable to obtain complete data on Army ROTC cadets. Table 6.8 provides the data we did obtain.

In 2015, 254 cadets participated in Air Force ROTC programs. The BYU program enrolled an average of 105 cadets from BYU and UVU, who were awarded $188,048 in scholarships. An average of 91 Air Force ROTC cadets at Utah State University received $221,159 in scholarships. An additional $129,600 of stipends was paid in the 2015–16 school year. The U of U Air Force ROTC maintained an average of 58 cadets with approximately $250,000 in scholarships and $35,000 in stipends.

Table 6.4: Military Recruiting in Utah, 2015

Service	Personnel			Recruiting Sites
	Military	Civilian	Total	
Air Force*	34	5	39	7
Army	94	19	113	11
Utah National Guard*	72	1	73	6
Marine Corps	43	2	45	11
Navy	38	1	39	9
Military Entrance Processing Squadron	8	25	33	1
Total	**289**	**53**	**342**	**45**

* Air Force and Guard personnel are included in employee counts for Hill Air Force Base and the Utah National Guard, respectively.
Source: Personal communications.

Table 6.5: Statewide Economic Impacts of Military Recruiting, 2015 (Thousands of Dollars)

Category	Direct	Indirect & Induced	Total
Employment by Place of Work	342	636	978
Earnings by Place of Work	$16,918.4	$36,262.8	$53,181.2
Gross Domestic Product			$89,093.4

Source: Kem C. Gardner Policy Institute analysis using the REMI PI+ model.

Table 6.6: Statewide Fiscal Impacts of Military Recruiting, 2015 (Thousands of Dollars)

Impact	Amount
Personal Income Tax Revenues	$1,061.1
Corporate Income Tax Revenues	$109.6
State Sales Tax Revenues	$1,400.3
Total State Revenues	**$2,571.1**
Non-Education Expenditures	$547.1
State Public Education Expenditures	$338.9
Higher Education Expenditures	$227.0
Total State Operating Expenditures	**$1,113.0**
Net State Operating Revenue	**$1,458.1**

Source: Kem C. Gardner Policy Institute analysis using the Gardner Policy Institute fiscal model.

Table 6.7: ROTC Employment in Utah by County, 2015

County	Military	Civilian	State	Total
Cache – USU	12	0	2	14
Salt Lake – U of U	19	7	2	28
Utah – BYU	15	6	0	21
Weber – WSU	8	2	2	12
Total	**54**	**15**	**6**	**75**

Source: ROTC web sites and Utahsright.com.

Table 6.8: Selected ROTC Cadets and Scholarships Paid in Utah, 2015

Service/School	Cadets	Scholarships
Air Force		
Brigham Young University[1]	105	$188,048
Utah State University	91	$221,159
University of Utah[2]	58	$250,000
Army[3]		
Brigham Young University	113	$975,000
University of Utah[4]	77	NA
Utah Valley University	51.5	$225,000
Southern Utah University	41	$150,000
Dixie State University	25	$60,000
Navy/Marine Corps		
University of Utah	12.5	$268,150
Westminster College	11.5	$393,747

Note: Cadet and scholarship numbers are averages of 2014–15 and 2015–16 school year amounts.
1. Includes cadets at Utah Valley University.
2. Includes cadets at Salt Lake Community College, Weber State University and Westminster College. Details by school were not available.
3. Does not represent all Army ROTC cadets and scholarships in Utah as not all programs responded to our data requests.
4. Includes cadets at Salt Lake Community College and Westminster College. Details by school were not available.

NA = not available
Source: Personal communication with Utah State University Air Force ROTC, Brigham Young University Air Force and Army ROTC, and University of Utah Air Force, Army and Navy ROTC.

Table 6.9: Statewide Impacts of Federal ROTC Employment, 2015 (Thousands of Dollars)

Category	Direct	Indirect & Induced	Total
Employment by Place of Work	69	131	200
Earnings by Place of Work	$3,743.9	$7,193.5	$10,937.4
Gross Domestic Product			$18,275.3

Note: Does not include the effects of scholarships and stipends as we were unable to obtain complete data on these.
Source: Kem C. Gardner Policy Institute analysis using the REMI PI+ model.

Table 6.10: Statewide Fiscal Impacts of Federal ROTC Employment, 2015 (Thousands of Dollars)

Impact	Amount
Personal Income Tax Revenues	$261.2
Corporate Income Tax Revenues	$22.0
State Sales Tax Revenues	$285.7
Total State Revenues	**$568.9**
Non-Education Expenditures	$105.0
State Public Education Expenditures	$63.3
Higher Education Expenditures	$43.6
Total State Operating Expenditures	**$211.8**
Net State Operating Revenue	**$357.0**

Note: Does not include the effects of scholarships and stipends as we were unable to obtain complete data on these.
Source: Kem C. Gardner Policy Institute analysis using the Gardner Policy Institute fiscal model.

With only two out of four programs reporting, Army ROTC involved at least 307 cadets in Utah during 2015. The Army ROTC battalion at BYU was responsible for an average of 113 cadets at BYU, 51 at Utah Valley University, 41 at Southern Utah University and 25 at Dixie State. Of these cadets, 94 received $1.4 million in scholarships and stipends; the majority of non-scholarship cadets were in the Utah National Guard or Army Reserves. The U of U's Army ROTC program enrolled 77 cadets. Its scholarship and stipend payments were not available. This study was unable to obtain information on the Army ROTC programs at USU and WSU.

The U of U's Naval ROTC unit involved an average of 12 cadets at the U of U and 11 at Westminster. These Navy and Marine Corps cadets received almost $662,000 in scholarships and other aid.

The economic impact of federal employment by ROTC programs in 2015 included 200 jobs and $10.9 million in earnings (Table 6.9). This consists of the 69 direct federal military and civilian jobs at the ROTC units, with an estimated $3.7 million in earnings, plus an additional 131 indirect and induced jobs and $7.2 million in earnings. ROTC also contributed almost $18.3 million to the state's GDP.

The fiscal impacts associated with these economic impacts include $568,900 in state income and sales tax revenues, and $211,800 in education and non-education expenditures (Table 6.10). This produces a positive net revenue impact of $357,000.

Section 7: Veterans

Veterans in Utah impact the state and local economies in several ways. There is a regional Department of Veterans Affairs (VA) benefits office and a VA hospital in Salt Lake City, plus several clinics and vet centers throughout the state and four veterans homes operated by the State of Utah. The VA and Department of Defense (DOD) annually send hundreds of millions of dollars each in transfer payments and military pension payments to Utah veterans. VA grants help fund the provision of social services to veterans in the state, through veterans homes, local government and nonprofit organizations. Total in-state federal spending on behalf of veterans amounted to nearly $1.8 billion in 2015 (Table 7.1). There are also millions of dollars of VA contract spending in Utah that do not come through the local office or regional network contract office (see Section 8.4).

There were 150,904 veterans in Utah in 2015, 16,963 of which were military retirees. The largest numbers of veterans were in Salt Lake, Davis, Utah and Weber counties (Figure 7.1 and Table 7.2). Retirees are concentrated in Davis, Salt Lake and Weber counties, with relatively strong presences in Utah and Washington counties too. Veterans represented 7.5 percent of Utah's adult population in 2015. They made up more than 10 percent of the population in 13 mostly rural counties, with the largest shares in Garfield, Kane (both 12.3 percent) and Daggett (12.1 percent).

7.1 Medical Facilities

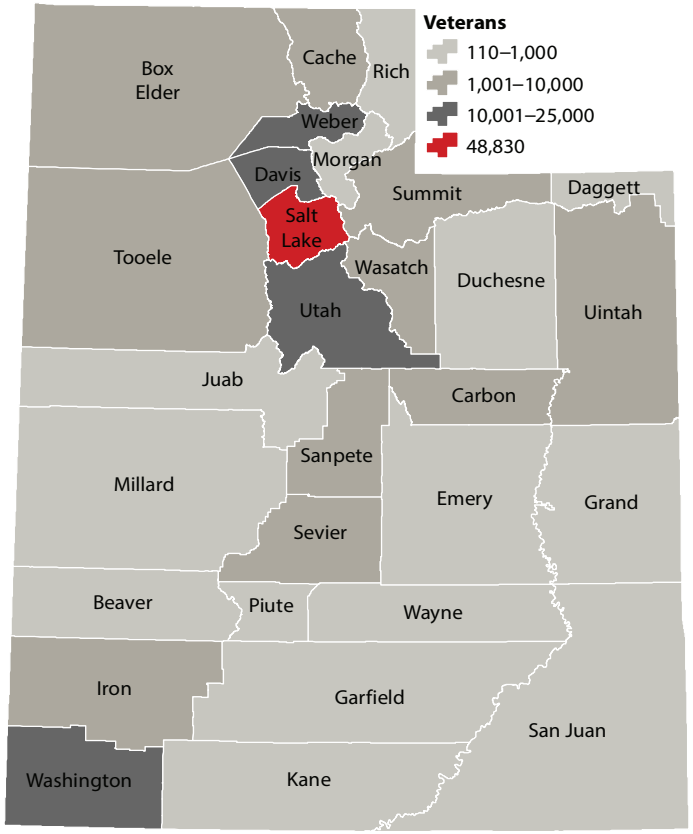
The medical facilities and veterans homes together employ nearly 2,400 people with a payroll of $232.1 million. The VA spent almost $3.5 million on construction in Salt Lake County and $475.8 million on medical care statewide. In addition, the VA funded $24.2 million in grants to state, local and nonprofit organizations in Utah (Table 7.1). Almost $21.8 million of this

Table 7.1: Direct Effects for Veterans in Utah including DOD Pensions, FY 2015 (Millions of Dollars)

Impact	Amount
Direct Employment (jobs)	3,010
VA SLC Health Care System	2,365
VA Regional Benefit Office	645
Total Compensation	$284.3
Total VA Transfer Payments	$579.8
DOD military pensions	$430.4
Construction Expenditures	$3.5
Medical Care Expenditures	$475.8
VA Grants to Utah Recipients	$24.2

Source: U.S. Department of Veterans Affairs, National Center for Veterans Analysis and Statistics; Salt Lake VA regional office and hospital; and USAspending.gov.

Figure 7.1: Veterans by County in Utah in 2015



Source: U.S. Department of Veterans Affairs, National Center for Veterans Analysis and Statistics; U.S. Department of Defense, Office of the Actuary, 2015 Statistical Report on the Military Retirement System; U.S. Census Bureau.

Table 7.2: Veterans by County in Utah in 2015

County	Military Retirees	All Veterans	Share of Adult Population
Beaver	37	454	10.7%
Box Elder	315	2,888	8.3%
Cache	437	4,610	5.6%
Carbon	93	1,742	11.6%
Daggett	7	110	12.1%
Davis	4,435	20,863	9.4%
Duchesne	53	977	7.1%
Emery	26	724	10.2%
Garfield	18	454	12.3%
Grand	1	636	8.6%
Iron	286	2,838	8.4%
Juab	51	646	9.5%
Kane	38	666	12.3%
Millard	53	871	10.1%
Morgan	123	632	8.9%
Piute	13	128	11.2%
Rich	8	122	8.0%
Salt Lake	4,045	48,830	6.2%
San Juan	60	588	5.6%
Sanpete	155	1,779	8.7%
Sevier	109	1,545	10.7%
Summit	197	1,910	6.6%
Tooele	465	4,594	11.3%
Uintah	87	2,068	8.2%
Utah	1,790	19,639	5.3%
Wasatch	86	1,008	5.2%
Washington	1,057	11,580	10.5%
Wayne	9	202	10.6%
Weber	2,909	17,798	10.4%
Total	**16,963**	**150,904**	**7.5%**

Note: Military retiree counts are for September 30 of each year. Veteran and adult populations are estimated as of July 1. Veteran total does not match due to rounding.
Source: U.S. Department of Veterans Affairs, National Center for Veterans Analysis and Statistics; U.S. Department of Defense, Office of the Actuary, 2015 Statistical Report on the Military Retirement System and supporting data received by email in response to an information request; U.S. Census Bureau.

grant money went to the four veterans homes in the state. The Housing Authority of Salt Lake City received almost $1.6 million, while the remainder went to Catholic Community Services, Housing Assistance Management Enterprise, First Step House and Homeless Veterans Fellowship.

In FY 2015 the VA's Salt Lake City Health Care System, which includes clinics, vet centers and veterans homes throughout the state, served 36,004 unique patients who live in Utah (Table 7.3). Medical care expenses for these patients amounted to $475.8 million, excluding administrative, facility maintenance and other overhead items. Just over half of the expenditures were for patients who lived in Salt Lake County. Patients from Davis, Weber and Utah counties together accounted for 27 percent of medical care spending. Just over 60 percent of Utah patients receiving medical care from the VA in FY 2015 lived in Salt Lake County.

Table 7.3: VA Medical Care Expenditures in Utah by County of Patient Residence, FY 2015

	Medical Care Expenditures		Patients Served	
County	Dollars (Thousands)	Share	Unique Patients	Share
Beaver	$508	0.1%	80	0.2%
Box Elder	$7,536	1.6%	655	1.8%
Cache	$7,970	1.7%	770	2.1%
Carbon	$5,352	1.1%	392	1.1%
Daggett	$906	0.2%	42	0.1%
Davis	$48,327	10.2%	4,382	12.2%
Duchesne	$4,607	1.0%	379	1.1%
Emery	$1,542	0.3%	144	0.4%
Garfield	$864	0.2%	100	0.3%
Grand	$2,518	0.5%	218	0.6%
Iron	$6,042	1.3%	709	2.0%
Juab	$3,015	0.6%	183	0.5%
Kane	$1,689	0.4%	171	0.5%
Millard	$1,283	0.3%	141	0.4%
Morgan	$1,080	0.2%	132	0.4%
Piute	$141	0.0%	27	0.1%
Rich	$405	0.1%	29	0.1%
Salt Lake	$245,994	51.7%	14,196	39.4%
San Juan	$2,489	0.5%	188	0.5%
Sanpete	$4,187	0.9%	344	1.0%
Sevier	$3,104	0.7%	317	0.9%
Summit	$3,448	0.7%	355	1.0%
Tooele	$13,945	2.9%	1,018	2.8%
Uintah	$5,519	1.2%	511	1.4%
Utah	$39,462	8.3%	3,629	10.1%
Wasatch	$2,598	0.5%	235	0.7%
Washington	$19,431	4.1%	2,813	7.8%
Wayne	$249	0.1%	41	0.1%
Weber	$41,549	8.7%	3,803	10.6%
Total	**$475,761**	**100%**	**36,004**	**100%**

Note: Patients served and medical expenditures are attributed to the county where patients live, not the location where care was received. Treatment per patient counted in this table may range from a single office visit to a surgical procedure with preparatory testing and follow-up appointments to year-round daily care in a veterans home. Medical expenditures total does not match due to rounding.
Source: U.S. Department of Veterans Affairs, National Center for Veterans Analysis and Statistics.

7.2 Benefits

Total transfer payments to veterans in Utah were over $1.0 billion in FY 2015. These consisted of compensation and pension payments, education and employment benefits, and insurance and indemnities, all from the VA, and military retiree pensions from the DOD (Table 7.4). The largest of these was VA compensation and pensions, totaling $440.3 million. Military retiree pensions were a close second at $430.4 million. The VA paid $127.3 million in education and employment benefits and $12.2 million in insurance and indemnities. Following the veteran population, the largest amounts of payments went to Salt Lake ($279.1 million), Davis ($206.6 million), Weber ($143.0 million) and Utah ($113.0 million) counties. In addition, the regional benefits office in Salt Lake City provided almost 650 jobs with a $52.2 million payroll.

Table 7.4: Income and Financial Support Received by Utah Veterans, FY 2015
(Thousands of Dollars)

County	Compensation & Pensions[1]	Military Retiree Pensions[2]	Education & Employment[3]	Insurance & Indemnities[4]	Total
Beaver	$993.0	542.2	32.6	12.4	$1,580.1
Box Elder	$6,947.0	6,738.1	1,020.2	139.6	$14,845.0
Cache	$11,627.9	11,201.3	3,984.3	480.4	$27,293.9
Carbon	$4,993.1	1,825.3	155.2	38.3	$7,011.9
Daggett	$297.4	126.2	13.7	0.2	$437.5
Davis	$74,575.3	114,382.5	16,208.3	1,463.5	$206,629.5
Duchesne	$2,989.8	913.4	172.3	25.1	$4,100.6
Emery	$1,105.0	621.7	45.4	29.3	$1,801.5
Garfield	$1,018.4	465.5	25.5	1.0	$1,510.3
Grand	$1,949.0	0.0	42.4	34.8	$2,026.3
Iron	$9,337.9	6,868.0	35,429.7	109.5	$51,745.2
Juab	$1,710.3	701.6	147.9	72.8	$2,632.6
Kane	$2,033.0	946.2	57.2	18.6	$3,054.9
Millard	$1,777.8	1,288.9	112.9	70.2	$3,249.7
Morgan	$2,241.3	3,686.4	300.4	33.9	$6,262.1
Piute	$418.9	221.9	12.8	2.8	$656.5
Rich	$265.7	194.4	24.5	15.8	$500.3
Salt Lake	$142,767.4	97,430.7	34,293.9	4,588.2	$279,080.1
San Juan	$1,355.0	1,487.2	131.7	30.6	$3,004.5
Sanpete	$4,217.9	2,999.2	395.1	122.7	$7,734.9
Sevier	$3,850.6	1,994.7	213.4	116.4	$6,175.1
Summit	$3,542.6	8,430.1	666.4	255.9	$12,894.9
Tooele	$13,886.1	9,355.8	1,915.8	262.3	$25,420.1
Uintah	$3,389.4	1,833.8	313.7	64.2	$5,601.2
Utah	$45,389.2	50,860.7	14,845.3	1,888.5	$112,983.7
Wasatch	$2,222.8	3,090.1	282.1	166.5	$5,761.5
Washington	$35,585.0	30,798.8	5,146.2	1,004.9	$72,534.8
Wayne	$455.0	170.6	77.8	0.0	$703.4
Weber	$59,393.7	71,270.9	11,209.1	1,120.4	$142,994.1
Total[5]	**$440,335.3**	**430,446.3**	**127,275.6**	**12,168.9**	**$1,010,226.2**

1. Compensation and pension expenditures include payments to veterans and their survivors from the VA related to disabilities and deaths, as well as burial and other benefits.
2. Military retiree pensions include $402.7 million in DOD payments to veterans who retired from the armed forces, usually after at least 20 years of service, as well as $27.7 million in DOD pensions for survivors of military retirees.
3. Education and employment expenditures support a group of VA programs for education and vocational rehabilitation and employment.
4. Insurance and indemnity expenditures by the VA include a variety of obligations not included elsewhere.
5. Totals may not match due to rounding.

Source: U.S. Department of Veterans Affairs, National Center for Veterans Analysis and Statistics; U.S. Department of Defense, Office of the Actuary.

7.3 Contracts

Contract spending in Utah by the Department of Veterans Affairs, where the contracting office was either the regional network contract office or the Salt Lake City office, amounted to almost $52.6 million in FY 2015. Three sectors accounted for nearly 75 percent of the total: manufacturing ($14.7 million), construction ($12.7 million), and health care and social assistance ($11.2 million). Another 10 percent (almost $5.6 million) went to administration and waste management (Table 7.5). Additional VA contract spending in Utah that did not come through the local office or regional network contract office is included in Section 8: Grants and Additional Contracts.

The impacts on Utah's economy of federal spending on veterans, comprising VA benefits, VA operations, VA grants and DOD pensions, include almost 24,500 jobs (direct plus indirect and induced), $1.4 billion in earnings and $1.9 billion in state GDP (Table 7.6). The impacts of military pensions alone were over 6,000 jobs, $315.2 million in earnings and $473.7 million in state GDP.

Federal spending on veterans also had fiscal impacts on the state's finances. The combined effects of transfer payments, VA regional office and hospital employment and operations, and VA grants to Utah recipients produced an estimated $130.9 million in state income and sales taxes and $126.7 million in state education and non-education spending (Table 7.7). Federal funding for veterans' education may offset somewhat the $14.4 million estimate for higher education expenditures. However, much of the higher education spending is for economic migrants and dependents of veterans who may not attract VA funding. Subtracting expenditures from taxes, the net fiscal impact was $4.2 million in revenue.

Given the dispersion of veterans throughout Utah, it comes as no surprise that the jobs, earnings and GDP generated by federal support for their medical care and other benefits reached communities throughout the state. Table 7.8 shows combined direct, indirect and induced impacts, with emphasis on ten counties which each derived at least 190 jobs and $10 million in earnings and GDP from federal spending for veterans in 2015.

Salt Lake, the county with the largest economy and population in Utah, can attribute about 2 percent of its economic activity in 2015 to veteran pensions, VA health care and other VA and DOD spending for this population (Table 7.8). That year, because of this spending, Salt Lake County residents held 12,081 jobs and received over $700 million in earnings.

Three counties—Davis, Utah and Weber—owe roughly 1 to 2 percent of their jobs, earnings and GDP to federal spending for veterans in the state. Residents of each county benefitted from between 2,200 and about 3,600 jobs, aggregate earnings between $100 million and $185 million, and GDP between $140 million and $190 million.

Table 7.5: Regional and Local Office VA Contract Spending in Utah by Industry, FY 2015

Sector	Amount
Agriculture, Forestry, Fishing and Hunting	$17,000
Construction	$12,693,647
Manufacturing	$14,686,181
Wholesale Trade	$444,133
Retail Trade	$925,925
Transportation and Warehousing	$457,370
Information	$262,515
Finance and Insurance	$6,000
Real Estate and Rental and Leasing	$2,475,273
Professional, Scientific and Technical Services	$843,429
Administration and Waste Management	$5,564,634
Educational Services	$1,854,741
Health Care and Social Assistance	$11,243,639
Accommodation and Food Services	$276,338
Other Services (except Public Administration)	$825,891
Total	**$52,576,715**

Note: Amounts are dollars obligated.
Source: Kem C. Gardner Policy Institute analysis of data from USAspending.com, where the contracting office ID was either 259 Network Contract Office 19 (including 19P) or 660 Salt Lake City.

Table 7.6: Statewide Economic Impacts of Federal Spending for Veterans, 2015 (Millions of Dollars)

Impact	Amount
Total Employment by Place of Work	24,480
Total Earnings by Place of Work	$1,437.8
Gross Domestic Product	$1,891.9

Note: Comprises the effects of compensation and pension payments, education and vocational rehabilitation expenditures, insurance and indemnities expenditures, construction expenditures, both regional office and hospital employment, VA grants to in-state entities, and DOD pensions, including payments to survivors.
Source: Kem C. Gardner Policy Institute analysis using the REMI PI+ model.

Table 7.7: Statewide Fiscal Impacts of Federal Spending for Veterans, 2015 (Millions of Dollars)

Impact	Amount
Personal Income Tax Revenues	$61.0
Corporate Income Tax Revenues	$3.3
State Sales Tax Revenues	$66.7
Total State Revenues	**$130.9**
Non-Education Expenditures	$77.3
State Public Education Expenditures	$34.9
Higher Education Expenditures	$14.4
Total State Operating Expenditures	**$126.7**
Net State Operating Revenue	**$4.2**

Note: Comprises the effects of compensation and pension payments, education and vocational rehabilitation expenditures, insurance and indemnities expenditures, construction expenditures, both regional office and hospital employment, VA grants to in-state entities, and DOD pensions, including payments to survivors.
Source: Kem C. Gardner Policy Institute analysis using the Gardner Policy Institute fiscal model.

The magnitude and share of economic impacts for several other counties are given in Table 7.8. Every county in Utah, including those grouped under "All Others," derives at least two jobs and $75,000 in earnings for their residents from the support veterans receive from the DOD and VA. Far above those minimums, medians represent the 15th county in rank order for each measure: 52 jobs, $2.5 million in earnings and $3.3 million in GDP. Of course, county experiences varied widely above and below these median impacts. Statewide, the impact of federal spending for veterans accounts for 1.7 percent of employment, 1.8 percent of earnings and 1.2 percent of GDP.

Table 7.8: Economic Impacts of Federal Spending for Veterans by County, 2015 (Shares of County Totals, Millions of Dollars)

	Employment		Earnings		Gross Domestic Product	
County of Residence	Number	Share	Amount	Share	Amount	Share
Salt Lake	12,081	2.1%	$709.9	2.1%	$1,177.1	1.6%
Davis	3,603	2.3%	$185.4	1.9%	$190.7	1.4%
Utah	3,126	1.2%	$129.8	0.9%	$182.9	0.8%
Weber	2,266	2.0%	$101.8	1.8%	$143.9	1.4%
Washington	851	1.4%	$28.8	1.1%	$51.0	1.0%
Tooele	408	0.8%	$21.0	0.6%	$17.0	0.5%
Iron	334	1.4%	$10.3	1.4%	$18.5	0.8%
Cache	455	1.7%	$16.4	1.4%	$26.9	1.2%
Summit	273	1.2%	$30.8	1.4%	$31.4	0.8%
Box Elder	190	0.8%	$10.4	0.9%	$11.4	0.5%
All Others	655	0.6%	$28.3	0.5%	$41.0	0.3%
Out of State	238	NA	$165.1	NA	$0.0	NA
Total	**24,480**	**1.7%**	**$1,437.8**	**1.8%**	**$1,891.9**	**1.2%**

Note: Employment and earnings are by place of residence. Utah workers who commute across county lines are counted where they live. GDP is by place of work. Shares equal employment, earnings and GDP impacts divided by total employment, earnings and GDP in the county (or state for the "Total" row), respectively.
NA = not available
Source: Kem C. Gardner Policy Institute analysis using the REMI PI+ model, Bureau of Economic Analysis, Utah Department of Workforce Services.

Section 8: Defense Grants and Contracts

In 2015, Utah's economy benefited from $1.6 billion in federal funding for defense contracts and grants. Much of this activity is included in impacts for Utah defense installations and organizations in Sections 2 through 7. This section emphasizes additional economic and fiscal impacts from Department of Defense (DOD) and Department of Veterans Affairs (VA) contracts and grants. An overview of all defense contracts and grants to Utah recipients since 2000 is followed by a detailed presentation for FY 2015. Then, economic and fiscal impact results for 2015 are given separately for grants and additional contracts.

8.1 DOD and VA Contracts and Grants in Utah, FY 2000 to 2015

At $1.5 billion in FY 2015, the total value of DOD and VA contracts and grants in Utah was little changed from the inflation-adjusted amount in FY 2000 of $1.4 billion. However, in the intervening years the total climbed as high as $3.6 billion in 2007, just prior to the financial crisis, before following an uneven decline to the current level (Table 8.1 and Figure 8.1). Annual amounts varied considerably, driven primarily by changes in DOD contracting levels. Contracts and grants included here are prime awards, without subcontracts or sub-awards for grants performed in Utah. Contracts and grants cover nearly all non-payroll spending by these federal agencies in Utah.

From 2000 to 2015, DOD contracts accounted for 97 percent of total contracts and grants from DOD and the VA to Utah organizations. While DOD contracting in the state has softened over the past several years, VA contracts and grants have been on an upward trend, rising from $18.0 million in 2000 to $109.8 million in 2015 in inflation-adjusted dollars. For example, in 2015 nearly one-third of prime awards for defense grants came from the VA, up from less than 5 percent in 2000.

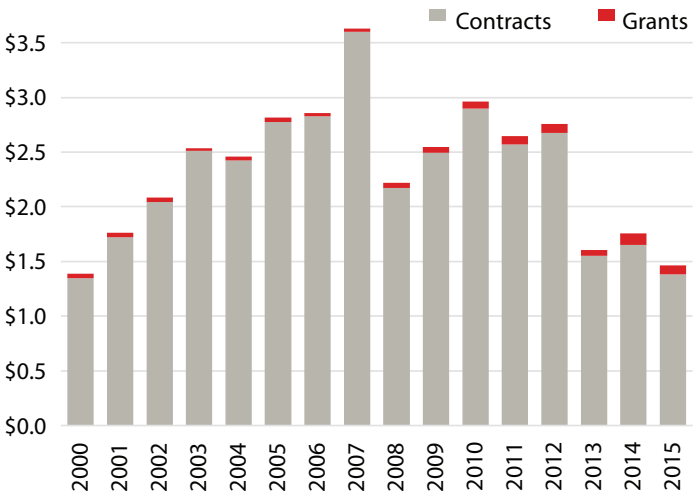
The annual value of VA grants in Utah barely exceeded $2 million from 2000 to 2009. Since 2010, amounts have ranged from $10 million to $35 million. Possible reasons for the dramatic increase include VA funding changes favoring grants, incomplete data for earlier years, and actual increases in patient care, research and other activity in Utah supported by VA grants.

Table 8.1: Defense Contracts and Grants in Utah, Prime Awards, FY 2000–2015
(Millions of Constant 2015 Dollars)

	Contracts			Grants			Contracts & Grants		
Fiscal Year	DOD	VA	Total	DOD	VA	Total	DOD	VA	Total
2000	$1,333.5	$16.3	$1,349.8	$37.4	$1.7	$39.2	$1,370.9	$18.0	$1,388.9
2001	$1,688.3	$36.1	$1,724.4	$36.8	$1.9	$38.7	$1,725.1	$38.0	$1,763.1
2002	$1,995.2	$45.6	$2,040.8	$43.2	$1.9	$45.1	$2,038.4	$47.5	$2,085.9
2003	$2,455.6	$53.9	$2,509.5	$26.1	$2.0	$28.2	$2,481.7	$55.9	$2,537.7
2004	$2,386.1	$39.3	$2,425.4	$31.3	$2.1	$33.4	$2,417.4	$41.4	$2,458.8
2005	$2,702.3	$74.4	$2,776.7	$35.1	$2.0	$37.1	$2,737.4	$76.4	$2,813.9
2006	$2,769.9	$60.2	$2,830.2	$25.3	$2.1	$27.4	$2,795.3	$62.3	$2,857.6
2007	$3,528.4	$69.8	$3,598.2	$32.1	$0.0	$32.1	$3,560.5	$69.8	$3,630.3
2008	$2,110.2	$63.7	$2,173.9	$47.4	$0.1	$47.5	$2,157.7	$63.8	$2,221.5
2009	$2,392.9	$99.7	$2,492.5	$51.8	$0.0	$51.8	$2,444.6	$99.7	$2,544.3
2010	$2,779.6	$116.0	$2,895.6	$47.9	$16.6	$64.4	$2,827.5	$132.5	$2,960.0
2011	$2,463.3	$107.5	$2,570.8	$64.8	$10.4	$75.1	$2,528.1	$117.9	$2,645.9
2012	$2,579.3	$94.0	$2,673.2	$46.9	$34.5	$81.3	$2,626.1	$128.4	$2,754.6
2013	$1,466.4	$85.7	$1,552.1	$40.8	$11.9	$52.7	$1,507.2	$97.7	$1,604.9
2014	$1,560.1	$89.8	$1,649.9	$88.9	$18.8	$107.7	$1,649.0	$108.6	$1,757.6
2015	$1,299.7	$83.3	$1,383.0	$55.5	$26.6	$82.1	$1,355.2	$109.8	$1,465.1

Note: Amounts include dollars obligated each federal fiscal year for prime awards for contracts and grants funded by the DOD and VA for which Utah was given as the primary place of performance. Inflation adjustments are based on the Bureau of Labor Statistics CPI for urban areas in the West. This adjustment accounts for slight differences between 2015 amounts reported here and in Table 8.2.
Source: USAspending.gov.

Figure 8.1: Defense Contracts and Grants in Utah, Prime Awards, FY 2000–2015 (Billions of Constant 2015 Dollars)



Source: USAspending.gov.

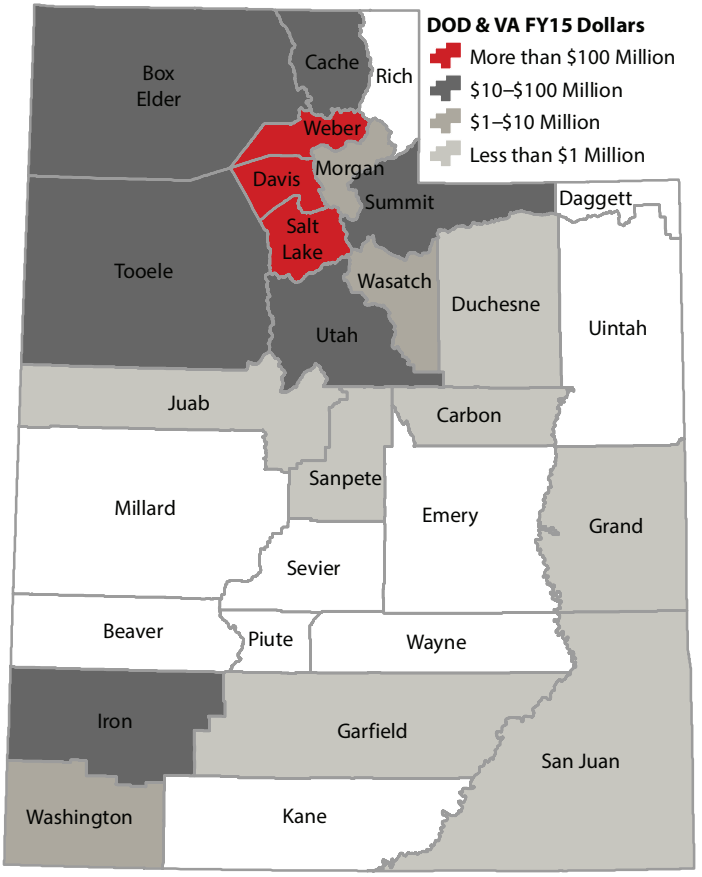
8.2 FY 2015 Contracts and Grants

Economic impact analysis in this study for 2015 includes defense contract and grant sub awards, in addition to the prime awards in Table 8.1. Also, Table 8.2 shows a downward adjustment from $1.5 billion in DOD and VA contracts and grants to $1.4 billion after verifying each contractor and grantee's presence in Utah. Additions and subtractions to account for in-state and out-of-state subcontracts and grants combined add about $210 million. Total adjusted prime and sub-awards equal $1.6 billion, 94 percent from DOD. This amount is 9.3 percent more than the $1.5 billion in unadjusted prime contracts and grants from the DOD and VA reported in Table 8.1.

The $1.6 billion of defense contract and grant spending in Utah in FY 2015 was spread across 19 of the state's 29 counties. However, just two counties accounted for more than three-quarters of total DOD and VA contract and grant spending. Organizations in Salt Lake County received almost $831.4 million, 52 percent of the statewide total. Davis County captured 24 percent, with $387.5 million. Weber County came in third at $111.5 million and just 7 percent of the total (Figure 8.2 and Table 8.3). Some of the state's more rural counties, i.e., *not* Salt Lake, Davis, Weber, Utah or Washington, received a combined $184.5 million in defense spending, 12 percent of the total.

Analyzing DOD and VA spending by industry reveals that just two sectors accounted for almost three-quarters of FY 2015 defense contracts and grants in Utah. The manufacturing

Figure 8.2: Total FY 2015 DOD and VA Contract and Grant Dollars by County



Source: Kem C. Gardner Policy Institute analysis of data from USASpending.gov.

Table 8.2: Value of Defense Contracts and Grants Performed in Utah during FY 2015 (Millions of Dollars)

	Contracts			Grants			Contracts & Grants		
Type of Contract or Grant	**DOD**	**VA**	**Total**	**DOD**	**VA**	**Total**	**DOD**	**VA**	**Total**
Utah Prime Awards (Unadjusted)[1]	$1,295.0	$83.0	$1,378.0	$55.5	$26.6	$82.1	$1,350.5	$109.5	$1,460.1
Utah Prime Awards (Adjusted)[2]	$1,246.9	$64.3	$1,311.2	$55.6	$24.2	$79.8	$1,302.5	$88.5	$1,391.0
Add: Utah Sub-Awards for Non-Utah Primes[3]	$263.9	$0.0	$263.9	$9.4	$0.0	$9.4	$273.3	$0.0	$273.3
Subtract: Out-of-State Sub-Awards for Utah Primes[3]	$60.6	$0.0	$60.6	$2.5	$0.0	$2.5	$63.1	$0.0	$63.1
Total Awards (Net)	**$1,450.2**	**$64.3**	**$1,514.5**	**$62.5**	**$24.2**	**$86.7**	**$1,512.7**	**$88.6**	**$1,601.3**

1. Amounts in this table are in current dollars. Prime contract values here are slightly lower than those in Table 8.1, which are converted from fiscal year 2015 dollars to calendar year 2015 dollars based on the CPI West.
2. Adjusted amounts exclude contracts and grants to companies without a Utah presence, since most of the associated economic activity was not likely to have accrued to Utah.
3. Subcontracts and sub-grants performed in Utah for prime awards from outside the state are added to Utah prime awards. Sub awards performed outside of Utah under Utah prime awards are subtracted, since that portion of economic activity funded by the prime award accrues to states besides Utah. VA subcontracts of $49,879 performed in Utah did not round up to $0.1 million, while there were no out-of-state subcontracts to Utah primes and no sub-grants from the VA.

Source: USAspending.gov.

Table 8.3: Total FY 2015 DOD and VA Contract and Grant Dollars Obligated by County

County	Amount	Share
Salt Lake	$831,375,046	51.9%
Davis	$387,495,291	24.2%
Weber	$111,491,396	7.0%
Utah	$79,843,200	5.0%
Box Elder	$56,905,180	3.6%
Tooele	$43,047,657	2.7%
Cache	$41,928,299	2.6%
Iron	$16,222,237	1.0%
Summit	$15,335,112	1.0%
Wasatch	$7,085,827	0.4%
Washington	$6,515,330	0.4%
Morgan	$2,477,248	0.2%
Grand	$677,624	0.0%
Sanpete	$449,348	0.0%
San Juan	$259,237	0.0%
Carbon	$85,819	0.0%
Duchesne	$33,977	0.0%
Garfield	$29,571	0.0%
Juab	$3,339	0.0%
Total	**$1,601,260,736**	**100%**

Note: Consists of prime contracts performed by companies with a presence in Utah, plus subcontracts performed in Utah where the prime contract place of performance is not Utah, minus subcontracts to out-of-state companies from in-state prime contracts, plus grants to Utah recipients (including $30 million to the Utah National Guard).
Source: Kem C. Gardner Policy Institute analysis of data from USASpending.gov.

Table 8.4: DOD and VA Contracts and Grants in Utah by Industry, FY 2015

Sector	Amount	Share
Agriculture	$44,500	0.0%
Mining	$546,812	0.0%
Utilities	$11,775,235	0.7%
Construction	$176,072,491	11.0%
Manufacturing	$676,388,483	42.2%
Wholesale Trade	$3,238,373	0.2%
Retail Trade	$2,462,807	0.2%
Transportation and Warehousing	$13,729,162	0.9%
Information	$12,874,521	0.8%
Finance and Insurance	$6,000	0.0%
Real Estate and Rental and Leasing	$2,588,389	0.2%
Professional, Scientific and Technical Services	$506,971,523	31.7%
Administration and Waste Management	$84,625,892	5.3%
Educational Services	$15,509,350	1.0%
Health Care and Social Assistance	$41,209,554	2.6%
Arts, Entertainment and Recreation	$2,188,631	0.1%
Accommodation and Food Services	$2,520,122	0.2%
Other Services	$16,572,361	1.0%
Public Administration*	$31,936,531	2.0%
Total	**$1,601,260,736**	**100%**

* $31.1 million of the public administration amount consists of DOD grants to the Utah National Guard.
Source: Kem C. Gardner Policy Institute analysis of data from USASpending.gov.

sector received 42 percent of defense spending in the state, with $676.4 million in contracts and grants, and professional, scientific and technical services received 32 percent, almost $507.0 million (Table 8.4). The next largest sector was construction, with 11 percent and $176.1 million. Administrative and waste management services captured 5.3 percent of total spending, with $84.6 million. All other sectors claimed less than 3 percent each.

Of the $1.5 billion in defense contracts in Utah, 57 percent – $861.5 million – went to 10 contractors (Table 8.5). The largest was L-3 Communications, winning $334.6 million in contracts, 22 percent of the total. Orbital ATK and its subsidiaries received $240.7 million, 16 percent. Northrop Grumman came in a distant third, with $82.5 million and 5.5 percent of all contracts. If grants were included, the Utah National Guard would be the sixth largest recipient of defense dollars at $31.1 million.

Between 834 and 1,184 companies performed DOD or VA contracts in Utah during FY 2015, depending the degree of overlap in companies with both prime and sub-contracts and companies working for both DOD and VA (Table 8.6). These

Table 8.5: Top 10 Defense Contractors in Utah, FY 2015

Company	Amount	Share
L-3 Communications	$334,605,695	22.1%
Orbital ATK	$240,740,367	15.9%
Northrop Grumman	$82,543,323	5.5%
Boeing	$36,839,622	2.4%
Utah State University*	$32,728,358	2.2%
Rio Vista Management	$29,571,655	2.0%
Unisys Corp.	$29,552,613	2.0%
BioFire	$28,914,301	1.9%
ImSAR	$24,104,753	1.6%
Sverdrup Technology	$21,891,624	1.4%
Total	**$861,492,311**	**56.9%**

Note: Includes subsidiaries and joint ventures. Shares are of total FY15 DOD and VA contracts of $1.5 billion.
* Utah State University also received an additional $358,539 in DOD grants in FY15.
Source: Kem C. Gardner Policy Institute analysis of data from USASpending.gov.

companies and other organizations performed over 11,500 DOD contracts and nearly 1,600 VA contracts, for a total of 13,141 defense contracts in FY 2015. Details for federal grants are discussed in Section 8.3.

Table 8.6: Number of Utah Contracts and Contractors from DOD and VA, FY 2015

Type of Contract	DOD	VA	Total
Prime Contracts	11,248	1,593	12,841
Subcontracts	298	2	300
Total Number of Contracts	**11,546**	**1,595**	**13,141**
Contractors Receiving Prime Awards*	834	307	NA
Contractors Receiving Sub Awards*	42	1	NA

* Column totals are not shown for the number of contractors, since an undetermined number of companies received both prime and sub-awards. Similarly, row totals are omitted because some companies performed contracts for both the DOD and VA.
NA = not available
Source: USAspending.gov.

8.3 Impacts of Defense Grants

Both the Department of Defense (DOD) and the Department of Veterans Affairs (VA) fund grants to Utah recipients; these totaled $86.7 million in FY 2015. About half of the DOD's $62.5 million in grants to the state went to the Utah National Guard ($31.1 million) to help fund its operations (Table 8.7). Another $30.3 million went to Utah universities, companies and nonprofit organizations to support scientific, medical and technological research. The remaining $1.1 million went to the Governor's Office of Economic Development, the Department of Environmental Quality and three school districts in the state. After the National Guard, the University of Utah was the largest single recipient of DOD grants, with $14.0 million in FY 2015. Other large grantees were Conductive Composites Company with $5.0 million, Brigham Young University with $4.4 million and Ripple with $3.4 million.

The Department of Veterans Affairs funded $24.2 million in grants to Utah recipients in FY 2015. All of these funds went to either veterans homes across the state or to other organizations providing social services to veterans, such as the Housing Authority of Salt Lake City and Catholic Community Services (Table 8.8). The largest beneficiaries were the veterans homes, receiving $4.0 to $7.0 million, followed by the Salt Lake City Housing Authority ($1.6 million). The remaining social service organizations each received from $161,000 to almost $300,000. VA grants are included in the economic and fiscal impacts shown below and in Section 7: Veterans.

In modeling the economic and fiscal impacts of DOD and VA grants, we did not include DOD grants to the Utah National Guard, as we assumed these amounts were captured by their spending numbers, or to the Governor's Office of Economic Development or the Department of Environmental Quality. After these adjustments, we modeled $54.8 million of DOD and VA grants in Utah. The economic impacts of these grants consisted of 1,341 jobs with over $66.0 million in earnings.

Table 8.7: DOD Grants and Cooperative Agreements in Utah, FY 2015

Recipient	Amount
Utah National Guard	$31,110,186
University of Utah	$13,996,845
Conductive Composites Company, LLC	$5,050,000
Brigham Young University	$4,374,319
Ripple LLC	$3,368,908
Western Institute for Biomedical Research	$1,561,502
5N Plus Semiconductors, LLC	$1,424,939
GOED: Procurement Technical Assistance Program	$469,289
Utah DEQ: Defense & State Memorandum of Agreement	$364,000
Utah State University	$358,539
Utah State Office of Education: subbed to Provo and Tooele school districts	$207,044
Hawkwatch International	$121,701
Sports Medicine Research and Testing Laboratory	$60,000
Davis School District: DOD Impact Aid Supplemental	$28,359
Total	**$62,495,630**

Source: Kem C. Gardner Policy Institute analysis of data from USAspending.gov.

Table 8.8: VA Grants to Utah Recipients, FY 2015

Recipient	Amount
Central Utah Veterans Home, Payson	$6,999,176
George E. Wahlen Ogden Veterans Home	$6,113,480
Southern Utah Veterans Home, Ivins	$4,720,199
Utah State Veterans Nursing Home, Salt Lake City	$3,933,708
Housing Authority of Salt Lake City	$1,570,524
Catholic Community Services of Utah	$295,454
Housing Assistance Management Enterprise	$260,373
First Step House, Inc.	$187,251
Homeless Veterans Fellowship	$160,665
Total	**$24,240,830**

Source: Kem C. Gardner Policy Institute analysis of Department of Veterans Affairs data from USAspending.gov.

Table 8.9: Statewide Economic Impacts of DOD and VA Grants to Utah Recipients, 2015 (Thousands of Dollars)

Category	Direct*	Indirect & Induced	Total
Employment by Place of Work	690	651	1,341
Earnings by Place of Work	$32,522.8	$33,545.8	$66,068.6
Gross Domestic Product			$88,618.1

* Direct earnings were estimated by the REMI PI+ model and were not obtained directly from the contract recipients.
Source: Kem C. Gardner Policy Institute analysis using the REMI PI+ model.

This includes 690 direct jobs at the grant recipients with $32.5 million in earnings. The grants also added $88.6 million to the state's GDP (Table 8.9). These impacts led to $3.4 million in state tax revenues and $1.3 million in expenditures, for a net state fiscal impact of $2.1 million in revenue (Table 8.10).

The universities, veterans homes and other Utah organizations receiving DOD or VA grants in 2015 are spread across eight counties, mostly along the Wasatch Front. Including indirect and induced effects from the $54.8 million in grants modeled, these organizations' activity supported employment and production in a total of 17 counties with at least one job, $60,000 in earnings, and $42,000 in GDP in 2015 (Table 8.11). Local employment impacts from these grants did not exceed 0.2 percent of the total number of jobs held by any county's workforce that year, but grant-supported work was significant to the employers, workers and households involved, whether a few or in the hundreds.

Table 8.10: Statewide Fiscal Impacts of DOD and VA Grants to Utah Recipients, 2015 (Thousands of Dollars)

Impact	Amount
Personal Income Tax Revenues	$1,574.8
Corporate Income Tax Revenues	$149.0
State Sales Tax Revenues	$1,722.4
Total State Revenues	**$3,446.2**
Non-Education Expenditures	$680.9
State Public Education Expenditures	$352.5
Higher Education Expenditures	$282.1
Total State Operating Expenditures	**$1,315.6**
Net State Operating Revenue	**$2,130.6**

Source: Kem C. Gardner Policy Institute analysis using the Gardner Policy Institute fiscal model.

Table 8.12: Non-Installation DOD and VA Contracts Performed in Utah by Industry, FY 2015

Sector	Amount
Agriculture, Forestry, Fishing and Hunting	$27,500
Utilities	$1,429
Construction	$79,564,572
Manufacturing	$549,806,081
Wholesale Trade	$56,156
Retail Trade	$86,131
Transportation and Warehousing	$123,572
Information	$6,761,700
Real Estate and Rental and Leasing	$40,855
Professional, Scientific and Technical Services	$194,069,609
Administration and Waste Management	$18,568,999
Educational Services	$2,442,236
Health Care and Social Assistance	$1,586,908
Arts, Entertainment and Recreation	$2,190,431
Accommodation and Food Services	$48,657
Other Services, except Public Administration	$4,725,540
Total	**$860,100,376**

Source: Kem C. Gardner Policy Institute analysis of data from USASpending.gov.

Salt Lake captured over 40 percent of the impacts, with defense grants providing 581 jobs and $28.1 million in earnings to county residents and adding $49.5 million to its local GDP in 2015. Utah County was the next largest beneficiary. Defense grants directly and indirectly provided 332 jobs and $12.6 million to people living there, as well as $17.8 million in GDP. Weber, Washington and Davis counties were the next largest beneficiaries, as detailed in Table 8.11.

Table 8.11: Economic Impacts of DOD and VA Grants to Utah Recipients by County, 2015
(Shares of County Totals, Thousands of Dollars)

	Employment		Earnings		Gross Domestic Product	
County of Residence	Number	Share	Amount	Share	Amount	Share
Salt Lake	581	0.1%	$28,074.1	0.1%	$49,471.3	0.1%
Utah	332	0.1%	$12,603.6	0.1%	$17,823.2	0.1%
Weber	151	0.1%	$5,470.1	0.1%	$7,608.1	0.1%
Washington	111	0.2%	$3,615.1	0.1%	$5,734.0	0.1%
Davis	75	0.0%	$4,569.0	0.0%	$2,726.5	0.0%
All Others	79	0.0%	$4,124.4	0.0%	$5,255.1	0.0%
Out of State	11	NA	$7,612.3	NA	$0.0	NA
Total	**1,341**	**0.1%**	**$66,068.6**	**0.1%**	**$88,618.1**	**0.1%**

Note: Employment and earnings are by place of residence. Utah workers who commute across county lines are counted where they live. GDP is by place of work. Shares equal employment, earnings and GDP impacts divided by total employment, earnings and GDP in the county (or state for the "Total" row), respectively.
NA = not available
Source: Kem C. Gardner Policy Institute analysis using the REMI PI+ model, Bureau of Economic Analysis, Utah Department of Workforce Services.

8.4 Impacts of Other Defense Contracts

Utah's military bases and organizations are not the only conduits for DOD and VA contract dollars coming into the state. In addition to the contracts that the Gardner Policy Institute was able to assign to one of the state's military installations, there was an additional $860.1 million in DOD and VA contracts performed by companies in Utah (Table 8.12, above). These contracts originated from the Army, Air Force and Navy; the Department of Veterans Affairs; and the Missile Defense Agency, Defense Advanced Research Projects Agency, Defense Health Agency, Defense Threat Reduction Agency, U.S. Special Operations Command and other offices within the DOD. The majority of these contract dollars, almost $550 million, went to manufacturing firms. An additional $194 million purchased professional, scientific and technical services, and almost $80 million went toward construction.

These additional DOD and VA contracts supported almost 13,000 jobs in Utah in 2015 and $780 million in earnings (Table 8.13). This includes nearly 4,600 jobs at the contractors themselves, paying $270.1 million in earnings. The contracts contributed almost $1.2 billion to state GDP. The associated fiscal impacts included $41.5 million in state income and sales tax revenues and $11.5 million in state expenditures, for net revenues of $30.0 million (Table 8.14).

Recipients of the $860.1 million in DOD and VA contracts addressed in this section produced direct employment, earnings and GDP impacts in 17 counties in Utah during 2015. Local impacts of these defense contracts accounted for as much as 1.5 percent of total jobs held by a county's residents (Cache, see Table 8.15), as much as 1.2 percent of their total earnings (Salt Lake and Cache), and 1.2 percent of county GDP (Box Elder, the county with the largest GDP impact of those grouped under "All Others" in the table).

Table 8.13: Statewide Economic Impacts of Other DOD and VA Contracts with Utah Companies, 2015
(Millions of Dollars)

Category	Direct*	Indirect & Induced	Total
Employment by Place of Work	4,578	8,409	12,987
Earnings by Place of Work	$270.1	$509.9	$780.0
Gross Domestic Product			$1,179.7

* Direct earnings were estimated by the REMI PI+ model and were not obtained directly from the contract recipients.
Source: Kem C. Gardner Policy Institute analysis using the REMI PI+ model.

Table 8.14: Statewide Fiscal Impacts of Other Contracts in Utah, 2015 (Millions of Dollars)

Impact	Amount
Personal Income Tax Revenues	$18.5
Corporate Income Tax Revenues	$2.7
State Sales Tax Revenues	$20.2
Total State Revenues	**$41.5**
Non-Education Expenditures	$6.0
State Public Education Expenditures	$3.1
Higher Education Expenditures	$2.5
Total State Operating Expenditures	**$11.5**
Net State Operating Revenue	**$30.0**

Source: Kem C. Gardner Policy Institute analysis using the Gardner Policy Institute fiscal model.

Over half of the impacts went to Salt Lake County, where these additional defense contracts provided over 7,000 jobs and $400 million in earnings to residents in 2015, while adding $811.3 million to the county's GDP that year. Utah and Davis counties were the next largest beneficiaries, with roughly 1,500 jobs in each county directly or indirectly supported by the contracts, plus $103.5 million in Utah County GDP and $82.2 million in Davis County GDP. These defense contracts also produced about 850 jobs for residents of both Cache and Weber counties, and generated more than $50 million in GDP for each county.

Table 8.15: Economic Impacts of Other DOD and VA Contracts with Utah Companies by County, 2015
(Shares of County Totals, Millions of Dollars)

	Employment		Earnings		Gross Domestic Product	
County of Residence	Number	Share	Amount	Share	Amount	Share
Salt Lake	7,169	1.3%	$403.0	1.2%	$811.3	1.1%
Utah	1,521	0.6%	$72.5	0.5%	$103.5	0.5%
Davis	1,487	1.0%	$85.4	0.9%	$82.2	0.6%
Cache	857	1.5%	$29.7	1.2%	$54.5	1.1%
Weber	837	0.7%	$42.9	0.7%	$52.7	0.5%
All Others	975	0.4%	$57.1	0.4%	$75.5	0.3%
Out of State	140	NA	$89.4	NA	$0.0	NA
Total	**12,987**	**0.9%**	**$780.0**	**0.9%**	**$1,179.7**	**0.8%**

Note: Employment and earnings are by place of residence. Utah workers who commute across county lines are counted where they live. GDP is by place of work. Shares equal employment, earnings and GDP impacts divided by total employment, earnings and GDP in the county (or state for the "Total" row), respectively.
NA = not available
Source: Kem C. Gardner Policy Institute analysis using the REMI PI+ model, Bureau of Economic Analysis, Utah Department of Workforce Services.

Section 9: Trends in Defense Employment and Compensation

The analysis of defense employment and earnings in Utah in Sections 2 through 8 has relied on detailed information reported directly from defense organizations for 2015. Similar extensive data collection for previous years was not feasible. In this section, we show 25-year trends in defense employment and compensation in Utah based primarily on data from the Bureau of Economic Analysis (BEA) and the Bureau of Labor Statistics (BLS). The difference in 2015 job totals from the two approaches is 5 percent, 32,715 jobs according to BEA and BLS versus 34,388 jobs reported by Utah defense organizations for this study.

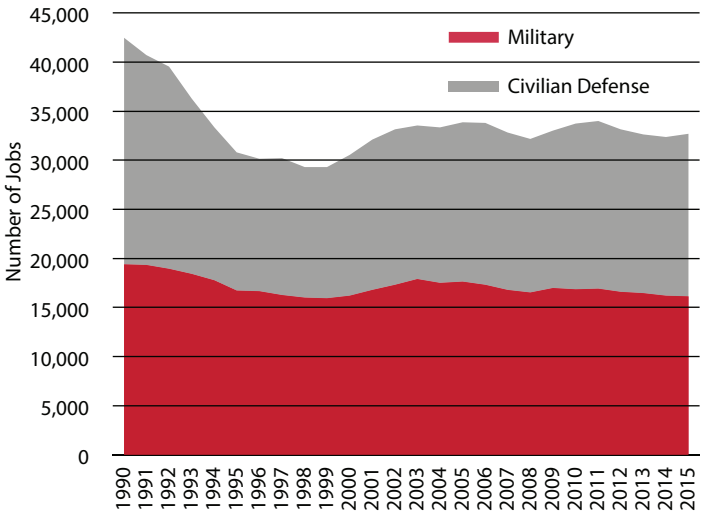
9.1 Defense Employment in Utah, 1990 to 2015

Since 1990, when Utah's federal defense employment exceeded 42,000 jobs, defense efforts have required an increasingly smaller share of the state's growing labor force (Figure 9.1 and Figure 9.2). In 2015, military personnel and civilians with federal defense jobs made up about 1.8 percent of Utah's employment total, down from 2.2 percent in 2000 and 4.5 percent in 1990. In recent decades, the number of military personnel serving in Utah has been more stable than the number of federal civilian jobs with the DOD or VA. Considering all federal defense employment in the state, employment held fairly steady above 30,000 jobs from 2000 to 2015. During those years, while defense employment increased 7 percent, employment in the economy as a whole grew by 35 percent, resulting in defense's shrinking share.

Between 1990 and 2015, the total number of defense jobs statewide decreased by almost a fourth, 23 percent. The decline mainly occurred in the 1990s due to military downsizing (Table 9.1). Utah has followed the statewide trend of economic diversification with robust non-defense employment growth of 104 percent for the same period.

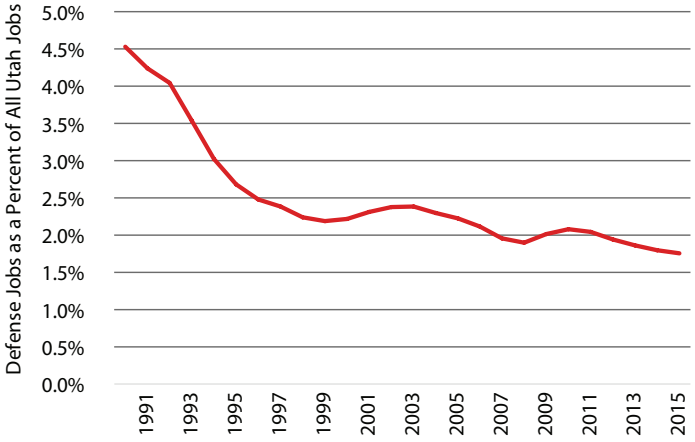
Federal defense employment includes the military, whether active-duty employment or part-time employment in reserve or National Guard units. It also includes federal civilian employment for national security and medical care provided by the VA and DOD. Defense-related private sector employment that relies on federal funding, such as jobs at defense contractors, is not available for this time series, but we have included such defense-related economic activity for 2015 in other sections of this report.

Figure 9.1: Military and Federal Civilian Defense Employment in Utah, 1990–2015



Source: Bureau of Economic Analysis, Bureau of Labor Statistics.

Figure 9.2: Defense Share of Total Employment in Utah, 1990–2015



Source: Bureau of Economic Analysis, Bureau of Labor Statistics.

Table 9.1: Defense Employment in Utah, Selected Years 1990–2015

County	1990	1995	2000	2005	2010	2015
Military	19,399	16,695	16,222	17,608	16,886	16,166
Federal Civilian	23,067	14,134	14,290	16,232	16,881	16,549
Total Defense	**42,466**	**30,829**	**30,512**	**33,840**	**33,767**	**32,715**
Share of All Utah Jobs	4.5%	2.7%	2.2%	2.2%	2.1%	1.8%

Source: Bureau of Economic Analysis; Bureau of Labor Statistics, Quarterly Census of Employment and Wages.

At 19,399 jobs in 1990, military employment in Utah was the highest it had been in the previous 20 years. Since then, the number of military jobs has declined to 16,166 in 2015. Military employment includes full-time active-duty personnel as well as larger numbers of part-time soldiers in the National Guard and armed forces reserves. Military employment does not include civilians employed by the DOD.

Federal civilian employment in Utah related to defense is predominantly in the national security sector, NAICS 92811 for civilians employed by the armed forces, including the National Guard. A smaller medical component includes civilians employed by DOD or VA at federal medical facilities, such as the VA Medical Center in Salt Lake City, the 74th Medical Group at Hill Air Force Base and the U.S. Army Medical Command in Tooele. These jobs related to military health care are categorized as NAICS 622 for hospitals or NAICS 6211 for federal physicians' offices. In 2015, 84 percent of federal civilian defense employment was in the national security sector, with 13,854 jobs in 13 counties in Utah.

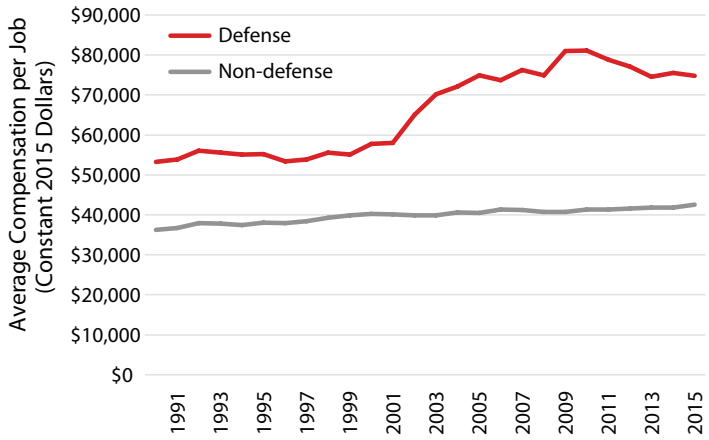
Statewide, the number of federal civilian defense jobs declined by 28 percent from 1990 to 2015, while the total number of civilian jobs more than doubled. Federal civilian defense employment in Utah fell 42 percent from over 23,000 in 1990 to a 25-year low below 13,300 in 1998. That change was driven by reduced civilian employment in the national security sector following the Cold War and Gulf War and the base realignment and closure rounds in the early 1990s. However, Utah has benefitted from a substantial increase in federal civilian defense jobs since 2000, with employment rising 16 percent to over 16,500 jobs in 2015. Nearly one-third of that growth came from federal civilian employment in hospitals. Over this period the number of national security jobs in Utah decreased by a modest 8 percent, while medical jobs for federal civilians jumped 87 percent.

9.2 Compensation from Defense Employment, 1990 to 2015

From 1990 to 2015, compensation per federal defense job in Utah remained considerably higher than Utah's average compensation rate, and the gap widened over the period (Figure 9.3). Compensation per federal defense job, including military and civilian employment, grew by 40 percent in inflation-adjusted dollars over the 25 years. In contrast, steady growth in non-defense compensation resulted in an 18 percent gain from 1990 to 2015.

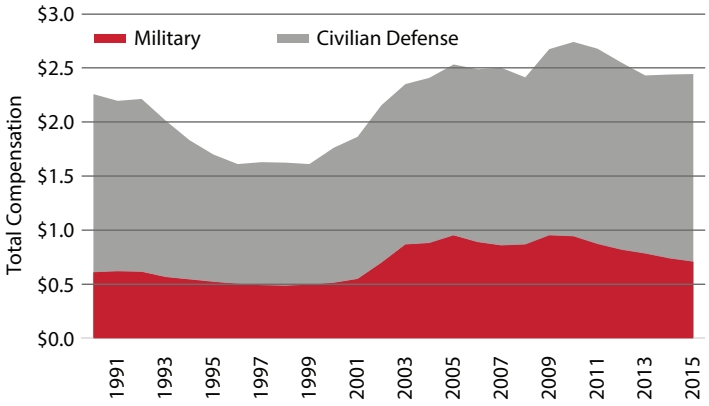
Compensation includes wages and salaries, as well as the dollar value of supplements to wages and salaries, such as employer contributions to insurance and retirement funds. Compensation covers full- and part-time employees, but not proprietors or self-employed individuals. Federal civilian defense employees and part-time military personnel may have

Figure 9.3: Compensation per Utah Job, Defense versus Non-Defense, 1990–2015



Source: Bureau of Economic Analysis, Bureau of Labor Statistics, REMI PI+ historical data.

Figure 9.4: Military and Federal Civilian Defense Estimated Compensation in Utah, 1990–2015
(Billions of Constant 2015 Dollars)



Source: Bureau of Economic Analysis, Bureau of Labor Statistics, REMI PI+ historical data.

second jobs or be self-employed, but this discussion refers only to their federal compensation.

In contrast, proprietor income is included in earnings, an alternative measure used extensively in the other sections of this report. For federal civilian defense employees and military personnel, federal compensation is the same as earnings from military and civilian defense employment. To allow comparisons to other Utahns, we rely on federal compensation in this section, rather than earnings, in order to exclude proprietors' income from non-defense workers' income.

In 1990, federal defense jobs in Utah offered an average of $53,200 in compensation, 47 percent more than the $36,200 at non-defense jobs (both in inflation-adjusted 2015 dollars). By 2015, the federal defense advantage had grown to 75 percent, with federal defense jobs offering an average of $74,800 in compensation versus $42,600 for all other Utah jobs.

Average compensation per military job in Utah was $43,800 in 2015, barely higher than average compensation per civilian job. However, over two-thirds of the military personnel in Utah are reserve or guard members with part-time military obligations that allow them to pursue other full-time employment. Active-duty military personnel, on the other hand, earn considerably more than the average civilian employee in Utah.

Over a 25-year period, aggregate federal defense compensation for military and civilian employees in Utah rose 8 percent in inflation-adjusted dollars, from $2.3 billion in 1990 to $2.4 billion in 2015 (Figure 9.4, above). This growth occurred in spite of the fact that the number of federal defense jobs in the state fell 23 percent during the same period (Table 9.1).

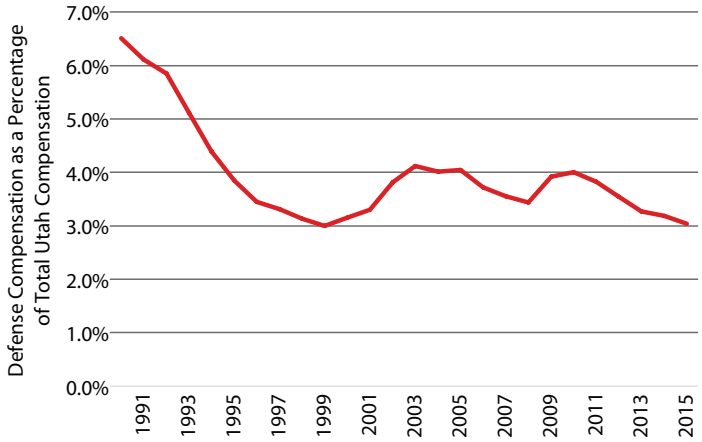
Civilians accounted for more than two-thirds (71 percent) of the 2015 compensation total. From 2000 to 2015, military compensation and federal civilian defense compensation grew at about the same rates, 38 percent and 39 percent, respectively.

From 1990 to 2015, the share of Utah compensation earned by defense employees fell from 6.5 percent to 3.0 percent (Figure 9.5). During each year from 1990 to 2015, federal defense activity in Utah accounted for a significantly larger share of the state's employee compensation than of its jobs (compare Figure 9.2, above, to Figure 9.5). For example, 1.8 percent of Utah employment in 2015 came from federal defense jobs, while they paid 3.0 percent of total compensation in the state. As shown in Figure 9.3, above, compensation rates at federal defense jobs in Utah have consistently been above the state's average.

While aggregate defense compensation fell from 1990 to 1995, Utah has seen gains over every five-year period since, as defense compensation climbed from $1.7 billion in 1995 to $2.4 billion in 2015, even after accounting for inflation (Table 9.2).

From 1990 to 2000, military compensation in Utah fell from $613 million to $513 million in inflation-adjusted 2015 dollars.

Figure 9.5: Defense Share of Total Compensation in Utah, 1990–2015



Source: Bureau of Economic Analysis, REMI PI+ historical data.

War in Afghanistan and Iraq in a post-9/11 environment brought increased pay, with compensation fluctuating between $850 million and $950 million from 2003 to 2011. Since then, military compensation to Utahns has declined somewhat to $710 million in 2015.

Compensation received by federal civilian employees in defense jobs in Utah amounted to $1.7 billion in 2015. That represents a 5 percent increase since 1990 and a 57 percent increase since the 25-year low in 1996, based on inflation-adjusted amounts estimated from wages.

In 2015, 83 percent of federal civilian defense compensation came from national security jobs, down from 94 percent in 1990. Civilian compensation from federal medical centers for veterans and service members in Utah, primarily in Salt Lake and Davis counties, increased by 75 percent, from $106.2 million in 1990 to $291.5 million in 2015. Both figures are in inflation-adjusted 2015 dollars.

Table 9.2: Estimated Defense Compensation in Utah, Selected Years 1990–2015
(Millions of Constant 2015 Dollars)

County	1990	1995	2000	2005	2010	2015
Military	$612.8	$524.6	$512.6	$951.5	$945.8	$709.5
Federal Civilian	$1,647.4	$1,178.1	$1,248.7	$1,581.7	$1,793.4	$1,735.9
Total Defense	**$2,260.1**	**$1,702.7**	**$1,761.3**	**$2,533.2**	**$2,739.2**	**$2,445.5**
Share of Utah Compensation	6.5%	3.8%	3.2%	4.0%	4.0%	3.0%

Source: Bureau of Economic Analysis, Bureau of Labor Statistics, REMI PI+ historical data.

Section 10: Hill Air Force Base Closure Scenario

The Gardner Policy Institute modeled the economic and demographic impacts of a closure of Hill Air Force Base on the state of Utah and on Davis and Weber counties. Hill Air Force Base (Hill AFB) is not currently being considered for closure, but the analysis illustrates the significance of the base to the state and local economies.

Results of this exercise show substantial short-term and long-term losses from a Hill AFB closure, particularly in counties near the base. For example, Davis County would need several years of recovery to return to pre-closure employment levels. In Weber County, Davis County and statewide, forecasts suggest that, even by 2040, levels of employment and GDP would not have caught up to the baseline growth path forecasted with Hill AFB. Much of this is due to the fact that the Gardner Policy Institute did not model any repurposing of the base, which would provide new economic activity to replace the loss of Hill. Fiscal impacts include marked declines in state and local tax revenue offset by reductions in state and local government spending as people who owe their employment to the base move away.

10.1 Simulation Methodology

The modeling assumed the hypothetical shutdown would take place over four years, beginning in 2019 and finishing in 2022. The simulation was run out to 2040 to assess the longer-term impacts on the state and local economies. The following sections provide results for 2023, the first year after the closure is complete, and 2040, by which time the economy has established a new equilibrium without the base. Employment and population impacts are shown relative to the 2012 baseline projections from the Governor's Office of Management and Budget.[3] Earnings, GDP and industry output impacts are presented relative to the REMI version 1.7.8 baseline forecasts.

With respect to employment, only active-duty military and federal civilian jobs were removed. Beginning with 3,771 in 2015, active-duty employment followed the rate of change in the REMI PI+ baseline for total military employment in Davis County through 2040. For the closure, half of the active-duty employment was subtracted in 2019, four-sixths was subtracted in 2020, five-sixths in 2021, and the full amount was subtracted in 2022 through 2040, effectively removing active-duty military jobs from the economy. Federal civilian jobs at Hill AFB were treated similarly, though the baseline and projected numbers removed were based on their share of the REMI baseline total federal civilian employment in Davis County in 2015, 98.4 percent.

In addition to removing the active duty jobs, the modeling also assumed that active-duty military personnel at Hill AFB and their families would be deployed elsewhere and leave the state. This outmigration followed the schedule of the military job losses.

In-state expenditures by Hill AFB were modeled in a variety of ways. All spending was assumed to continue at 2015 levels through 2018. Contract spending for professional, scientific and technical services and for transportation equipment manufacturing, computer and electronic product manufacturing, and machinery manufacturing was assumed to continue, as this kind of activity is not necessarily dependent on the location of the base. The remainder of contract spending was phased out at the same rate as employment. Health care (TRICARE) spending, education impact aid (modeled as a local fiscal impact) and government purchase card purchases also decreased at the same rate as employment. Temporary duty assignment expenditures were assumed to end immediately in 2019.

The Gardner Policy Institute did not attempt to model any repurposing of the land and facilities at Hill AFB. Were this to be part of the base closure, it could mitigate some of the negative impacts that were found.

10.2 Statewide Impacts

In 2023, statewide employment would be 1.7 percent lower than the Governor's Office of Management and Budget's (GOMB) 2012 baseline projection, a loss of 35,678 jobs, due to the closure of Hill Air Force Base (Table 10.1 and Figure 10.1). Earnings would be 2.6 percent lower, down by $2.9 billion (in inflation-adjusted 2015 dollars), and state GDP would be 2.1 percent lower, $3.9 billion less than REMI's baseline forecast (Figure 10.2). The state's population would be smaller by 30,616 people, or 0.9 percent lower than GOMB's baseline population projection (Figure 10.3). By 2040 the negative economic impacts have lessened somewhat with employment 28,712 jobs, or 1.1 percent, below the baseline forecast. Earnings would be $2.6 billion, 1.8 percent, below the baseline and GDP would be $3.8 billion or 1.5 percent below baseline (in inflation-adjusted 2015 dollars). However, the population loss would have grown to 53,830, 1.2 percent lower than GOMB's baseline projection.

The Gardner Policy Institute used its fiscal model and output from REMI PI+ to estimate fiscal impacts on the State of Utah stemming from the base closure. In 2023 these amounted

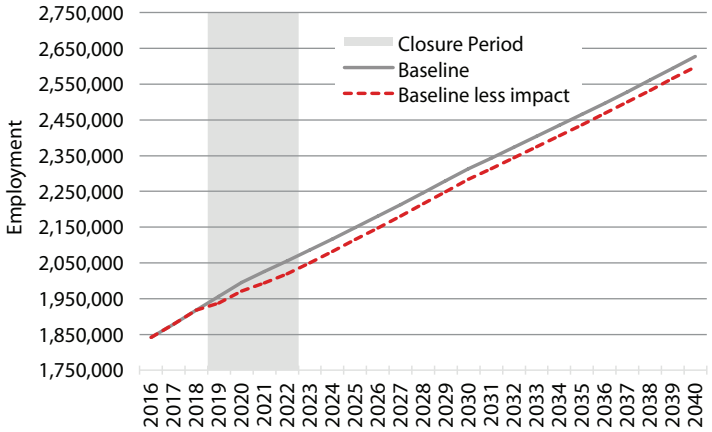
3 Baseline employment and population projections from the Utah Governor's Office of Management and Budget (GOMB) were used because the Gardner Policy Institute's own employment and population projections will not be finalized until July 2017, after the publication date of this report.

Table 10.1: Hill Air Force Base Closure Scenario Analysis, 2023 and 2040
Statewide Economic, Demographic and Fiscal Impact Summary (Millions of Constant 2015 Dollars)

	2023		2040	
Metric	**Absolute**	**Relative**	**Absolute**	**Relative**
Employment by Place of Work	–35,678	–1.7%	–28,712	–1.1%
Earnings by Place of Work	–$2,926.5	–2.6%	–$2,644.3	–1.8%
Gross Domestic Product	–$3,899.5	–2.1%	–$3,770.5	–1.5%
Population	–30,616	–0.9%	–53,830	–1.2%
State Tax Revenues	–$155.5	NA	–$172.8	NA
Personal Income Tax	–$70.3	NA	–$79.3	NA
Corporate Income Tax	–$2.8	NA	–$2.2	NA
State Sales Tax	–$82.4	NA	–$91.3	NA
State Expenditures	–$122.8	NA	–$230.4	NA
Non–Education	–$64.4	NA	–$113.3	NA
Public Education	–$34.4	NA	–$93.7	NA
Higher Education	–$24.0	NA	–$23.4	NA
Net Revenue Impact	–$32.7	NA	$57.6	NA

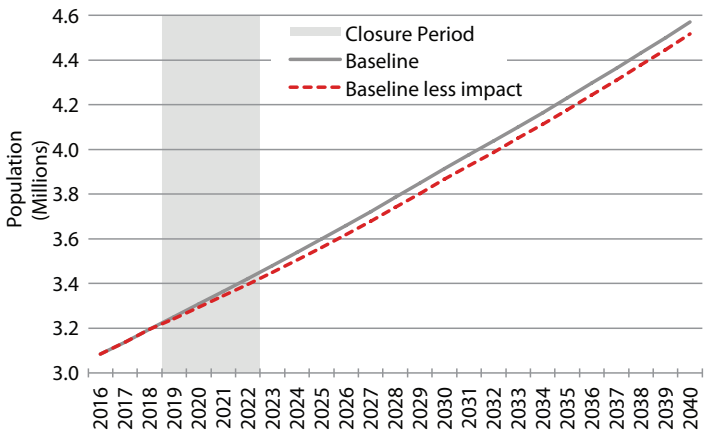
Note: Employment and population impacts are with respect to the Utah GOMB 2012 baseline forecasts; earnings and GDP are relative to the REMI PI+ baseline.
NA = not applicable
Source: Kem C. Gardner Policy Institute analysis using the REMI PI+ model and Gardner Policy Institute fiscal model, Governor's Office of Management and Budget.

Figure 10.1: Hill Air Force Base Closure Scenario Statewide Employment Impacts, 2016–2040



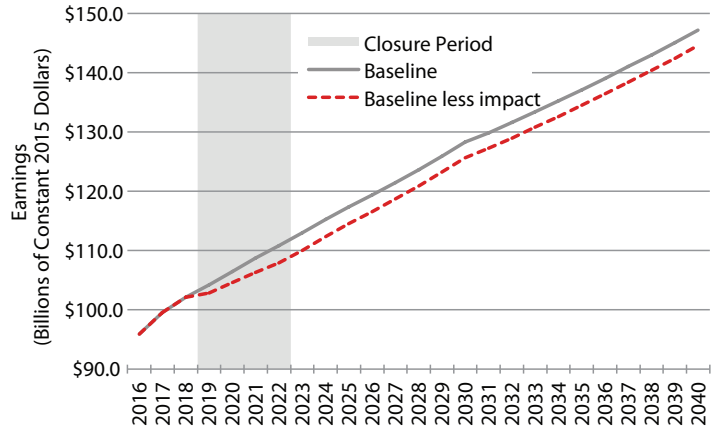
Source: Kem C. Gardner Policy Institute analysis using the REMI PI+ model and Utah GOMB 2012 baseline employment projections.

Figure 10.3: Hill Air Force Base Closure Scenario Statewide Population Impacts, 2016–2040



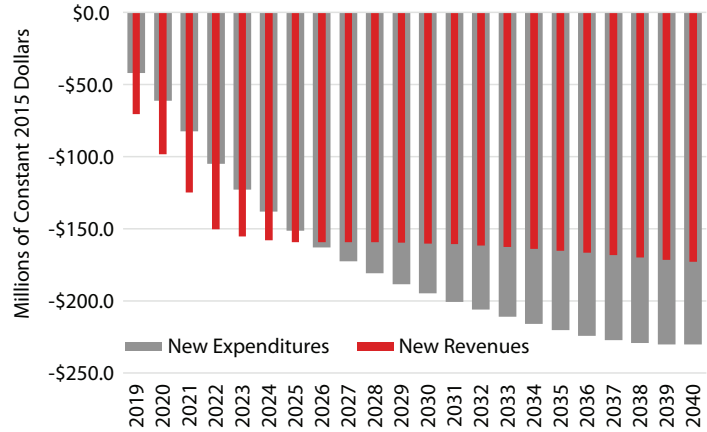
Source: Kem C. Gardner Policy Institute analysis using the REMI PI+ model and Utah GOMB 2012 baseline population projections.

Figure 10.2: Hill Air Force Base Closure Scenario Statewide Earnings Impacts, 2016–2040



Source: Kem C. Gardner Policy Institute analysis using the REMI PI+ model.

Figure 10.4: Hill Air Force Base Closure Scenario State Government Fiscal Impacts, 2019–2040



Source: Kem C. Gardner Policy Institute analysis using the Gardner Policy Institute fiscal model.

Table 10.2: Hill Air Force Base Closure Scenario Analysis, 2023 and 2040
Statewide Detailed Employment and Earnings Impacts (Millions of Constant 2015 Dollars)

	2023		2040	
Sector	**Jobs**	**Earnings**	**Jobs**	**Earnings**
Manufacturing	–526	–$79.0	–190	–$38.0
Construction	–3,654	–$307.3	–1,544	–$155.4
Transportation and Utilities	–412	–$41.6	–191	–$25.9
Finance, Insurance and Real Estate	–2,227	–$108.6	–1,551	–$77.0
Retail Trade	–2,842	–$135.2	–2,157	–$131.2
Wholesale Trade	–402	–$49.1	–231	–$37.4
Services	–9,111	–$491.7	–7,758	–$409.6
Natural Resources and Mining	–93	–$10.4	–27	–$2.8
State and Local Government	–1,751	–$144.1	–1,651	–$150.0
Total	**–35,678**	**–$2,926.5**	**–28,712**	**–$2,644.3**

Source: Kem C. Gardner Policy Institute analysis using the REMI PI+ model.

Table 10.3: Hill Air Force Base Closure Scenario Analysis, 2023 and 2040
Statewide Industry Output Impacts (Millions of Constant 2015 Dollars)

	2023		2040	
Sector	**Absolute**	**Relative**	**Absolute**	**Relative**
Manufacturing	–$334.2	–0.5%	–$179.0	–0.2%
Construction	–$527.6	–2.8%	–$290.1	–0.9%
Transportation and Utilities	–$103.7	–0.7%	–$75.8	–0.4%
Finance, Insurance and Real Estate	–$516.0	–1.0%	–$437.6	–0.6%
Retail Trade	–$277.0	–1.3%	–$302.8	–1.1%
Wholesale Trade	–$103.2	–0.7%	–$95.5	–0.4%
Services	–$837.1	–0.9%	–$792.7	–0.1%
Natural Resources and Mining	–$37.8	–0.4%	–$10.2	–0.1%
Total	**–$2,736.6**	**–1.0%**	**–$2,183.7**	**–0.6%**

Source: Kem C. Gardner Policy Institute analysis using the REMI PI+ model.

to a net revenue loss of $32.7 million (in 2015 dollars) (Table 10.1 and Figure 10.4, above). While both state government revenues and expenditures decrease, the loss in revenues (–$155.5 million) is greater than the decline in expenditures (–$122.8 million). By 2040 the fiscal picture has improved somewhat. State government expenditures are lower by $230.4 million (in 2015 dollars) due to population losses and tax revenues are down by $172.8 million, for a net positive impact of $57.6 million.

Turning to industry-level results shows those sectors that would be most affected by a base closure. The largest job losses immediately after Hill AFB has closed are in services (–9,111), construction (–3,654) and retail trade (–2,842) (Table 10.2). These are accompanied by earnings losses of $491.7 million (services), $307.3 million (construction) and $135.2 million (retail trade). By 2040 the impacts have mitigated in all sectors. Services are 7,758 jobs and $409.6 million in earnings below baseline; construction is down 1,544 jobs and $155.4 million, and retail trade is 2,157 jobs and $131.2 million lower. State and local government and finance, insurance and real estate both see larger job losses than does construction in 2040, although the impacts on earnings in these sectors are not as large.

Another way to assess the impacts of a base closure on the state and local economy is to examine changes in industry output as a result of the closure. Output is a measure of total production, including the value of intermediate goods and services used to produce that output. It can also be thought of as sales or supply. In 2023, the first year after Hill has fully closed, total statewide private, non-farm output has fallen by $2.7 billion dollars (in 2015 dollars), 1.0 percent below the baseline (Table 10.3). The industries hit hardest are services (–$837.1 million), construction (–$527.6 million), and finance, insurance and real estate (–$516.0 million). By 2040 the total private non-farm output loss has shrunk to less than $2.2

Table 10.4: Hill Air Force Base Closure Scenario Analysis, 2023 and 2040
Davis-Weber Region Economic, Demographic and Fiscal Impact Summary (Millions of Constant 2015 Dollars)

	2023		2040	
Metric	**Absolute**	**Relative**	**Absolute**	**Relative**
Employment by Place of Residence	–25,971	–7.1%	–23,367	–5.4%
Earnings by Place of Residence	–$2,176.8	–11.2%	–$2,254.6	–9.0%
Gross Domestic Product	–$3,226.2	–11.5%	–$3,228.0	–8.7%
Population	–25,996	–4.1%	–49,182	–6.3%
Local Tax Revenues	–$51.5	NA	–$60.9	NA
Local Sales Tax	–$4.0	NA	–$4.9	NA
Property Tax	–$47.2	NA	–$55.7	NA
Education Impact Aid	–$0.3	NA	–$0.3	NA
Local Expenditures	–$17.6	NA	–$42.6	NA
Non–Education	–$8.5	NA	–$15.8	NA
Public Education	–$9.1	NA	–$26.8	NA
Net Revenue Impact	–$33.9	NA	–$18.3	NA

Note: Employment and population impacts are relative to the Utah GOMB 2012 baseline forecasts; earnings and GDP are relative to the REMI PI+ baseline.
NA = not applicable
Source: Kem C. Gardner Policy Institute analysis using the REMI PI+ model and Gardner Policy Institute fiscal model, Governor's Office of Management and Budget.

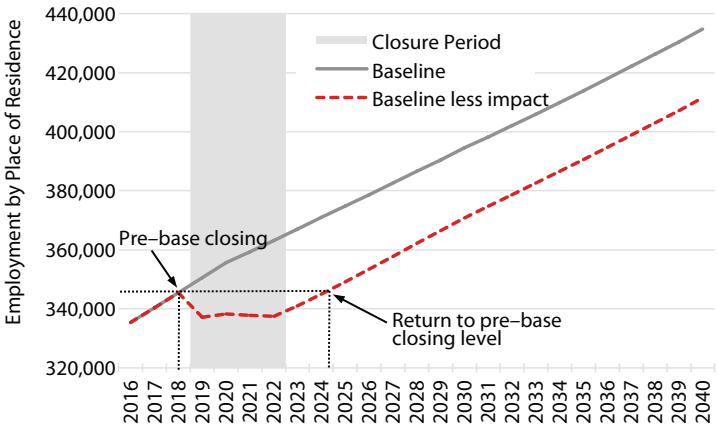
billion, 0.6 percent below baseline. The impacts on all sectors except retail trade have improved, with services now $792.7 million below baseline, construction $290.1 million below, and finance, insurance and real estate $437.6 million lower. The negative impact on retail trade has increased from $277.0 million in 2023 to $302.8 million in 2040.

10.3 Davis-Weber Region Impacts

The employment and earnings impacts presented in the state-level discussion above were by place of work. That is, some of those jobs may be held by residents of other states who work in Utah. In the following county-level discussions we first report total employment and earnings impacts by place of residence; these are the effects of base closure on the jobs and earnings of those who live in Davis and Weber counties. These are followed by detailed employment and earnings impacts by place of work—the number of jobs and earnings paid in each region.

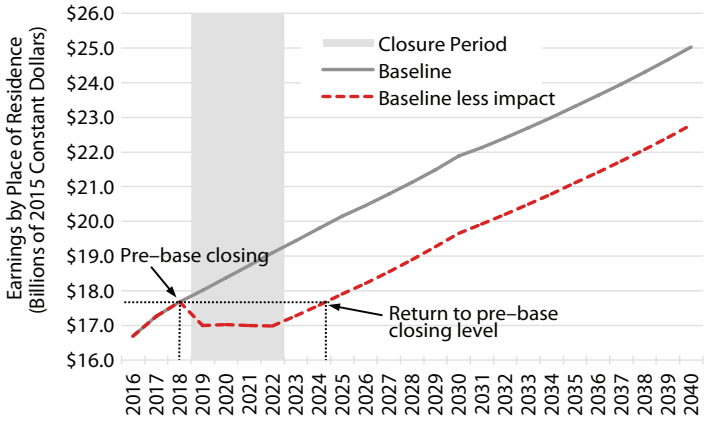
Not surprisingly, the Davis-Weber region bears the brunt of the impacts of closing Hill Air Force Base. Over 80 percent of the statewide employment, earnings, GDP and population impacts arise in the region. In 2023, total job losses for residents of Davis and Weber are 25,971 jobs, 7.1 percent below GOMB's baseline forecast (Table 10.4 and Figure 10.5). Earnings are almost $2.2 billion (11 percent) lower, and GDP is $3.2 billion (12 percent) less than forecast (Figure 10.6). It is not until 2024 that the region regains its pre-closure employment and earnings levels. The region has also lost approximately 26,000 residents by 2023, 4.1 percent of the baseline projection (Figure 10.7). By 2040 the impacts of base closure have become even more concentrated in the region, with Davis-Weber accounting for 85 to 98 percent of statewide effects. Residential employment is 23,367 jobs (5.4 percent) lower than

Figure 10.5: Hill Air Force Base Closure Scenario Davis-Weber Region Employment Impacts, 2016–2040



Source: Kem C. Gardner Policy Institute analysis using the REMI PI+ model and Utah GOMB 2012 baseline employment projections.

Figure 10.6: Hill Air Force Base Closure Scenario Davis-Weber Region Earnings Impacts, 2016–2040



Source: Kem C. Gardner Policy Institute analysis using the REMI PI+ model.

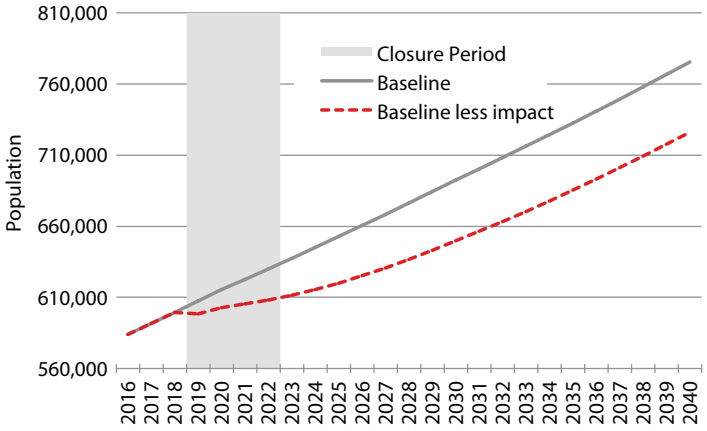
the baseline and earnings are $2.3 billion (9.0 percent) lower. GDP is still $3.2 billion (8.7 percent) lower. The population loss has grown to over 49,000 residents and 6.3 percent of the projected population.

The combined fiscal impacts on Davis and Weber counties in 2023 amount to a $51.5 million loss in local sales and property tax revenues partially mitigated by a $17.6 million reduction in expenditures, for a net revenue impact of –$33.9 million (in 2015 dollars). By 2040 the revenue loss has grown to $60.9 million and the reduction in expenditures to $42.6 million, for a net loss of $18.3 million—an improvement over 2023.

Since the Davis-Weber region absorbs over 80 percent of the impacts of a base closure, the industry-level effects track those at the statewide level. In 2023 there are 29,094 fewer jobs and almost $2.5 billion less in earnings paid in the Davis-Weber region (Table 10.5). This is larger than the impact shown above in Table 10.4 since some of these jobs are held by workers who live outside the region, and so are not counted in the residence-adjusted employment and earnings. The local service sector is the hardest hit by far, losing over 6,000 jobs and $314.3 million in earnings in 2023. The construction sector loses 2,741 jobs and $237.6 million in earnings, and retail trade is down 2,250 jobs and $101.7 million in earnings. By 2040 the situation is less bad, except for state and local government. The total job loss has shrunk to 24,530 and $2.3 billion in earnings. Services are 5,503 jobs and $275.0 million of earnings lower than forecast. Construction is 1,216 jobs and $130.2 million below baseline, and retail trade is 1,804 jobs and $107.7 million lower. State and local government declines from 1,239 fewer jobs in 2023 to 1,337 fewer in 2040. The earnings gap also grows from $98.3 million in 2023 to $119.8 million in 2040.

The closure of Hill Air Force Base causes industry output in the Davis-Weber region to fall by almost $1.7 billion in 2023; this is a decline of 4.1 percent below the baseline forecast (Table 10.6). The service sector shrinks by $499.9 million in 2023, 4.5 percent of its baseline. Construction activity is 12 percent less, losing $401.7 million in sales. Finance, insurance and real estate output declines by $265.3 million, or 4.0 percent. In 2040, the toll on output has shrunk to less than $1.4 billion, 2.4 percent below baseline. Services are still $482.5 million below forecast, while construction is down $232.4 million and finance, insurance and real estate are down $236.1 million. The impacts on retail sales have worsened, growing from a loss of $208.8 million in 2023 to a loss of $242.5 million in 2040. However, the industry is larger in 2040 so the relative impact is less. Natural resources and mining is the only sector with an increase in output in 2040, albeit a very modest one at $1.2 million.

Figure 10.7: Hill Air Force Base Closure Scenario
Davis-Weber Region Population Impacts, 2016–2040



Source: Kem C. Gardner Policy Institute analysis using the REMI PI+ model and Utah GOMB 2012 baseline population projections.

10.4 Davis County Impacts

Over 60 percent of the statewide employment, earnings, GDP and population impacts arise in Davis County. In 2023, total

Table 10.5: Hill Air Force Base Closure Scenario Analysis, 2023 and 2040
Davis-Weber Region Detailed Employment and Earnings Impacts (By Place of Work, Millions of Constant 2015 Dollars)

	2023		2040	
Sector	**Jobs**	**Earnings**	**Jobs**	**Earnings**
Manufacturing	–305	–$50.4	–83	–$22.3
Construction	–2,741	–$237.6	–1,216	–$130.2
Transportation and Utilities	–251	–$25.7	–102	–$15.8
Finance, Insurance and Real Estate	–1,294	–$53.3	–955	–$39.4
Retail Trade	–2,250	–$101.7	–1,804	–$107.7
Wholesale Trade	–197	–$23.4	–116	–$18.7
Services	–6,132	–$314.3	–5,503	–$275.0
Natural Resources and Mining	–25	–$4.6	0	–$1.2
State and Local Government	–1,239	–$98.3	–1,337	–$119.8
Total	**–29,094**	**–$2,466.6**	**–24,530**	**–$2,345.8**

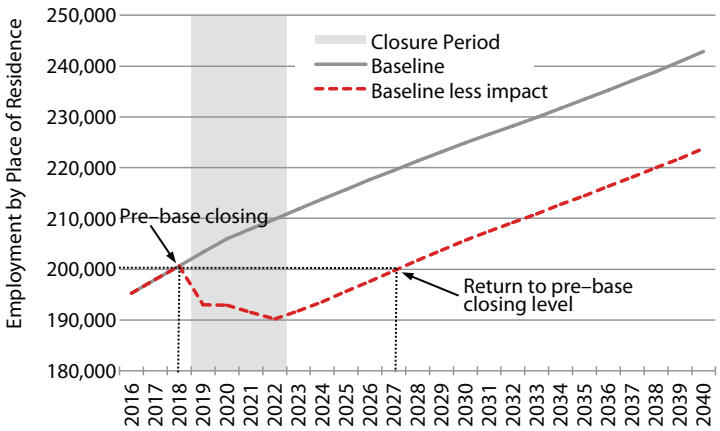
Source: Kem C. Gardner Policy Institute analysis using the REMI PI+ model.

Table 10.6: Hill Air Force Base Closure Scenario Analysis, 2023 and 2040
Davis-Weber Region Industry Output Impacts (Millions of Constant 2015 Dollars)

	2023		2040	
Sector	**Absolute**	**Relative**	**Absolute**	**Relative**
Manufacturing	–$203.7	–1.5%	–$84.4	–0.5%
Construction	–$401.7	–12.0%	–$232.4	–4.1%
Transportation and Utilities	–$58.2	–3.9%	–$38.2	–1.9%
Finance, Insurance and Real Estate	–$265.3	–4.0%	–$236.1	–2.8%
Retail Trade	–$208.8	–6.6%	–$242.5	–5.7%
Wholesale Trade	–$45.3	–2.7%	–$43.5	–1.8%
Services	–$499.9	–4.5%	–$482.5	–0.2%
Natural Resources and Mining	–$9.7	–2.6%	$1.2	0.3%
Total	**–$1,692.6**	**–4.1%**	**–$1,358.5**	**–2.4%**

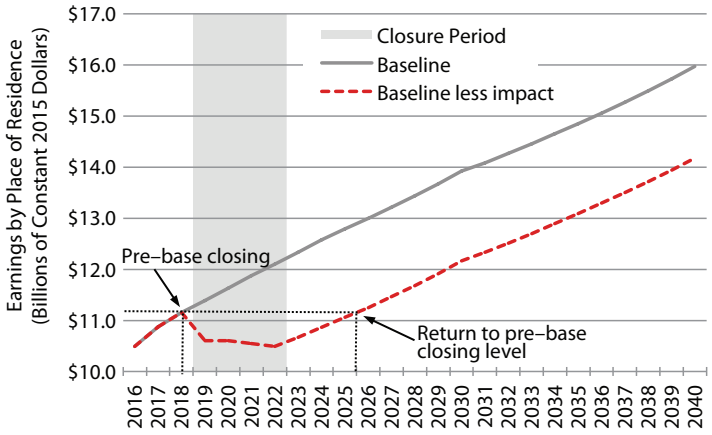
Source: Kem C. Gardner Policy Institute analysis using the REMI PI+ model.

Figure 10.8: Hill Air Force Base Closure Scenario Davis County Employment Impacts, 2016–2040



Source: Kem C. Gardner Policy Institute analysis using the REMI PI+ model and Utah GOMB 2012 baseline employment projections.

Figure 10.9: Hill Air Force Base Closure Scenario Davis County Earnings Impacts, 2016–2040



Source: Kem C. Gardner Policy Institute analysis using the REMI PI+ model.

Table 10.7: Hill Air Force Base Closure Scenario Analysis, 2023 and 2040
Davis County Economic, Demographic and Fiscal Impact Summary (Millions of Constant 2015 Dollars)

	2023		2040	
Metric	**Absolute**	**Relative**	**Absolute**	**Relative**
Employment by Place of Residence	–20,004	–9.4%	–19,077	–7.9%
Earnings by Place of Residence	–$1,670.6	–13.5%	–$1,799.9	–11.3%
Gross Domestic Product	–$2,877.3	–17.7%	–$2,899.7	–13.4%
Population	–20,604	–5.6%	–40,594	–9.5%
Local Tax Revenues	–$39.1	NA	–$47.9	NA
Local Sales Tax	–$2.5	NA	–$3.2	NA
Property Tax	–$36.3	NA	–$44.4	NA
Education Impact Aid	–$0.3	NA	–$0.3	NA
Local Expenditures	–$13.4	NA	–$34.7	NA
Non–Education	–$6.1	NA	–$11.9	NA
Public Education	–$7.4	NA	–$22.8	NA
Net Revenue Impact	–$25.6	NA	–$13.2	NA

Note: Employment and population impacts are relative to the Utah GOMB 2012 baseline forecasts; earnings and GDP are relative to the REMI PI+ baseline.
NA = not applicable
Source: Kem C. Gardner Policy Institute analysis using the REMI PI+ model and Gardner Policy Institute fiscal model, Governor's Office of Management and Budget.

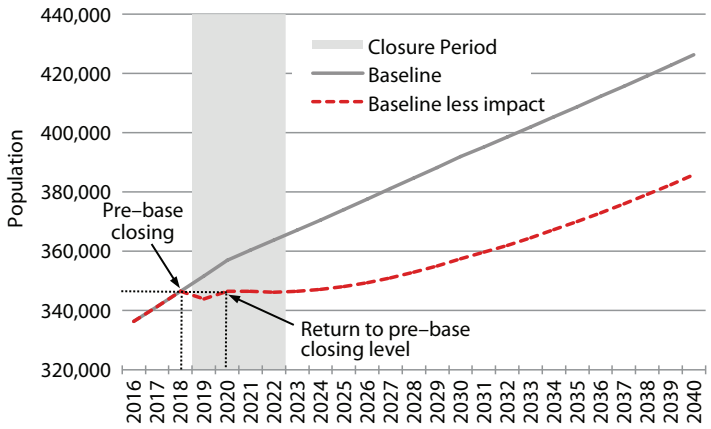
job losses for residents of Davis are 20,004, 9.4 percent below GOMB's baseline forecast (Table 10.7 and Figure 10.8, above). Earnings are $1.7 billion (14 percent) lower, and GDP is almost $2.9 billion (18 percent) less than forecast (Figure 10.9, above). It is not until at least 2026 that the county regains its pre-closure employment and earnings levels. Davis County has also lost 20,600 residents by 2023, 5.6 percent of the baseline projection (Figure 10.10). By 2040 the impacts of base closure have become even more concentrated in the county, with Davis accounting for at least 75 percent of statewide effects. Residential employment is 19,077 jobs (7.9 percent) lower than the baseline and earnings are $1.8 billion (11 percent) lower. GDP is still $2.9 billion (13 percent) lower. The population loss has grown to almost 40,600 residents and 9.5 percent of projected population.

The fiscal impacts on Davis County in 2023 amount to a $39.1 million loss in local sales and property tax revenues partially mitigated by a $13.4 million reduction in expenditures, for a net revenue impact of –$25.6 million (in 2015 dollars). By 2040 the revenue loss has grown to $47.9 million and the reduction in expenditures to $34.7 million, for a net loss of $13.2 million—an improvement over 2023.

Since Davis County absorbs over 60 percent of the impacts of a base closure, the industry-level effects track those at the statewide level. In 2023 there are 24,808 fewer jobs and $2.2 billion less in earnings paid in Davis (Table 10.8). This is larger than the impact shown above in Table 10.7 since some of these jobs are held by workers who live in other counties, and so are not counted in the residence-adjusted employment and earnings. Services are the hardest hit by far, losing 4,185 jobs and $214.8 million in earnings in 2023. The construction sector loses 1,977 jobs and $186.1 million in earnings, and retail trade is down 1,657 jobs and $74.4 million in earnings. By 2040 the situation has improved somewhat, except for state and local government. Total job loss is 21,126, with $2.1 billion less in earnings. Services are below forecast by 3,649 jobs and $178.1 million of earnings. Construction is 864 jobs and $101.1 million below baseline, and retail trade is 1,355 jobs and $80.4 million lower. State and local government declines from 854 fewer jobs in 2023 to 971 fewer in 2040. The earnings gap also grows from $68.4 million in 2023 to $88.1 million in 2040.

The closure of Hill Air Force Base would cause industry output in Davis County to fall by over $1.1 billion in 2023, a decline of 5.0 percent below the baseline forecast (Table 10.9). The service sector shrinks by $314.4 million in 2023, 4.9 percent of its baseline. Construction activity is almost 14 percent lower, losing $302.0 million in sales. Finance, insurance and real estate output declines by $183.2 million, or 4.9 percent. In 2040, the toll on output has shrunk to $877.0 million, 2.8 percent below baseline. Services are $282.0 million below forecast, while construction is down $172.4 million and finance, insurance and real estate are down $165.0 million. The impacts on retail sales have worsened, growing from a loss

Figure 10.10: Hill Air Force Base Closure Scenario Davis County Population Impacts, 2016–2040



Source: Kem C. Gardner Policy Institute analysis using the REMI PI+ model and Utah GOMB 2012 baseline population projections.

Table 10.8: Hill Air Force Base Closure Scenario Analysis, 2023 and 2040
Davis County Detailed Employment and Earnings Impacts (By Place of Work, Millions of Constant 2015 Dollars)

	2023		2040	
Sector	**Jobs**	**Earnings**	**Jobs**	**Earnings**
Manufacturing	–171	–$32.6	–17	–$9.7
Construction	–1,977	–$186.1	–864	–$101.1
Transportation and Utilities	–209	–$20.6	–82	–$12.7
Finance, Insurance and Real Estate	–954	–$37.9	–708	–$27.7
Retail Trade	–1,657	–$74.4	–1,355	–$80.4
Wholesale Trade	–121	–$15.2	–67	–$11.8
Services	–4,185	–$214.8	–3,649	–$178.1
Natural Resources and Mining	–20	–$4.2	1	–$1.0
State and Local Government	–854	–$68.4	–971	–$88.1
Total	**–24,808**	**–$2,207.5**	**–21,126**	**–$2,123.6**

Source: Kem C. Gardner Policy Institute analysis using the REMI PI+ model.

Table 10.9: Hill Air Force Base Closure Scenario Analysis, 2023 and 2040
Davis County Industry Output Impacts (Millions of Constant 2015 Dollars)

	2023		2040	
Sector	**Absolute**	**Relative**	**Absolute**	**Relative**
Manufacturing	–$121.4	–1.7%	–$25.7	–0.3%
Construction	–$302.0	–13.7%	–$172.4	–4.6%
Transportation and Utilities	–$45.2	–5.9%	–$29.0	–2.7%
Finance, Insurance and Real Estate	–$183.2	–4.9%	–$165.0	–3.5%
Retail Trade	–$150.3	–8.7%	–$178.2	–7.7%
Wholesale Trade	–$28.0	–3.4%	–$26.2	–2.2%
Services	–$314.4	–4.9%	–$282.0	–0.3%
Natural Resources and Mining	–$8.4	–3.2%	$1.6	0.5%
Total	**–$1,152.8**	**–5.0%**	**–$877.0**	**–2.8%**

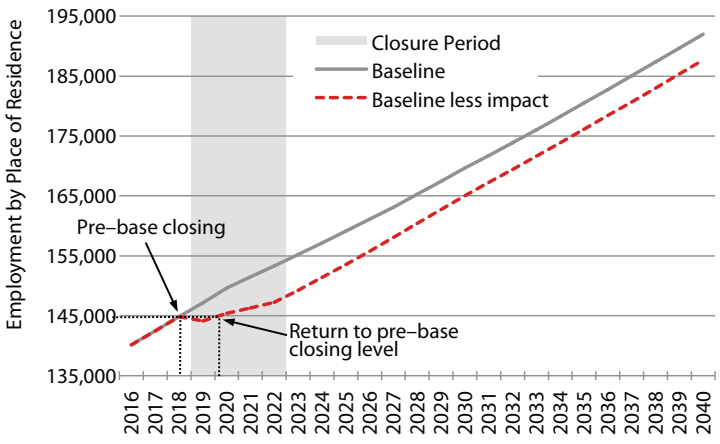
Source: Kem C. Gardner Policy Institute analysis using the REMI PI+ model.

Table 10.10: Hill Air Force Base Closure Scenario Analysis, 2023 and 2040
Weber County Economic, Demographic and Fiscal Impact Summary (Millions of Constant 2015 Dollars)

	2023		2040	
Metric	**Absolute**	**Relative**	**Absolute**	**Relative**
Employment by Place of Residence	–5,967	–3.8%	–4,290	–2.2%
Earnings by Place of Residence	–$506.2	–7.1%	–$454.7	–5.0%
Gross Domestic Product	–$348.9	–3.0%	–$328.3	–2.1%
Population	–5,392	–2.0%	–8,588	–2.5%
Local Tax Revenues	–$12.4	NA	–$13.0	NA
Local Sales Tax	–$1.5	NA	–$1.7	NA
Property Tax	–$10.9	NA	–$11.3	NA
Education Impact Aid	–$0.03	NA	–$0.03	NA
Local Expenditures	–$4.1	NA	–$7.9	NA
Non–Education	–$2.4	NA	–$3.8	NA
Public Education	–$1.7	NA	–$4.0	NA
Net Revenue Impact	–$8.3	NA	–$5.2	NA

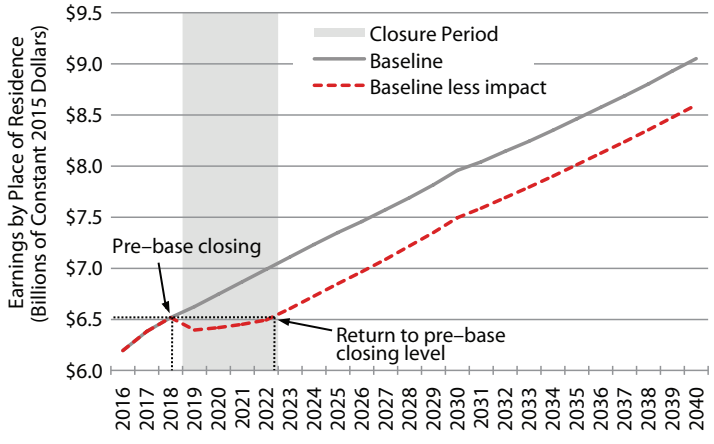
Note: Employment and population impacts are relative to the Utah GOMB 2012 baseline forecasts; earnings and GDP are relative to the REMI PI+ baseline.
NA = not applicable
Source: Kem C. Gardner Policy Institute analysis using the REMI PI+ model and Gardner Policy Institute fiscal model, Governor's Office of Management and Budget.

Figure 10.11: Hill Air Force Base Closure Scenario Weber County Employment Impacts, 2016–2040



Source: Kem C. Gardner Policy Institute analysis using the REMI PI+ model and Utah GOMB 2012 baseline employment projections.

Figure 10.12: Hill Air Force Base Closure Scenario Weber County Earnings Impacts, 2016–2040



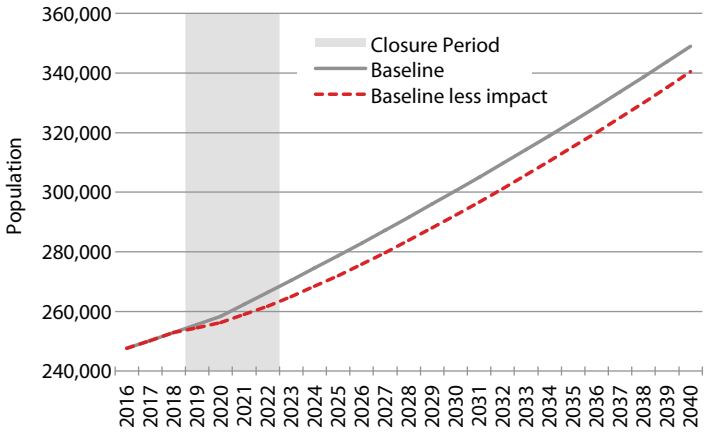
Source: Kem C. Gardner Policy Institute analysis using the REMI PI+ model.

of $150.3 million in 2023 to a loss of $178.2 million in 2040. However, the industry is larger in 2040 so the relative impact is less. Natural resources and mining is the only sector with an increase in output in 2040 due to base closure, albeit a very modest one at $1.6 million.

10.5 Weber County Impacts

Weber County would absorb about 20 percent of the statewide employment, earnings and population impacts of a shutdown of Hill Air Force Base, and about 10 percent of the GDP impacts. In 2023, total job losses for residents of Weber amount to almost 6,000 jobs, 3.8 percent below GOMB's baseline forecast (Table 10.10 and Figure 10.11, above). Earnings are $506.2 million (7.1 percent) lower, and GDP is $348.9 million (3.0 percent) less than forecast (Figure 10.12, above). Weber County has also lost almost 5,400 residents by 2023, 2.0 percent of the baseline projection (Figure 10.13).

Figure 10.13: Hill Air Force Base Closure Scenario Weber County Population Impacts, 2016–2040



Source: Kem C. Gardner Policy Institute analysis using the REMI PI+ model and Utah GOMB 2012 baseline population projections.

Table 10.11: Hill Air Force Base Closure Scenario Analysis, 2023 and 2040
Weber County Detailed Employment and Earnings Impacts (By Place of Work, Millions of Constant 2015 Dollars)

	2023		2040	
Sector	**Jobs**	**Earnings**	**Jobs**	**Earnings**
Manufacturing	–133	–$17.8	–66	–$12.6
Construction	–765	–$51.6	–352	–$29.2
Transportation and Utilities	–42	–$5.1	–20	–$3.1
Finance, Insurance and Real Estate	–340	–$15.4	–247	–$11.7
Retail Trade	–593	–$27.3	–449	–$27.2
Wholesale Trade	–76	–$8.3	–48	–$6.9
Services	–1,947	–$99.5	–1,854	–$96.9
Natural Resources and Mining	–5	–$0.4	–1	–$0.2
State and Local Government	–385	–$29.9	–366	–$31.7
Total	**–4,286**	**–$259.2**	**–3,403**	**–$222.2**

Source: Kem C. Gardner Policy Institute analysis using the REMI PI+ model.

Table 10.12: Hill Air Force Base Closure Scenario Analysis, 2023 and 2040
Weber County Industry Output Impacts (Millions of Constant 2015 Dollars)

	2023		2040	
Sector	**Absolute**	**Relative**	**Absolute**	**Relative**
Manufacturing	–$82.3	–1.2%	–$58.8	–0.6%
Construction	–$99.7	–8.8%	–$59.9	–3.1%
Transportation and Utilities	–$13.1	–1.8%	–$9.2	–1.0%
Finance, Insurance and Real Estate	–$82.1	–2.8%	–$71.1	–1.9%
Retail Trade	–$58.5	–4.1%	–$64.3	–3.4%
Wholesale Trade	–$17.3	–2.0%	–$17.3	–1.4%
Services	–$185.5	–4.0%	–$200.5	–0.2%
Natural Resources and Mining	–$1.3	–1.2%	–$0.4	–0.3%
Total	**–$539.8**	**–2.9%**	**–$481.5**	**–1.9%**

Source: Kem C. Gardner Policy Institute analysis using the REMI PI+ model.

Employment returns to its pre-closure level in 2020 and earnings reach pre-closure levels in 2022. However, both remain below the baseline forecasts that include Hill AFB. By 2040 residential employment is 4,290 jobs (2.2 percent) lower than the baseline, earnings are $454.7 million (5.0 percent) lower, and GDP is $328.3 million (2.1 percent) lower. The population loss has grown to almost 8,600 residents and 2.5 percent of projected population.

The fiscal impacts on Weber County in 2023 amount to an $12.4 million loss in local sales and property tax revenues partially mitigated by a $4.1 million reduction in expenditures, for a net revenue impact of –$8.3 million (in 2015 dollars). By 2040 the revenue loss has grown to $13.0 million and the reduction in expenditures to $7.9 million, for a net loss of $5.2 million—an improvement over 2023.

The industry-level effects in Weber County track those at the statewide level. In 2023 there are 4,286 fewer jobs and $259.2 million less in earnings paid in Weber (Table 10.11, above). This is smaller than the impact shown in Table 10.10 since most of the jobs directly and indirectly tied to Hill AFB are in Davis County. Services are the hardest hit by far, losing almost 1,950 jobs and $99.5 million in earnings in 2023. The construction sector loses 765 jobs and almost $51.6 million in earnings, and retail trade is down almost 600 jobs and $27.3 million in earnings. By 2040 the situation has improved somewhat. Total employment is 3,403 jobs and $222.2 million in earnings below forecast. Services are 1,854 jobs and $96.9 million in earnings lower than forecast. Construction is 352 jobs and $29.2 million below baseline, and retail trade is 449 jobs and $27.2 million lower.

The closure of Hill Air Force Base would cause a decline in industry output in Weber County of $539.8 million in 2023, a reduction of 2.9 percent from the baseline forecast (Table 10.12, above). The service sector shrinks by $185.5 million in 2023, 4.0 percent of its baseline. Construction activity is 8.8 percent lower, losing $99.7 million in sales. Manufacturing output declines by $82.3 million, or 1.2 percent. In 2040, the toll on output has shrunk to $481.5 million, 1.9 percent below baseline. The hit to services has increased to $200.5 million, although this is just 0.2 percent below baseline due to forecast growth. Construction activity is off by $59.9 million and manufacturing is down $58.8 million. The impacts on retail sales have worsened, growing from a loss of $58.5 million in 2023 to a loss of $64.3 million in 2040. However, the industry is larger in 2040 so the relative impact is less.

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