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Utah's Defense Economy: Economic Impacts and Industry Trends

Utah's defense industry is an integral component of the state's diverse economy, contributing over \$19 billion in economic activity.

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Utah's Defense Economy: Economic Impacts and Industry Trends

Analysis in Brief

Utah's defense industry makes a substantial contribution to the state's diverse economy, contributing an estimated \$19.3 billion to GDP (10.6% of total), and supporting 211,000 jobs. The industry has experienced nearly twofold growth since 2015, primarily due to growth at Hill Air Force Base, Veteran services, and a sharp rise in contract awards.

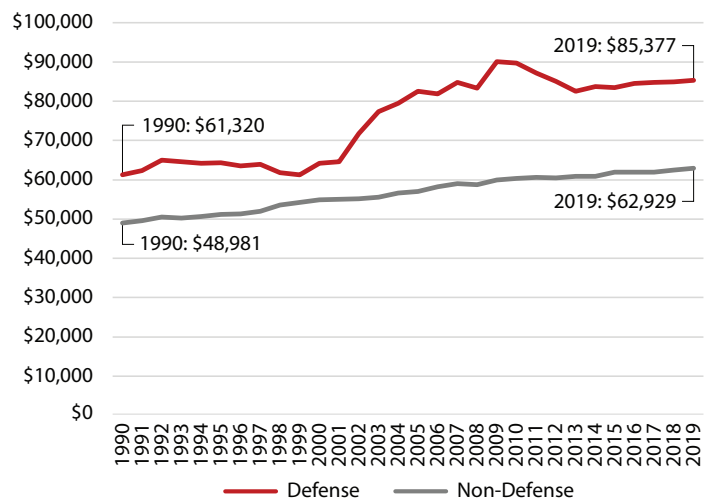
These considerable impacts stem from the following major components of Utah's defense economy:

- Hill Air Force Base
- Dugway Proving Ground
- Tooele Army Depot
- Utah National Guard
- Reserves, Recruiting, and ROTC
- Veterans
- Defense Civilian Retirees
- Contracts and Grants

Key Findings

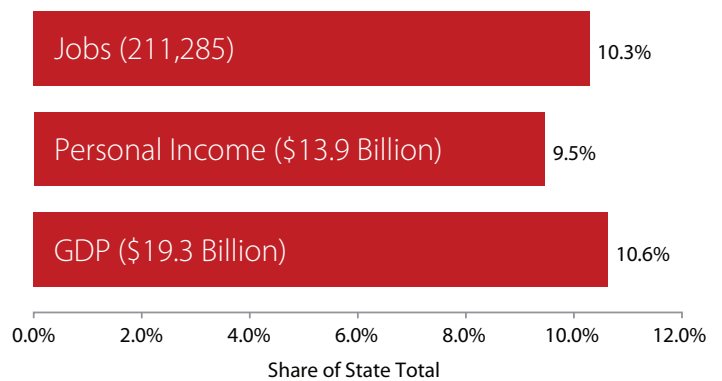
- **Share of the Economy**—In 2019, Utah's defense sector directly and indirectly supported 10.3% of the state's employment, 9.5% of its personal income, and 10.6% of its gross domestic product (GDP).
- **Growth**—The defense sector's total economic impacts have increased nearly twofold since 2015, increasing by 102,000 jobs and \$9.1 billion in inflation-adjusted GDP.
- **Key Organizations**—Of the \$4.3 billion in defense contracts in Utah, \$3.3 billion (76%) went to 10 contractors. Northrop Grumman, L-3 Communications, and Moog were the three largest organizations, accounting for nearly \$2.6 billion (60%) of total contracts.
- **Jobs**—Defense activities supported an estimated 211,285 full- and part-time jobs, 10.3% of total jobs in the state.
- **Income**—Defense personnel earned more than \$13.9 billion in 2019, 9.5% of total personal income. Federal defense jobs in Utah offered an average of \$85,377 in compensation, 35.7% more than the \$62,929 at non-defense jobs.

Average Compensation of Utah Jobs, 1990–2019
 (Constant 2019 Dollars)



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

Defense Sector Economic Impact Summary, 2019



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

- **GDP**—Utah's defense sector contributed \$19.3 billion to the state's GDP, 10.6% of the total.
- **Fiscal Impacts**—Defense-related activity generated net fiscal impacts of \$244.3 million for the state.

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Overview

Utah's defense sector is an integral component of the state's diverse economy. It brings in federal dollars that expand the state's economy and invest in its highly paid, middle-class workforce. In recent years, federal defense spending in Utah has significantly increased, warranting updated research to measure the sector's impact on Utah's economy.

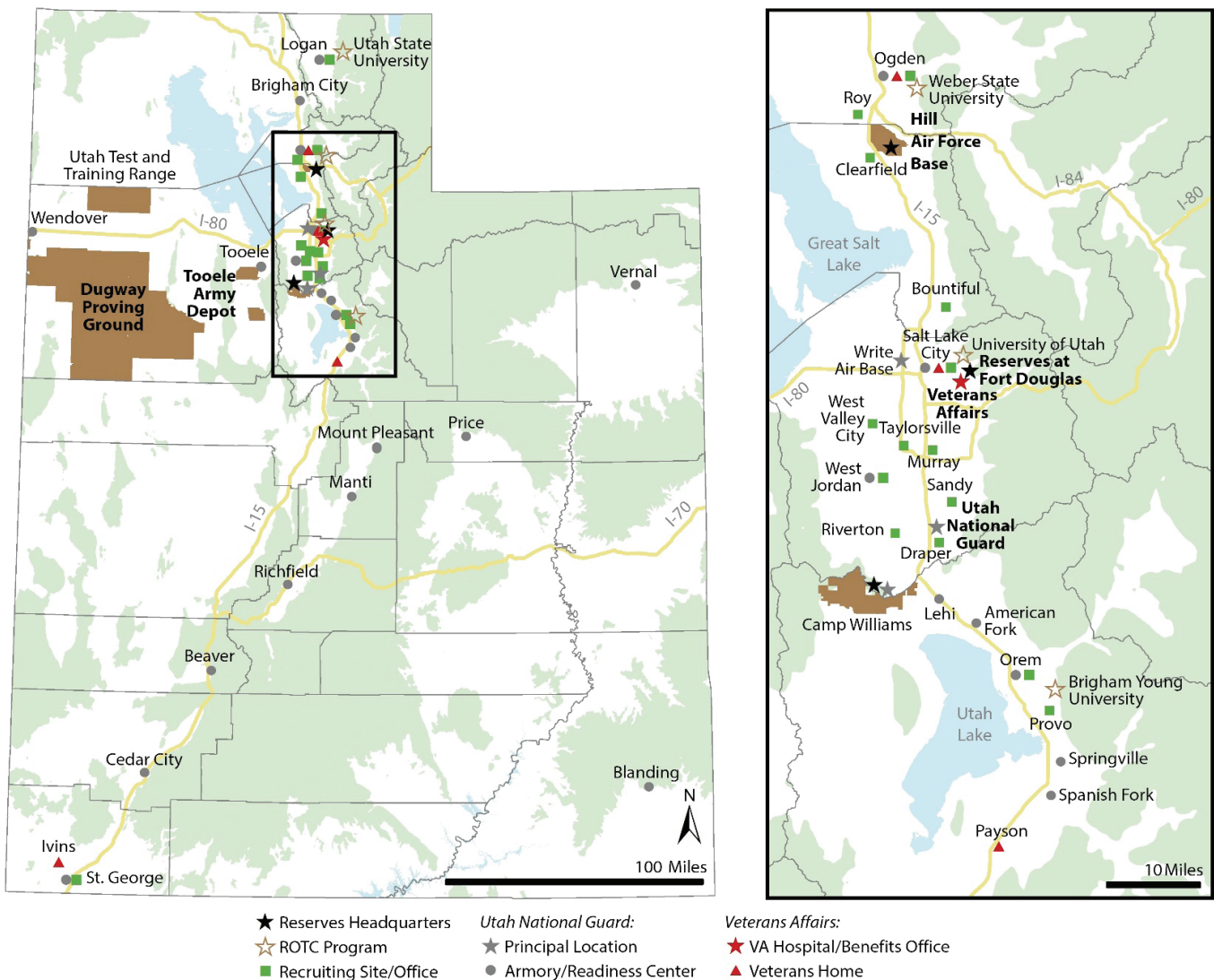
The Utah Defense Alliance commissioned the Kem C. Gardner Policy Institute to assess the economic impacts of Utah's defense industry. The Gardner Institute analyzed the impacts of current operations of Hill Air Force Base, Dugway Proving Ground, Tooele Army Depot, the Utah National Guard, reserves, recruiting, and ROTC. The Institute also examined pensions and services for veterans, pensions for defense civilian retirees, and Department of Defense and Department of Veterans Affairs contracts and grants in Utah.

Comparison: FY 2015 and FY 2019

Utah's defense sector changed significantly since FY 2015. Table 1 compares FY 2015 and FY 2019 employment and non-payroll spending by defense component. Some components have grown markedly over the period, while others have tempered slightly. Overall, direct employment increased by 62.8%, and non-payroll spending increased by 90.1% for the period. All FY 2015 dollars presented here and throughout the report are inflation-adjusted to FY 2019 constant dollars based on the Bureau of Labor Statistics CPI for urban areas in the West.

There are a few notable increases in employment and spending from FY 2015 to FY 2019. Hill Air Force Base direct jobs increased from 16,732 to 19,832 employees (19%), and the veteran benefits and medical offices increased their staff from 3,423 to 4,530 employees (32%). Contracts and grants have grown considerably

Figure 1: Major Military Installations in Utah



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

Table 1: Direct Employment and Non-Payroll Spending for Utah Defense Sector Components, FY 2015 and FY 2019

Category	Employment ¹			Spending		
	2015	2019	Change	2015 ²	2019	Change
Hill Air Force Base	16,732	19,832	18.5%	\$816,980,559	\$885,631,461	8.4%
Dugway Proving Ground	689	657	-4.6%	\$62,333,039	\$56,766,679	-8.9%
Tooele Army Depot	550	531	-3.5%	\$17,490,336	\$19,532,602	11.7%
Utah National Guard	9,280	7,831	-15.6%	\$53,340,220	\$55,572,993	4.2%
Reserves	4,163	3,978	-4.4%	N/A	N/A	N/A
Recruiting	230	263	14.3%	N/A	N/A	N/A
ROTC	69	82	18.8%	N/A	N/A	N/A
Veterans ³	3,423	4,530	32.3%	\$1,678,473,960	\$1,772,847,416	5.6%
DOD Retired Civilians	N/A	N/A	N/A	N/A	\$608,680,932	N/A
Contracts and Grants ⁴	4,855	27,413	464.6%	\$1,023,062,716	\$3,543,863,056	246.4%
Total	39,991	65,117	62.8%	\$3,651,680,832	\$6,942,895,139	90.1%

N/A = not available

Note: 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.

1. Employment consists of defense civilian and military jobs (36,875) as well as estimated direct private sector jobs (28,242) associated with defense retirement spending and other federal outlays.
2. All FY 2015 spending has been inflation adjusted into FY 2019 dollars.
3. Veteran employment includes direct employment from VA medical facilities, veterans homes, and benefits office and estimated direct contract jobs from grants. DOD military retiree pensions, including payments to survivors, are included in spending.
4. Grants and non-installation direct employment are estimates.

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

since FY 2015, rising from \$1.0 to \$3.5 billion, a 246.4% increase. Contract awards from just two companies, Northrop Grumman and L-3 Communications, accounted for nearly \$2.3 billion (65%) of this growth. In addition to these comparative increases, FY 2019 analysis includes over \$600 million in DOD retiree pension payments.

While many areas expanded, some installations experienced modest declines. Dugway Proving Ground employment was 4.6% lower in FY 2019 compared with FY 2015, and spending was 8.9% lower for the period. The number of Utah National Guard personnel declined by 15.6% for the same timeframe. However, part-time traditional guardsmembers represented the vast majority of this reduction, while federal civilians and active-duty personnel gained 157 and 156 jobs, respectively.

Economic Impacts

Utah's defense industry directly and indirectly supported 211,285 jobs—roughly the size of the state's education and healthcare sectors combined—and \$19.3 billion in economic activity during 2019 (Table 2). That year, federal defense spending was responsible for 10.3% of Utah's jobs, 9.5% of its personal income, and 10.6% of its GDP.

The defense sector includes the Department of Defense (DOD) and Department of Veterans Affairs (VA) employment, military and federal civilian pensions, and contracts and grants. Economic impacts include direct economic activity, as well as indirect and induced jobs, personal income, and GDP. For example, 211,285 in total direct, indirect, and induced employment resulted from the direct economic activity of 65,117 defense jobs and sizeable federal outlays for contracts, grants, and pensions in Utah. FY 2019 was selected as the principal year of study for these and other impacts because, at the time this research was undertaken, 2019 was the most recent common year for which reliable information was available from the disparate sources required for the analysis.

Contracts and grants have grown considerably since FY 2015, rising from \$1.0 to \$3.5 billion, a 246.4% increase.

Table 2: Statewide Economic Impacts of Utah Defense Sector by Component, 2019

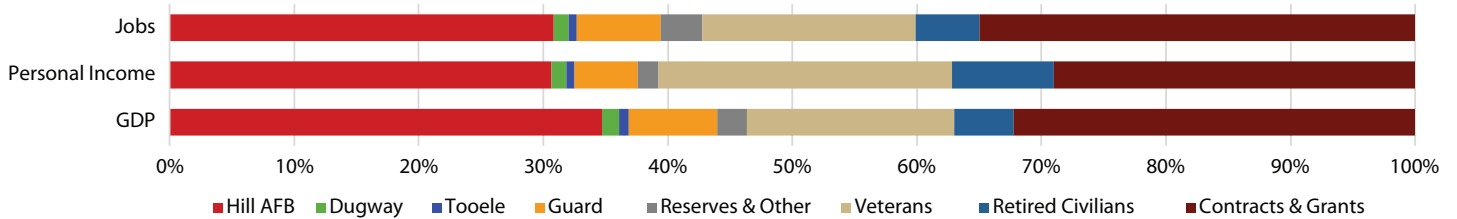
(Millions of Dollars)

Category	Hill Air Force Base	Dugway Proving Ground	Tooele Army Depot	Utah National Guard	Reserves, Recruiting, & ROTC*	Veterans	DOD Civilian Retirees	Contracts & Grants*	Total
Total Employment	65,129	2,528	1,385	14,270	7,108	36,140	10,846	73,878	211,285
Personal Income	\$4,267.0	\$172.7	\$88.7	\$707.4	\$226.1	\$3,282.8	\$1,144.2	\$4,035.7	\$13,924.6
Gross Domestic Product	\$6,712.5	\$266.7	\$151.5	\$1,363.9	\$466.1	\$3,215.3	\$926.6	\$6,227.8	\$19,330.4

*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

Figure 2: Share of Economic Impacts by Utah Defense Sector Component, 2019



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 3: Statewide Fiscal Impacts of Utah's Defense Sector, 2019

(Millions of Dollars)

Category	Hill Air Force Base	Dugway Proving Ground	Tooele Army Depot	Utah National Guard	Reserves, Recruiting, & ROTC*	Veterans	DOD Civilian Retirees	Contracts & Grants*	Total
Total State Revenues	\$211.7	\$9.0	\$4.4	\$34.9	\$11.4	\$162.5	\$56.4	\$206.8	\$697.0
Total State Operating Expenditures	\$107.8	\$4.0	\$2.1	\$16.7	\$5.4	\$157.3	\$54.6	\$104.9	\$452.8
Net State Operating Revenue	\$103.9	\$5.0	\$2.3	\$18.2	\$6.0	\$5.2	\$1.8	\$101.9	\$244.3

*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

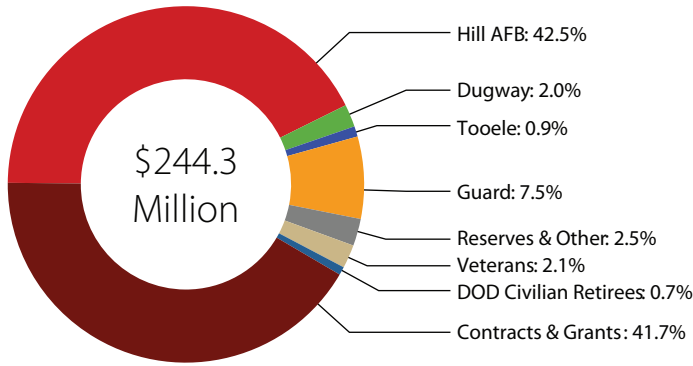
Figure 2 shows the contribution of each defense component in Utah in terms of employment, personal income, and GDP. Hill Air Force Base (Hill AFB) accounts for 31% to 35% of these economic impacts, followed by contracts and grants at 29% to 35%, and veterans at 17% to 24%.

The defense sector's total economic impacts have increased nearly twofold since 2015, increasing by 102,000 jobs and \$9.1 billion in inflation-adjusted GDP. Major factors that contributed to this increase include significant growth in non-installation contract spending—primarily driven by \$2.4 billion awarded to Northrop Grumman and L-3 Communications—an overall increase in employment and spending compared with 2015 (Table 1), and the addition of DOD civilian retirees, who were not included in the previous report.

Fiscal Impacts

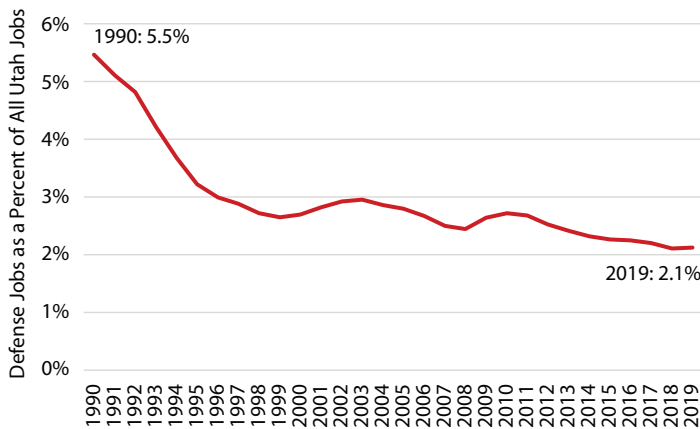
The \$19.3 billion in Utah economic activity supported by the defense sector generated an estimated \$697.0 million in state income and sales tax revenue during 2019 (Table 3). This activity also attracted economic migrants to Utah, spurring an estimated \$452.8 million in state government spending for public and higher education, roads, public safety, etc. Subtracting operating expenditures from revenue results in a net fiscal impact of \$244.3 million. Every component of Utah's defense sector generated net positive state fiscal impacts in 2019. Hill AFB and Contracts & Grants each accounted for over 40% of the net state revenue generated by the defense industry in Utah (Figure 3).

Figure 3: Share of State Net Revenue Impacts from Utah Defense Sector Component, 2019



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

Figure 4: Defense Share of Total Employment in Utah, 1990–2019

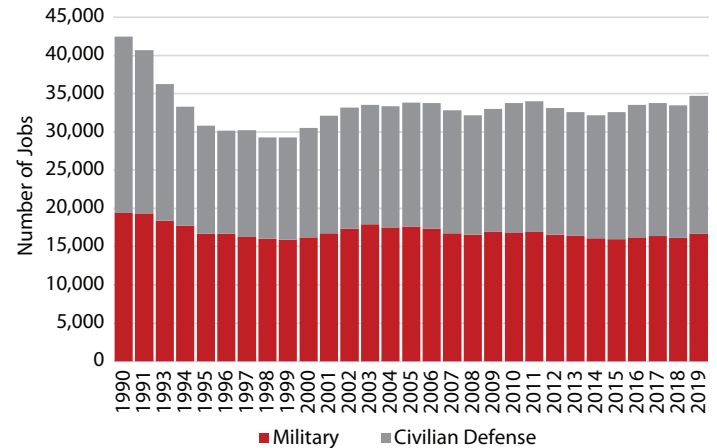


Source: Bureau of Economic Analysis

Federal Defense Employment

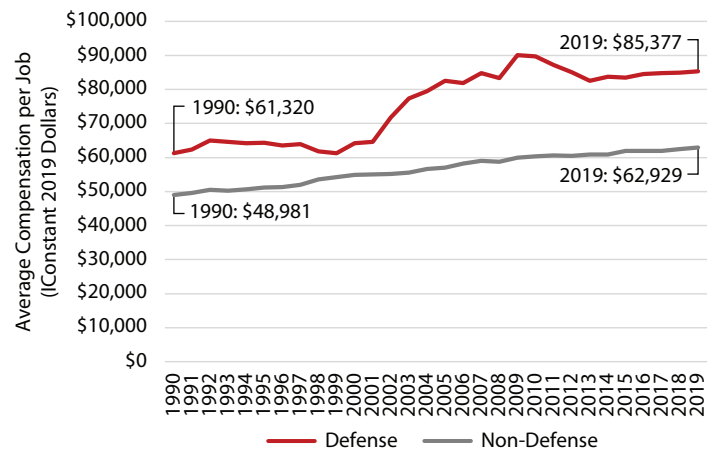
In 2019, military personnel and civilians with federal defense jobs made up about 2.1% of Utah’s employment total, down from 2.7% in 2010, and 5.5% in 1990 (Figure 4). In recent decades, the number of military personnel serving in Utah has been more stable than the number of civilian jobs with the DOD 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 2019 (Figure 5). During those years, while defense employment increased 13.7%, employment in the economy as a whole grew by 44.2%, resulting in defense’s shrinking share.

Figure 5: Military and Federal Civilian Defense Employment in Utah, 1990–2019



Source: Bureau of Economic Analysis, Bureau of Labor Statistics

Figure 6: Average Compensation of Utah Jobs, 1990–2019



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

Compensation per federal defense job in Utah has historically been considerably higher than Utah’s average compensation rate, with the gap widening by over 50% in 2009 (Figure 6). Even with some tapering in recent years, federal defense jobs in Utah offered an average of \$85,377 in compensation, 35.7% more than the \$62,929 at non-defense jobs in 2019.

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 Air Force Base (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 faculty, and all other officers and enlisted service personnel at major installations or smaller sites.

Civilian defense employees are federal government employees classified in NAICS sectors 92811, national defense; 6211, offices of physicians; or 622, hospitals. The latter two sectors represent U.S. Department of Defense (DOD) and Department of Veterans Affairs (VA) doctors and clinics, and employees of the VA hospital. See entry below for NAICS. Civilian defense employees include DOD and VA employees who are not military personnel.

Guardmembers in the National Guard fulfill 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.

Veterans are persons who gave military service for any duration in the U.S. Armed Forces.

Military retirees are individuals 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.

Department of Defense (DOD) civilian retirees are individuals who were DOD employees, whether they were paid appropriated or nonappropriated funds, under permanent or temporary appointment. The federal government employs both non-military civilians and retired military personnel who become civilian workers. In FY 2018, 48.4% of all DOD permanent full-time employees were veterans.⁷

ROTC refers to the Reserve Officer Training Corps. Utah college students can join ROTC units for the Army, Marine Corps, Navy and Air Force. Cadets and midshipmen study and train 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, personal income and gross domestic product (GDP).

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 from supporting businesses. These arise, for example, when Hill Air Force Base personnel and Northrop Grumman employees spend their personal income 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 in this report is a measure of jobs, not workers, unless otherwise specified. Full- and part-time jobs are counted equally, and both wage and salary positions and the self-employed are included. Employment is reported by place of work, rather than place of residence.

Compensation is the sum of wage and salary disbursements and supplements to wages and salaries, including contributions for health insurance policies and retirement accounts. Companies report their compensation by employees' place of work. Compensation does not include income from self-employment, personal investments, or government transfers. Compensation is used in the Trends in Defense Employment and Compensation section to compare historical defense employment with non-defense employment in Utah.

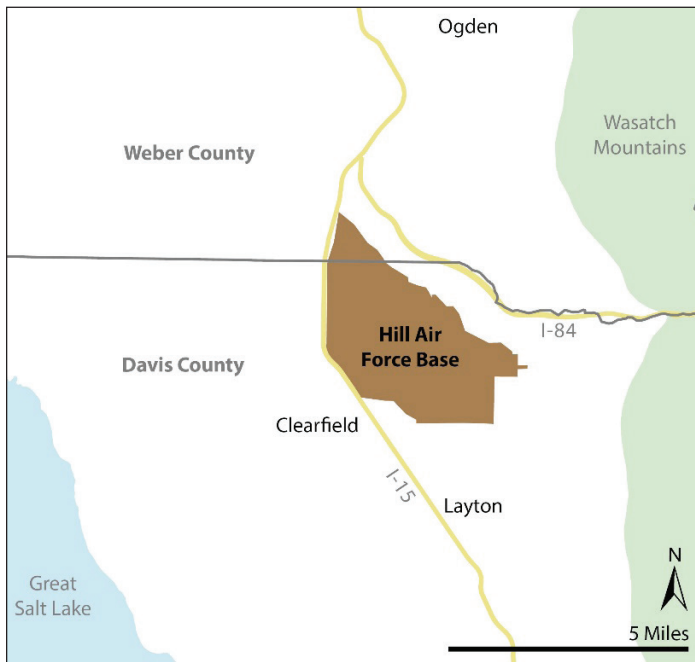
Personal income includes income a person receives from all sources: wage and salary disbursements, supplements to wages and salaries, proprietors' income, rent, dividends, interest and net transfer receipts. Personal income is a more expansive, less focused concept than compensation and is reported by place of residence rather than place of work.

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 employee compensation, indirect business taxes, and gross operating surplus; 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.

North American Industry Classification System (NAICS) 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/naics.

Fiscal year refers to the federal fiscal year (FY), which begins October 1 of the previous year and ends September 30 of the year indicated.

Hill Air Force Base



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

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 2019.¹ Hill employed 4,521 active-duty military personnel, 1,137 Air Force reservists, and 14,174 federal civilians, representing 10.1% of total jobs in Davis County (Table 4). An additional 2,487 employees of government contractors and private businesses worked on base. From 2015, Hill employment has grown by 3,100 jobs, increasing from 16,732 to 19,832 individuals in 2019 (Table 5). Most of this increase came from the addition of 2,369 federal civilians, while military personnel increased by 731 people.

The largest share of Hill AFB's federal workforce, 9,450 employees, lived in Davis County, almost 455 of them on base. Another 5,388 employees lived in neighboring Weber County, about 1,550 commuted from 13 other counties, and for almost 3,450 the county of residence is not known. Total federal civilian and military wages paid by Hill AFB amounted to more than

Total federal civilian and military wages paid by Hill AFB amounted to more than \$1.4 billion in 2019, 20.1% of all wages paid in Davis County.

Table 4: Hill Air Force Base Federal Employees by County of Residence, 2019

County	Civilians ¹	Military ²	Total
Box Elder	395	11	406
Cache	147	7	154
Davis	5,987	3,463	9,450
Iron	2	0	2
Millard	2	0	2
Morgan	216	15	231
Salt Lake	469	101	570
Sevier	2	0	2
Summit	29	1	30
Tooele	53	7	60
Utah	65	16	81
Uintah	0	2	2
Wasatch	2	0	2
Washington	3	1	4
Weber	4,786	602	5,388
None given	2,016	1,432	3,448
Total	14,174	5,658	19,832

1. Civilian employee numbers are 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 8 civilians with the 348th and 368th Recruiting Squadrons. Civilians do not include contractors or employees of private businesses.
2. The 1,432 military personnel for whom county information was not given either had a legal residence outside Utah, although they live in the state to work at Hill AFB, or no location was given. Counts include 45 military personnel with the 348th and 368th Recruiting Squadrons.

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

Table 5: Hill Air Force Base Employment and Non-Payroll Spending Comparison, FY 2015 and FY 2019
(Millions of Dollars)

Area	2015*	2019	Difference	Change
Employment	16,732	19,832	3,100	18.5%
Spending	\$819,623,360	\$885,631,461	\$68,650,902	8.4%

Note: Spending consists of contracts, TRICARE, TDY, GPC purchases and education impact aid for FY 2015 and FY 2019, respectively.

* All 2015 spending has been inflation adjusted to 2019 dollars.

Source: Kem C. Gardner Policy Institute analysis of data from USASpending.gov and Hill Air Force Base

\$1.4 billion in 2019, 20.1% of all wages paid in Davis County. The average wage of federal employees at Hill AFB was \$71,788, 47% above the countywide average of \$48,860.

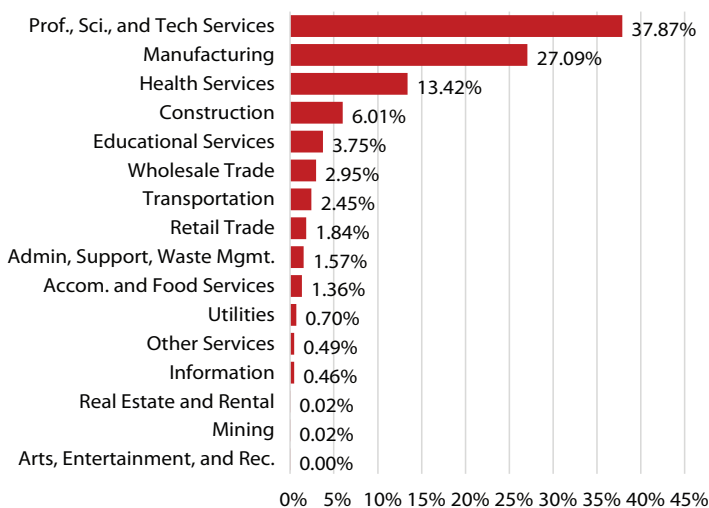
According to data from USASpending.gov, Hill AFB's FY 2019 contract spending in Utah totaled almost \$723.8 million. In addition, Hill AFB spent \$116.0 million on healthcare (TRICARE) benefits,² almost \$9.8 million for temporary duty assignments (TDY) at the base, an estimated \$33.1 million on in-state

Table 6: Hill Air Force Base Non-Payroll Spending in Utah by Industry, FY 2019

Sector	Amount
Mining	\$160,782
Utilities	\$6,185,922
Construction	\$53,270,165
Manufacturing	\$239,889,415
Wholesale Trade	\$26,103,735
Retail Trade	\$16,271,223
Transportation	\$21,716,325
Information	\$4,059,403
Real Estate and Rental	\$181,121
Professional, Scientific and Technical Services	\$335,417,941
Admin, Support, and Waste Management	\$13,898,542
Educational Services	\$33,211,917
Health Care and Social Assistance	\$118,828,244
Arts, Entertainment, and Recreation	\$28,236
Accommodation and Food Services	\$12,055,632
Other Services	\$4,352,857
Total	\$885,631,461

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

Figure 7: Hill Air Force Base Non-Payroll Spending in Utah by Industry, FY 2019



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 7: Statewide Economic Impacts of Hill Air Force Base, 2019 (Millions of Dollars)

Category	Direct Federal*	Indirect & Induced	Total
Employment	19,832	45,297	65,129
Personal Income	\$2,012.9	2,254.1	\$4,267.0
Gross Domestic Product	\$3,336.3	3,376.1	\$6,712.5

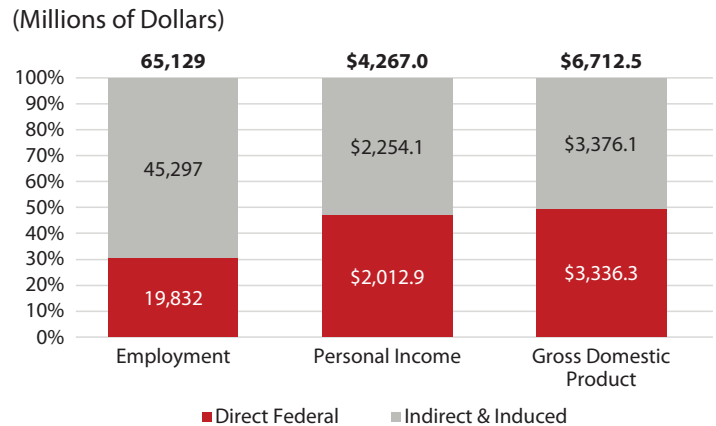
* Does not include jobs of contract civilians or private businesses on base. These are included in the indirect and induced jobs.
Source: Kem C. Gardner Policy Institute analysis using the REMI PI+ model

Table 8: Statewide Fiscal Impacts of Hill Air Force Base, 2019 (Millions of Dollars)

Impact	Amount
Personal Income Tax Revenues	\$103.5
Corporate Income Tax Revenues	\$7.4
State Sales Tax Revenues	\$100.8
Total State Revenues	\$211.7
Non-Education Expenditures	\$56.9
State Public Education Expenditures	\$24.1
Higher Education Expenditures	\$26.8
Total State Operating Expenditures	\$107.8
Net State Operating Revenue	\$103.9

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

Figure 8: Statewide Economic Impacts of Hill Air Force Base, 2019 (Millions of Dollars)



Note: 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

government purchase card (GPC) purchases, and \$2.9 million for education impact aid. Total in-state non-payroll spending amounted to \$885.6 million (Table 6 and Figure 7). This was an increase of \$68.7 million (8.4%) from 2015 (Table 5). Nearly 38% of all spending was for professional, scientific and technical services, 27.1% went toward manufacturing, and 13.4% went to the health care sector.

Hill AFB's employment, payroll and operational expenditures supported over 65,000 full- and part-time jobs in Utah in 2019 and \$4.3 billion in personal income (Table 7 and Figure 8). This consists of the 19,832 direct federal jobs with \$2.0 billion in personal income provided by the base itself, plus an estimated additional 45,297 indirect and induced jobs and almost \$2.3 billion in personal income.³ Hill AFB's operations contributed \$6.7 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 activity of the base. Hill AFB's activities directly and indirectly generated

an estimated \$211.7 million in state tax revenues (Table 8). This was partially offset by the additional population supported by the base, which required an estimated \$107.8 million in state government expenditures. The net fiscal impact was \$103.9 million in revenue.

Table 9 presents the total impacts from Table 7 and Figure 8 by county based on work that occurred at Hill AFB. While over 60% of Hill’s economic impacts remained in Davis County, nearby counties also received large employment, personal income and GDP impacts in 2019 because of the base.

Nearly 39,200 jobs held in Davis County were either performed at Hill AFB or indirectly supported by its spending and the spending of its employees. Those jobs represented 22.4% of county employment and generated \$2.1 billion in personal income for county residents; this was half of the base’s total personal income impact. An estimated \$4.3 billion of GDP was created in Davis County alone, representing nearly two-thirds of Hill AFB’s total economic impact.

Salt Lake County had the second largest impacts, with an estimated 12,180 direct, indirect and induced jobs due to Hill AFB. These jobs brought \$885.6 million in income into the county, 1.4% of all personal income in Salt Lake County. Hill AFB’s activity also increased Salt Lake County’s GDP by an estimated \$1.3 billion. Salt Lake County’s total employment, personal income, and GDP impacts each represented about 20% of Hill AFB’s total economic impact. Given the size of its economy, these large impacts amounted to less than 2% of Salt Lake County totals.

Table 9: Economic Impacts of Hill Air Force Base by County, 2019

(Shares of County Totals, Millions of Dollars)

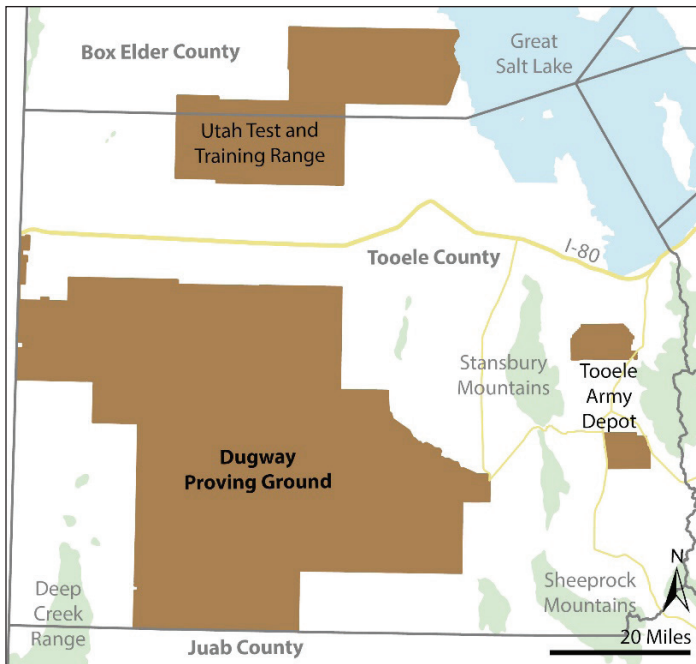
County	Employment		Personal Income		Gross Domestic Product	
	Number	Share	Number	Share	Number	Share
Davis	39,172	20.4%	\$2,122.3	12.6%	\$4,299.6	28.3%
Salt Lake	12,180	1.3%	\$885.6	1.4%	\$1,314.9	1.5%
Weber	7,561	5.4%	\$732.1	6.8%	\$568.0	5.3%
Utah	2,712	0.8%	\$218.0	0.9%	\$217.6	0.8%
Summit	606	1.4%	\$47.9	0.9%	\$78.5	1.6%
Cache	855	1.1%	\$57.4	1.2%	\$70.8	1.3%
Box Elder	1,003	3.4%	\$82.1	3.9%	\$69.8	2.6%
Toole	229	1.0%	\$33.0	1.3%	\$22.8	1.0%
Morgan	284	5.7%	\$51.4	8.0%	\$16.1	6.0%
All Others	527	0.2%	\$37.3	0.2%	\$54.4	0.2%
Total	65,129	3.2%	\$4,267.0	2.9%	\$6,712.5	3.7%

Note: Employment and GDP are by place of work. Personal income is by place of residence. Shares equal employment, personal income and GDP impacts divided by total employment, personal income and GDP in the county (or state for the “Total” row), respectively.

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

About 9% to 17% of Hill AFB’s total impacts went to Weber County in 2019: 7,561 jobs, \$732.1 million in personal income, and \$568.0 million in GDP. These impacts represented a larger local share compared with Salt Lake County, accounting for between 5% and 7% of Weber County totals. Morgan County also benefited from its close proximity to Hill AFB, boasting economic impacts between 6% and 8% of county totals.

Dugway Proving Ground



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

Dugway Proving Ground (DPG) is located in the remote Skull Valley, 85 miles southwest of Salt Lake City in the west desert of Tooele County. The base is surrounded by more than 260,000 acres of desert and mountain terrain. DPG tests detection and defensive equipment for chemical and biological agents with both live agents and nontoxic simulants. Personnel 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 2019, Dugway Proving Ground directly employed 635 civilians and 22 military personnel, representing 2.7% of all jobs in Tooele County. Most of these employees, 436 of them, lived in the county; the remainder commuted from 15 other counties in Utah and from out of state (Table 10).

The significant number of transient personnel stationed at Dugway causes employee counts to shift from year to year. Compared with 2015, personnel decreased by 32 individuals (-4.6%) (Table 11).

Total direct civilian and military wages from DPG amounted to \$57.8 million, 7.5% of all wages paid in Tooele County. The

The average wage of employees at Dugway Proving Ground was \$87,999, double the countywide average of \$43,838.

Table 10: Dugway Proving Ground Employees by County of Residence, 2019

County	Employees	County	Employees
Tooele	436	Millard	1
Utah	73	Uintah	1
Salt Lake	72	Sevier	1
Davis	12	Box Elder	1
Weber	11	Washington	1
Juab	10	Emery	1
Cache	7	Summit	1
Sanpete	4	Outside Utah	22
Iron	3	Total	657

Source: Dugway Proving Ground

Table 11: Dugway Proving Ground Employment and Non-Payroll Spending Comparison, FY 2015 and FY 2019

Area	2015*	2019	Difference	Change
Employment	689	657	-32	-4.6%
Spending	\$62,534,677	\$56,766,679	-\$5,566,360	-8.9%

Note: FY 2015 spending consists of contracts, and FY 2019 spending includes contracts, government purchase card transactions, and visitor spending.
 * All 2015 spending has been inflation adjusted to 2019 dollars.
 Source: Kem C. Gardner Policy Institute analysis of data from Dugway Proving Ground and USAspending.gov

average wage of employees at Dugway Proving Ground was \$87,999, double the countywide average of \$43,838. There were an additional 801 military contractors and school, hotel, credit union and other on-base workers not paid directly by the Department of Defense.

According to data from USAspending.gov, Dugway Proving Ground's FY 2019 contract spending in Utah totaled almost \$51.2 million. In addition, DPG spent \$2.8 million on in-state government purchase card (GPC) purchases, and the installation supported \$2.7 million in visitor spending. Total in-state non-payroll spending amounted to \$56.8 million (Table 12 and Figure 9). Over 55% was for professional, scientific and technical services, with another 30.4% going to administrative, support and waste management services, and 4.6% to accommodation and food services. FY 2019 spending was \$5.6 million lower (-8.9%) than inflation-adjusted 2015 spending, which did not include GPC or visitor amounts (Table 11).

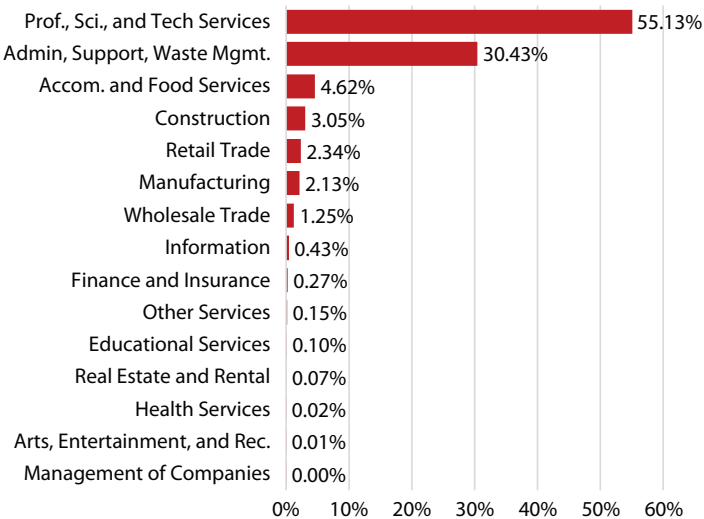
Along with its primary functions, Dugway hosts many civilian and military personnel for events, trainings and inspections. These visitors bring federal and out-of-state dollars into Utah's economy by spending their stipends on lodging, food and other travel-related expenses. In 2019, Dugway's Rapid Integration and Acceptance Center (RIAC) alone hosted 1,015 visitors.⁴ With data from defensetravel.dod.mil, Tooele-specific

Table 12: Dugway Proving Ground Non-Payroll Spending in Utah by Industry, FY 2019

Sector	Amount
Construction	\$1,730,913
Manufacturing	\$1,211,406
Wholesale Trade	\$710,477
Retail Trade	\$1,329,196
Information	\$243,687
Finance and Insurance	\$151,377
Real Estate and Rental	\$40,125
Professional, Scientific and Technical Services	\$31,295,925
Management of Companies	\$2,440
Admin, Support, and Waste Management	\$17,275,555
Educational Services	\$57,077
Health Care and Social Assistance	\$8,703
Arts, Entertainment, and Recreation	\$4,156
Accommodation and Food Services	\$2,620,580
Other Services	\$85,062
Total	\$56,766,679

Source: Kem C. Gardner Policy Institute analysis of data from USAspending.gov and Dugway Proving Ground

Figure 9: Dugway Proving Ground Non-Payroll Spending in Utah by Industry, FY 2019



Source: Kem C. Gardner Policy Institute analysis of data from USAspending.gov and Dugway Proving Ground

Table 13: Estimated Dugway Proving Ground Visitor Spending in Utah by Industry, FY 2019

Sector	Estimated Amount
Accommodations	\$1,749,534
Food Service	\$869,397
Incidentals	\$85,235
Total	\$2,704,166

Note: Visitor spending is included in accommodation and food services and retail trade sectors in Table 12 and Figure 9.

Source: Kem C. Gardner Policy Institute analysis of data from Dugway Proving Ground

Table 14: Statewide Economic Impacts of Dugway Proving Ground, 2019

(Thousands of Dollars)

Category	Direct	Indirect & Induced	Total
Employment	657	1,871	2,528
Personal Income	\$78,140.5	\$94,543.2	\$172,683.8
Gross Domestic Product	\$110,248.2	\$156,457.4	\$266,705.6

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

per diems for 2019 were used to estimate total RIAC visitor spending for housing, food and other expenses. That year, RIAC visitors spent an estimated \$2.7 million for total travel (Table 13). This consists of \$1.7 million for lodging, \$869,400 for food, and \$85,200 for incidentals.

DPG's employment, payroll and operational expenditures supported approximately 2,528 full- and part-time jobs in Utah in 2019 and \$172.7 million in personal income (Table 14 and Figure 10). This consists of the 657 direct jobs, with \$78.1 million in personal income, at the Proving Ground itself, plus an estimated additional 1,871 indirect and induced jobs and \$94.5 million in personal income. DPG's operations contributed an estimated \$266.7 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. In 2019, DPG's activities directly and indirectly generated an estimated \$9.0 million in state tax revenues, consisting of almost \$4.2 million in personal income taxes, \$727,100 in corporate income taxes, and almost \$4.1 million in state sales taxes (Table 15). The additional population supported by DPG's economic impact

Table 15: Statewide Fiscal Impacts of Dugway Proving Ground, 2019

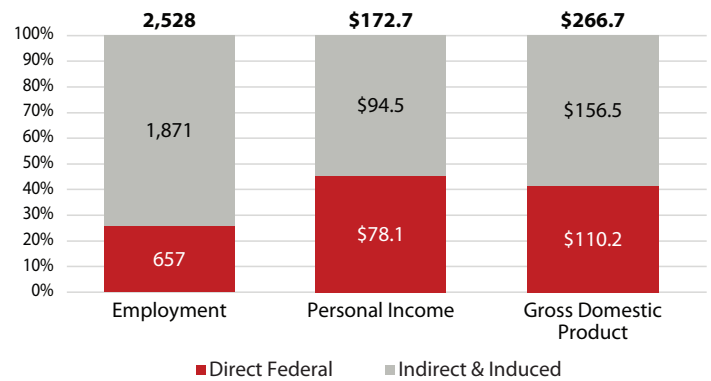
(Thousands of Dollars)

Impact	Amount
Personal Income Tax Revenues	\$4,188.8
Corporate Income Tax Revenues	\$727.1
State Sales Tax Revenues	\$4,078.9
Total State Revenues	\$8,994.8
Non-Education Expenditures	\$2,021.1
State Public Education Expenditures	\$1,021.1
Higher Education Expenditures	\$853.3
Total State Operating Expenditures	\$3,895.5
Net State Operating Revenue	\$5,099.3

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

Figure 10: Statewide Economic Impacts of Dugway Proving Ground, 2019

(Millions of Dollars)



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

Table 16: Economic Impacts of Dugway Proving Ground by County, 2019

(Shares of County Totals, Thousands of Dollars)

County	Employment		Personal Income		Gross Domestic Product	
	Number	Share	Amount	Share	Amount	Share
Tooele	1,043	4.4%	\$66,638.5	2.6%	\$123,220.1	5.4%
Salt Lake	1,062	0.1%	\$66,355.6	0.1%	\$108,371.8	0.1%
Utah	219	0.1%	\$17,917.1	0.1%	\$16,831.4	0.1%
Davis	78	0.0%	\$10,190.8	0.1%	\$6,049.7	0.0%
Weber	50	0.0%	\$4,190.3	0.0%	\$3,968.3	0.0%
All Others	77	0.0%	\$7,391.5	0.0%	\$8,264.3	0.0%
Total	2,528	0.1%	\$172,683.8	0.1%	\$266,705.6	0.1%

Note: Employment and GDP are by place of work. Personal income is by place of residence. Shares equal employment, personal income and GDP impacts divided by total employment, personal income and GDP in the county (or state for the "Total" row), respectively.

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

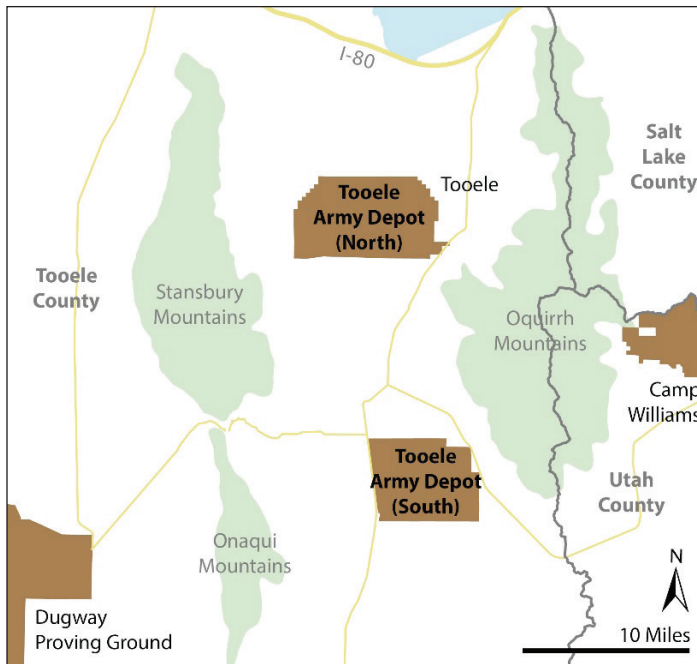
caused an estimated \$3.9 million in annual state government expenditures, comprising \$2.0 million in non-education expenditures, \$1.0 million in public education expenditures, and \$853,300 in higher education expenditures. The net fiscal impact was \$5.1 million in revenue.

Given the geographic distribution of DPG's spending, 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 1,043 jobs and \$66.6 million in personal income to Tooele county, adding \$123.2 million to the county's GDP in 2019 (Table 16). About 3% of Tooele County personal income and 5% of its GDP can be attributed to the

installation for the year. Salt Lake County was the next largest beneficiary. DPG's operations directly and indirectly provided 1,062 jobs and \$66.4 million in personal income to Salt Lake County, and added \$108.4 million in GDP.

The next three counties with the largest impacts from DPG operations are all on the Wasatch Front, supporting at least 50 jobs, \$4.2 million in personal income, and \$4.0 million in GDP. Another 17 counties have at least one resident whose job is supported by DPG. The installation supports a total of \$8.3 million in GDP created at workplaces in each of these counties grouped under "All Others" in Table 16.

Tooele Army Depot



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

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, tests, maintains, demilitarizes ammunition. The Depot also develops, manufactures and fields equipment related to ammunition. 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 2019, the Tooele Army Depot had 529 civilian employees and two military employees (the commanding officer and a Navy Sergeant), representing about 2.2% of total employment in the county. Most of these employees, 440 people (83%), live in Tooele County; the remainder commute from Salt Lake, Utah, Davis, Weber, Cache and Summit counties (Table 17). Tooele employed 19 fewer individuals in 2019 than the 550 employed in 2015, a decrease of 3.5% (Table 18).

Total federal and civilian wages amounted to \$31.9 million, representing about 4.1% of all wages in Tooele County. The

From FY 2015, Tooele Army Depot's spending increased by \$2.0 million inflation-adjusted dollars.

Table 17: Tooele Army Depot Employees by County of Residence, 2019

County	Employees	County	Employees
Tooele	440	Weber	6
Salt Lake	51	Cache	1
Utah	19	Summit	1
Davis	13	Total	531

Source: Tooele Army Depot

Table 18: Tooele Army Depot Employment and Non-Payroll Spending Comparison, FY 2015 and FY 2019

Area	2015*	2019	Difference	Change
Employment	550	531	-19	-3.5%
Spending	\$17,546,915	\$19,532,602	\$2,042,266	11.7%

Note: Spending consists of contracts, government purchase card transactions, and other spending for FY 2015 and FY 2019, respectively.

* All 2015 spending has been inflation adjusted to 2019 dollars.

Source: Kem C. Gardner Policy Institute analysis of data from Tooele Army Depot

Table 19: Tooele Army Depot Non-Payroll Spending in Utah by Industry, FY 2019

Sector	Amount
Utilities	\$3,042,290
Construction	\$11,777,092
Manufacturing	\$404,700
Wholesale Trade	\$661,374
Retail Trade	\$259,840
Transportation	\$3,222
Information	\$466,597
Real Estate and Rental	\$379
Professional, Scientific and Technical Services	\$176,180
Admin, Support, and Waste Management	\$894,772
Educational Services	\$68,368
Other Services	\$1,777,788
Total	\$19,532,602

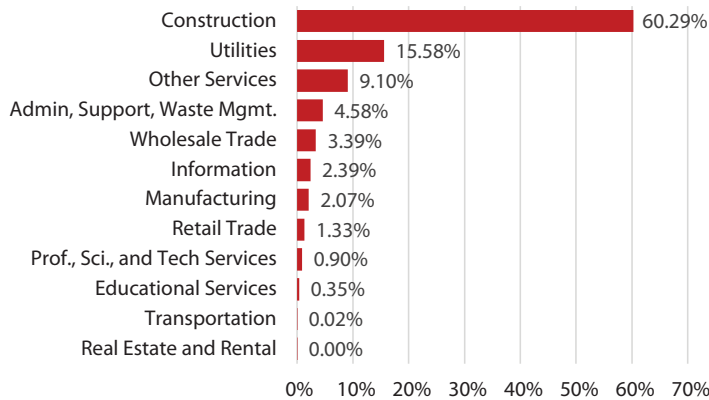
Source: Tooele Army Depot

average wages of TEAD employees were \$60,004 in 2019, 37% higher than the countywide average of \$43,838.

Depot non-payroll expenditures in Utah amounted to over \$19.5 million, consisting of \$18.5 million in contracts and \$1.0 million in government purchase card purchases (Table 19 and Figure 11). Over half (60.3%) of all non-payroll expenditures in Utah were for construction, another 15.6% went to utilities, and 9.1% went to other services. From FY 2015, Tooele Army Depot's spending increased by \$2.0 million inflation-adjusted dollars (Table 18).

In 2019, TEAD's employment, payroll and operational expenditures supported 1,385 full- and part-time jobs in Utah and \$88.7 million in personal income (Table 20 and Figure 12). This consisted of the 531 jobs and \$43.1 million in personal

Figure 11: Tooele Army Depot Non-Payroll Spending in Utah by Industry, FY 2019



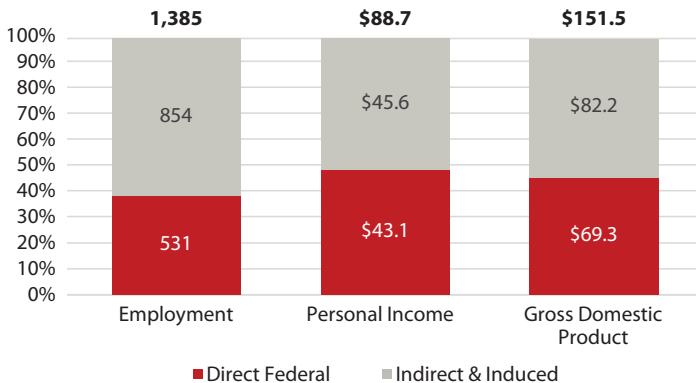
Source: Tooele Army Depot

Table 20: Statewide Economic Impacts of Tooele Army Depot, 2019 (Thousands of Dollars)

Category	Direct	Indirect & Induced	Total
Employment	531	854	1,385
Personal Income	\$43,063.3	\$45,610.1	\$88,673.4
Gross Domestic Product	\$69,279.1	\$82,220.0	\$151,499.1

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

Figure 12: Statewide Economic Impacts of Tooele Army Depot, 2019 (Millions of Dollars)



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

income at the Depot itself, plus an estimated additional 854 indirect and induced jobs and \$45.6 million in personal income. TEAD's operations contributed an estimated \$151.5 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. In 2019, TEAD's activities directly and indirectly generated an estimated \$4.4 million in state tax revenues, consisting of \$2.2 million in personal income taxes, \$133,600 in corporate income taxes, and almost \$2.1 million in state sales taxes (Table 21). The additional population supported by TEAD's economic impact

Table 21: Statewide Fiscal Impacts of Tooele Army Depot, 2019 (Thousands of Dollars)

Impact	Amount
Personal Income Tax Revenues	\$2,150.9
Corporate Income Tax Revenues	\$133.6
State Sales Tax Revenues	\$2,094.5
Total State Revenues	\$4,379.1
Non-Education Expenditures	\$1,075.3
State Public Education Expenditures	\$554.6
Higher Education Expenditures	\$447.0
Total State Operating Expenditures	\$2,077.0
Net State Operating Revenue	\$2,302.1

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

Table 22: Economic Impacts of Tooele Army Depot by County, 2019 (Shares of County Totals, Thousands of Dollars)

County	Employment		Personal Income		Gross Domestic Product	
	Number	Share	Amount	Share	Amount	Share
Tooele	698	2.9%	\$38,429.1	1.5%	\$84,165.8	3.7%
Salt Lake	366	0.0%	\$26,617.9	0.0%	\$40,837.2	0.0%
Utah	103	0.0%	\$8,415.3	0.0%	\$8,404.1	0.0%
Davis	57	0.0%	\$5,438.7	0.0%	\$4,089.1	0.0%
Weber	119	0.1%	\$5,888.9	0.1%	\$9,580.3	0.1%
All Others	42	0.0%	\$3,883.6	0.0%	\$4,422.5	0.0%
Total	1,385	0.1%	\$88,673.4	0.1%	\$151,499.1	0.1%

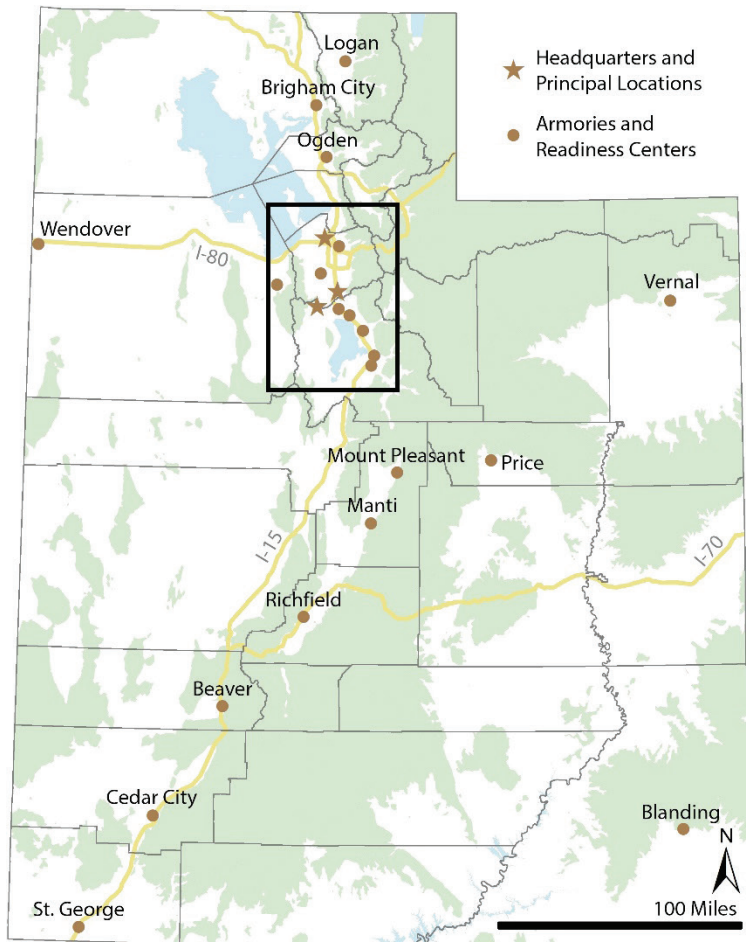
Note: Employment and GDP are by place of work. Personal income is by place of residence. Shares equal employment, personal income and GDP impacts divided by total employment, personal income and GDP in the county (or state for the "Total" row), respectively. Source: Kem C. Gardner Policy Institute analysis using the REMI PI+ model

caused an estimated \$2.1 million in state expenditures annually, comprising \$1.1 million in non-education expenditures, \$554,600 of public education expenditures, and \$447,000 of higher education expenditures. The estimated net fiscal impact is over \$2.3 million in revenue.

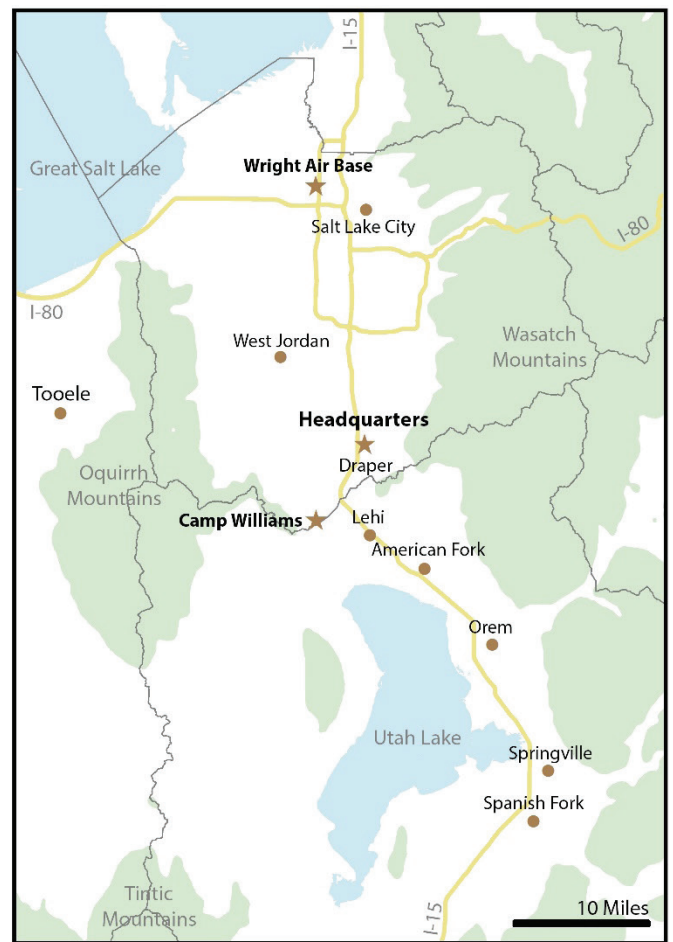
Tooele Army Depot's economic impact extends far beyond its immediate vicinity. Economic linkages carry dollars and jobs from the military installation to most parts of Utah. Based on measures of employment, personal income and GDP in 2019, roughly one-half of TEAD's economic footprint falls outside its home county (Table 22).

Tooele County received the largest economic benefits from the Army Depot: 698 full- and part-time jobs, \$38.4 million in personal income, and \$84.2 million in local GDP (Table 22). These impacts accounted for 2.9% of jobs in Tooele County and 3.7% of the value added (GDP) created at workplaces there in 2019. That year, four other counties each owed at least 57 jobs, \$5.4 million in personal income, and \$4.1 million in GDP to Tooele Army Depot. In 17 counties, at least one local job was supported directly or indirectly by TEAD.

Utah National Guard



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



The Utah National Guard has an armory readiness center or air base in 15 of Utah’s 29 counties, and traditional guard soldiers live in 14 counties (Table 23). However, most guard employees are located in Salt Lake County, where the headquarters and four other facilities are. There is also a strong presence in Utah County, with Camp Williams and several armories.

Compared to FY 2015, the National Guard employed 1,449 fewer employees (-15.6%) in FY 2019 (Table 24). However, the vast majority of this reduction was in part-time traditional guardmembers. For the timeframe, the Guard increased the

number of federal technicians and active guard personnel by 157 and 156 members, respectively.

Utah’s National Guard employed a total of 7,831 full- and part-time personnel and paid \$309 million in wages and salaries in FY 2019. That year, the National Guard employed 5,199 traditional guardmembers, representing two-thirds of total employed. The remainder is made up of federal civilians and federally funded 1,262 state civilians employees (16%) and 1,370 full-time military personnel (18%) (Figure 13).

The National Guard comprises two branches, the Army and the Air Force. In FY 2019, the majority of Utah’s guard was part of Army Guard, which employed 5,907 personnel, about 75% of the total (Table 25). For the same year, Air Guard employed 1,924 personnel, about 25% of the total. The largest roles in each branch were 1,161 active guard personnel for Army Guard and 337 federal technicians for Air Guard.

The Utah National Guard spent \$55.6 million of federal funds in Utah in FY 2019. This consists of contracts, government purchase card transactions, and federal-reimbursed state spending. About two-thirds, \$37.2 million, was spent on construction. Real estate and rental received \$4.2 million,

Utah’s National Guard employed a total of 7,831 full- and part-time personnel and paid \$309 million in wages and salaries in FY 2019.

Table 23: Utah National Guard Employees by County, FY 2019

County	Civilian		Military	
	Federal Technicians	Fed-Reimbursed State Employees	Active Guard Personnel	Traditional Guardmembers
Beaver	3	0	7	68
Box Elder	0	0	11	77
Cache	3	0	19	66
Carbon	0	0	7	89
Iron	0	1	16	103
Salt Lake	914	263	975	3,108
San Juan	0	1	1	28
Sanpete	8	0	10	123
Sevier	4	0	6	71
Tooele	7	0	13	108
Uintah	4	0	3	59
Utah	23	1	194	771
Washington	16	4	39	263
Weber	9	1	69	265
Total	991	271	1,370	5,199

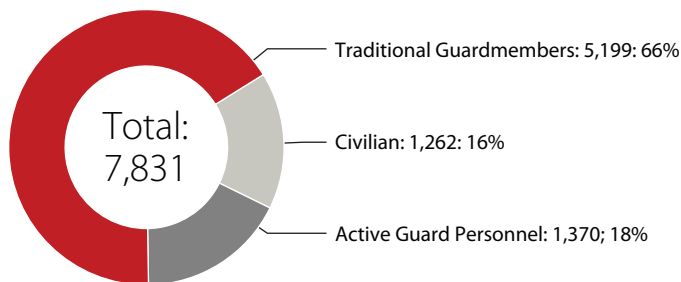
Note: National Guard employees are by place of work.
Source: Kem C. Gardner Policy Institute analysis of Utah National Guard data

Table 24: Utah National Guard Employment and Non-Payroll Spending Comparison, FY 2015 and FY 2019

Area	2015*	2019	Difference	Change
Employment	9,280	7,831	-1,449	-15.6%
Spending	\$53,512,767	\$55,572,993	\$2,232,773	4.2%

Note: Spending consists of contracts, government purchase card transactions, and federal-reimbursed state spending for FY 2015 and FY 2019, respectively.
* All 2015 spending has been inflation adjusted to 2019 dollars
Source: Kem C. Gardner Policy Institute analysis of data from Utah National Guard

Figure 13: Utah National Guard Employees by Type, FY 2019



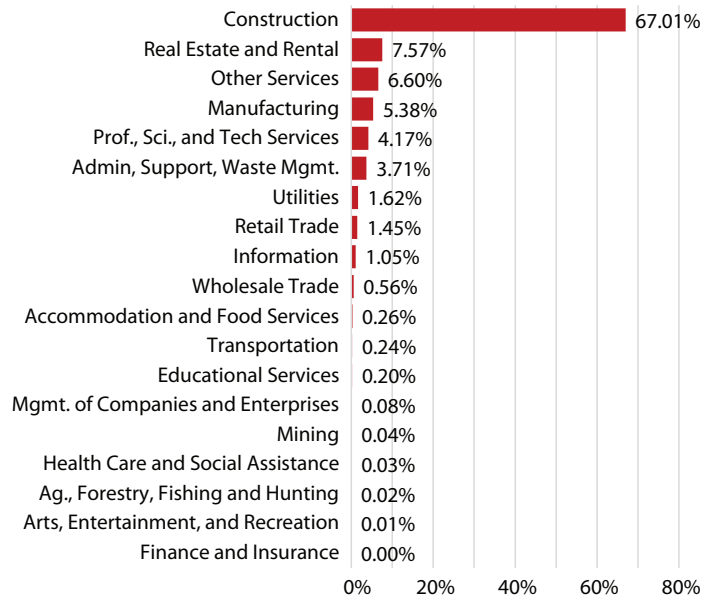
Source: Kem C. Gardner Policy Institute analysis of Utah National Guard data

Table 25: Utah National Guard Employees by Service, FY 2019

Service	Civilian		Military	
	Federal Technicians	Fed-Reimbursed State Employees	Active Guard Personnel	Traditional Guardmembers
Army	654	231	1,161	3,861
Air Force	337	40	209	1,338
Total	991	271	1,370	5,199

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

Figure 14: Utah National Guard Non-Payroll Spending in Utah by Industry, FY 2019



Source: Utah National Guard

Table 26: Utah National Guard Non-Payroll Spending in Utah by Industry, FY 2019

Sector	Total
Agriculture, Forestry, Fishing and Hunting	\$11,406
Mining	\$22,486
Utilities	\$902,923
Construction	\$37,236,994
Manufacturing	\$2,990,986
Wholesale Trade	\$313,606
Retail Trade	\$805,298
Transportation	\$131,511
Information	\$583,632
Finance and Insurance	\$283
Real Estate and Rental	\$4,204,802
Professional, Scientific and Technical Services	\$2,314,946
Management of Companies and Enterprises	\$43,856
Admin, Support, and Waste Management	\$2,063,864
Educational Services	\$110,306
Health Care and Social Assistance	\$17,500
Arts, Entertainment, and Recreation	\$5,000
Accommodation and Food Services	\$147,019
Other Services	\$3,666,576
Total	\$55,572,993

Source: Utah National Guard

Table 27: Statewide Economic Impacts of the Utah National Guard, 2019

(Millions of Dollars)

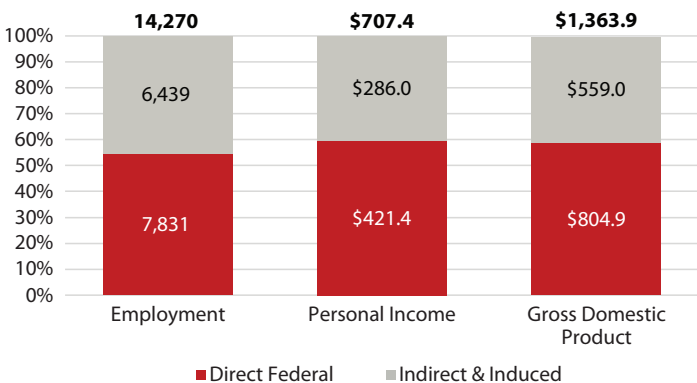
Category	Direct*	Indirect & Induced	Total
Air Guard Employment	1,924	1,610	3,534
Army Guard Employment	5,907	4,829	10,736
Total Employment	7,831	6,439	14,270
Air Guard Personal Income	\$87.1	\$59.1	\$146.2
Army Guard Personal Income	\$334.3	\$226.9	\$561.2
Total Personal Income	\$421.4	\$286.0	\$707.4
Air Guard Gross Domestic Product	\$151.8	\$105.4	\$257.2
Army Guard Gross Domestic Product	\$653.1	\$453.6	\$1,106.7
Total Gross Domestic Product	\$804.9	\$559.0	\$1,363.9

* 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

Figure 15: Statewide Economic Impacts of the Utah National Guard, 2019

(Millions of Dollars)



Note: Direct employment 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

almost 8% (Table 26 and Figure 14). Of total spend, the Army Guard's share was about 88% and Air Guard's share was just over 12%. Compared with 2015 inflation-adjusted data, the Guard's spend was about \$2.2 million (4.2%) higher in 2019 (Table 24).

Table 28: Statewide Fiscal Impacts of the Utah National Guard, 2019

(Thousands of Dollars)

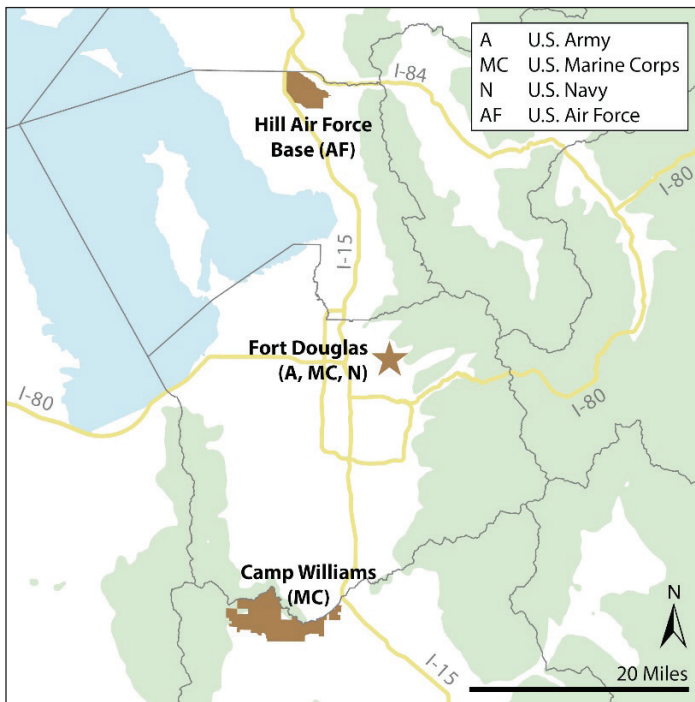
Impact	Amount
Personal Income Tax Revenues	\$17,158.7
Corporate Income Tax Revenues	\$1,003.4
State Sales Tax Revenues	\$16,708.8
Total State Revenues	\$34,870.9
Non-Education Expenditures	\$8,956.9
State Public Education Expenditures	\$3,027.9
Higher Education Expenditures	\$4,686.5
Total State Operating Expenditures	\$16,671.2
Net State Operating Revenue	\$18,199.6

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 federal employment, payroll and in-state spending supported nearly 14,300 jobs and \$707.4 million in personal income in Utah in 2019 (Table 27 and Figure 15). Over 3,500 of these jobs and \$146.2 million in personal income are attributed to Air Guard, while Army Guard's share of total impact are 10,736 jobs and \$561.2 million in personal income. The Guard's federally funded operations contributed almost \$1.4 billion to the state's GDP; about \$257.2 million supported by Air Guard, and \$1.1 billion supported by Army Guard.

National Guard 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 National Guard. These amounted to \$34.9 million in income and sales tax revenues and \$16.7 million in education and non-education expenditures in 2019 (Table 28). The net fiscal impact was \$18.2 million in revenue.

RESERVES



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

The reserve branches of the armed forces employed 5,053 military personnel and 373 federal civilians in Utah in 2019 (Table 29). This level of employment represents a modest decrease from 5,106 reservists and 399 civilian employees in 2015, a change of 79 jobs. Most military personnel were reservists who drill on weekends and two weeks a year to prepare for active-duty deployments. Active-duty personnel work full-time to train and support reservists.

In the 419th Fighter Wing, the Air Force employed 1,050 traditional reservists, 180 dual military/civilian reservists, 10 active guard reserves, and an additional 28 civilians in 2019. The Army had 3,138 personnel based in Utah and reporting to the 76th Operational Response Command at Fort Douglas. These included 162 civilian employees and an estimated 2,824 reservists and 314 active-duty military personnel. As for the Navy Reserve, 410 reservists plus 21 full-time military and one civilian worked at Ft. Douglas. Finally, the 23rd Marine Regiment operated two units in Utah. The 2nd Battalion consisted of 84

The presence of military reserve operations contributed an estimated \$534.0 million to the state's GDP in 2019.

Table 29: Reserves Employment in Utah, 2019

Service and Type	Military	Civilian	Location
Air Force	1,240	208	Hill AFB
Reservists ¹	1,230	N/A	
Active duty	10	N/A	
Army ²	3,138	162	Fort Douglas
Reservists	2,824	N/A	
Active duty	314	N/A	
Navy	431	1	Fort Douglas
Reservists	410	N/A	
Active duty	21	N/A	
Marine Corps ³	244	2	Fort Douglas & Camp Williams
Reservists	219	N/A	
Active duty	25	N/A	
Total	5,053	373	

N/A = not available

1. Air Force Reserve civilians include 180 dual civilian/military personnel, Air Reserve Technicians, who count in both columns.
2. Reservist and active-duty employment estimated using nine-to-one ratio the Army Reserve in Utah provided in 2016.
3. Marine Corps employment includes 94 military personnel in the 2nd Battalion at Fort Douglas and 150 military personnel and 2 civilian employees in the 4th Battalion at Camp Williams.

Source: America's Army Reserve At a Glance: 2020; Defense Manpower Data Center; and personal communication with the 419th Fighter Wing (Air Force), 76th Operational Response Command (Army), Navy Operational Support Center Salt Lake City, and 2nd and 4th Battalions, 23rd Marines

Table 30: Statewide Economic Impacts of Military Reserves, 2019

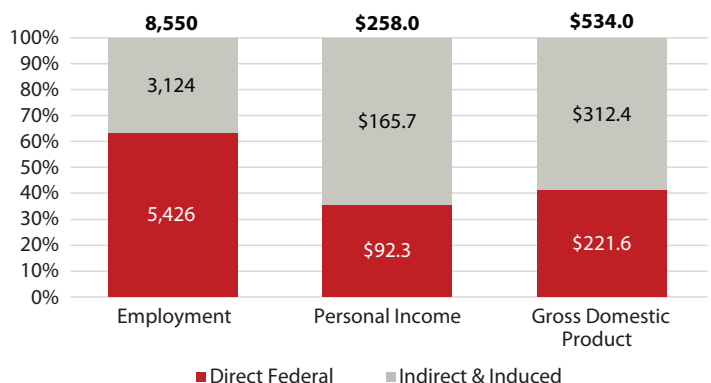
(Thousands of Dollars)

Category	Direct	Indirect & Induced	Total
Employment	5,426	3,124	8,550
Personal Income	\$92,334.1	\$165,700.9	\$258,034.9
Gross Domestic Product	\$221,631.3	\$312,394.4	\$534,025.8

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

Figure 16: Statewide Economic Impacts of Military Reserves, 2019

(Millions of Dollars)



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

Table 31: Statewide Fiscal Impacts of Military Reserves, 2019
(Thousands of Dollars)

Impact	Amount
Personal Income Tax Revenues	\$6,259.4
Corporate Income Tax Revenues	\$615.7
State Sales Tax Revenues	\$6,096.2
Total State Revenues	\$12,971.3
Non-Education Expenditures	\$2,614.8
State Public Education Expenditures	\$1,354.7
Higher Education Expenditures	\$1,038.9
Total State Operating Expenditures	\$5,053.3
Net State Operating Revenue	\$7,918.0

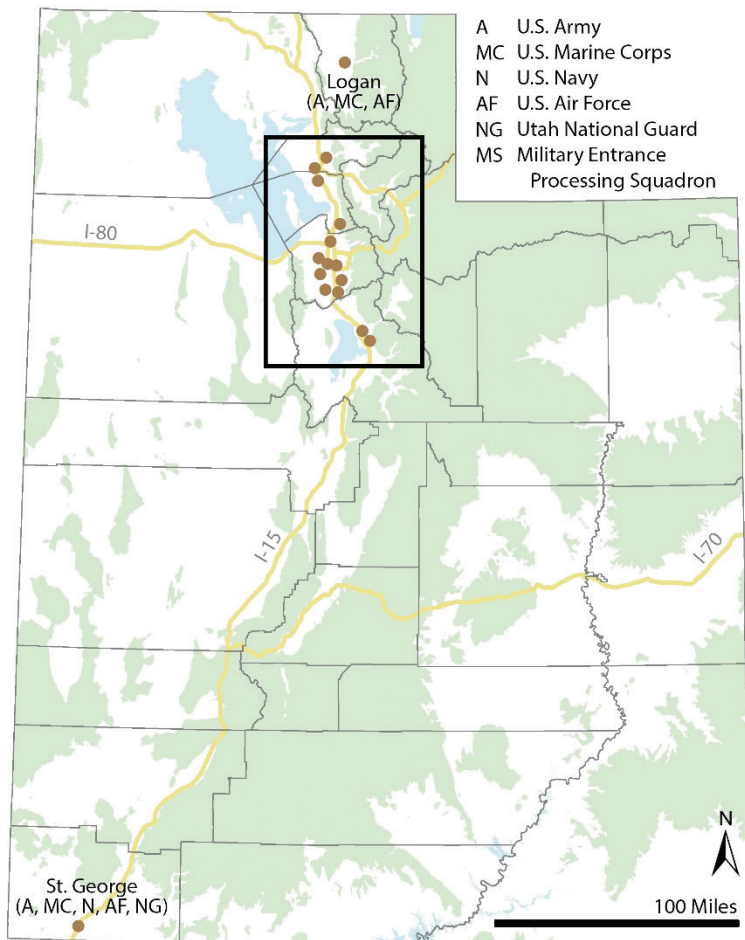
Source: Kem C. Gardner Policy Institute analysis using the Gardner Policy Institute fiscal model

reservists and 10 active-duty personnel at Ft. Douglas, while the 4th Battalion included 135 reservists, 15 active-duty personnel, and two civilians at Camp Williams.

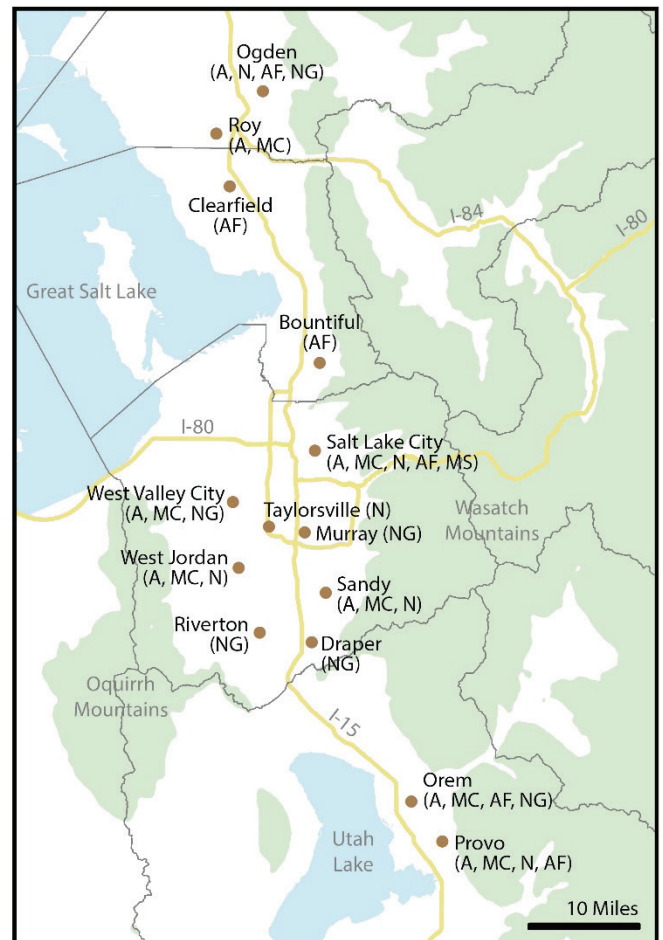
The statewide economic impact of military reserves employment included 8,550 Utah jobs and \$258.0 million in personal income (Table 30 and Figure 16). This consisted of the 5,426 direct jobs with \$92.3 million in personal income, plus 3,124 indirect and induced jobs and \$165.7 million in personal income. The presence of military reserve operations contributed an estimated \$534.0 million to the state's GDP in 2019.

The associated fiscal impacts of the military reserves included \$13.0 million in state tax revenues and \$5.1 million in state expenditures (Table 31). The net fiscal impact on the state was \$7.9 million in revenues in 2019.

MILITARY RECRUITING



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



For all branches of the military services, except for the Coast Guard, recruiters in Utah provide information and services for residents who may be interested in a military career. In 2019, six counties had a recruiting storefront or office: Cache, Weber, Davis, Salt Lake, Utah, and Washington. Total recruiting employment of

421 jobs (Table 32) represents a more than 20% increase from the 342 military recruiting jobs the state had in 2015.

For the Army, 105 military and 20 civilian personnel in the Salt Lake City Recruiting Battalion staffed 11 offices in five counties. The Utah National Guard had a combined 105 recruiting

Table 32: Military Recruiting in Utah, 2019

Service	Personnel			Recruiting Sites
	Military	Civilian	Total	
Army	105	20	125	11
Air Force*	45	8	53	8
Utah Air National Guard*	11	0	11	1
Utah Army National Guard*	93	1	94	5
Marine Corps	45	2	47	11
Navy	40	2	42	8
Military Entrance Processing Squadron	12	37	49	1
Total	351	70	421	45

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

Source: Personal communications

Total recruiting employment of 421 jobs represents a more than 20% increase from the 342 military recruiting jobs the state had in 2015.

employees at six Air and Army National Guard sites. The Air Force employed 53 military personnel and civilian employees in its 372nd Recruiting Group. While the 368th Recruiting Squadron has offices in five counties, the 348th Squadron for health professions operates from Hill Air Force Base. The Marine Corps dedicated 45 military and two civilian personnel to recruiting from 11 locations in population centers statewide. The Navy was represented by 42 recruiting personnel at eight sites. Finally, the Military Entrance Processing Squadron employed 49 military and civilian personnel in Salt Lake City.

The statewide impacts of 351 military and 70 federal civilian recruiting jobs in 2019 included 1,282 total Utah jobs and \$72.4 million in personal income (Table 33 and Figure 17). In addition to the 421 direct federal jobs with \$24.5 million in personal income, total economic impacts included 861 indirect and induced jobs and \$47.9 million of personal income. Recruiting activities contributed \$143.2 million to state GDP.

This activity also generated fiscal impacts of over \$3.6 million in state income and sales tax revenues and \$2.7 million in education and non-education expenditures (Table 34). The net impact was \$898,900 in revenue.

Table 33: Statewide Economic Impacts of Military Recruiting, 2019

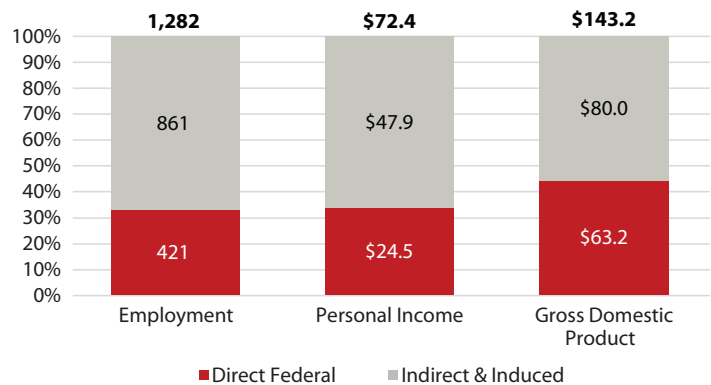
(Thousands of Dollars)

Category	Direct	Indirect & Induced	Total
Employment	421	861	1,282
Personal Income	\$24,490.4	\$47,892.9	\$72,383.3
Gross Domestic Product	\$63,183.6	\$80,026.5	\$143,210.1

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

Figure 17: Statewide Economic Impacts of Military Recruiting, 2019

(Millions of Dollars)



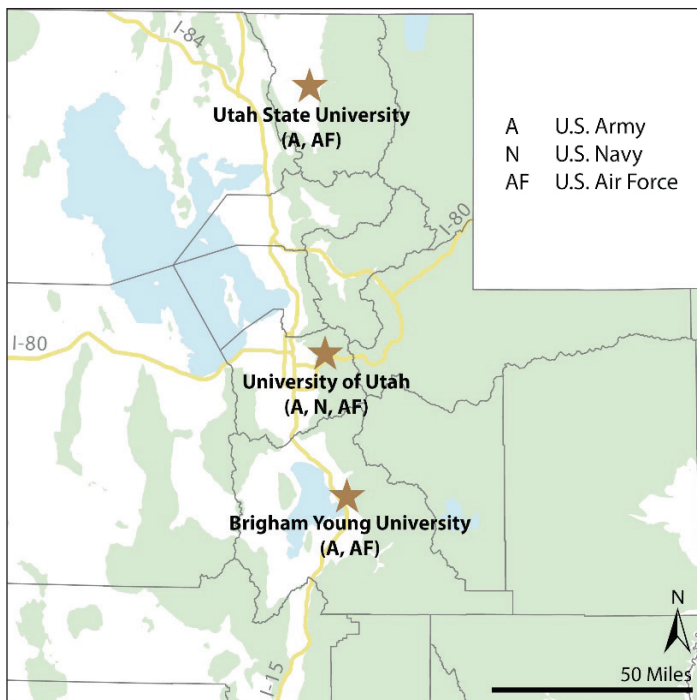
Source: Kem C. Gardner Policy Institute analysis using the REMI PI+ model

Table 34: Statewide Fiscal Impacts of Military Recruiting, 2019

(Thousands of Dollars)

Impact	Amount
Personal Income Tax Revenues	\$1,755.5
Corporate Income Tax Revenues	\$159.9
State Sales Tax Revenues	\$1,709.8
Total State Revenues	\$3,625.1
Non-Education Expenditures	\$1,495.0
State Public Education Expenditures	\$361.9
Higher Education Expenditures	\$869.4
Total State Operating Expenditures	\$2,726.2
Net State Operating Revenue	\$898.9

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



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

The Army, Navy and Air Force all have Reserve Officer Training Corps (ROTC) programs in Utah. ROTC programs at Utah's universities employed 60 military personnel, 13 federal civilians, and 9 state employees in 2019 (Table 35). The total of 82 jobs represents an increase from 75 ROTC jobs in 2015.

Army ROTC battalions educate student cadets at Utah State University (USU), University of Utah (U of U), Brigham Young University (BYU), and Weber State University (WSU). With cross-town arrangements with Utah Valley University (UVU) and Southern Utah University (SUU), the BYU battalion employed 14 military personnel and seven civilians in 2019. The U of U battalion had nine military personnel, four civilians, and cross-town arrangements with Westminster College and Salt Lake Community College. WSU's Army ROTC battalion employed seven military personnel and four civilians. Finally, four military personnel and two civilians were part of USU's faculty and staff.

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

Only the U of U has a Naval ROTC battalion, which also serves the Marine Corps. Five military personnel and three civilians train cadets enrolled at the U of U and Westminster College.

Table 35: ROTC Employment in Utah by County, 2019

County	Military Personnel	Federal Civilian	State Civilian	Total
Cache – USU	10	1	2	13
Salt Lake – U of U	20	5	3	28
Utah – BYU	23	5	2	30
Weber – WSU	7	2	2	11
Total	60	13	9	82

Note: Civilian job counts separated by funding source. ROTC employees are by place of work. Source: ROTC program websites and personal communication

Table 36: Selected ROTC Cadets and Scholarships Paid in Utah, 2019–2020 Academic Year

Service/School	Cadets	Scholarships	Stipends
Air Force			
Brigham Young University ¹	110	\$200,990	N/A
Utah State University	142	\$426,355	\$250,223
University of Utah ²	140	\$408,880	\$154,870
Army³			
Brigham Young University ⁴	248	\$694,400	\$525,000
Utah State University	78	\$231,500	\$37,860
University of Utah ⁵	77	\$1,040,705	\$209,160
Weber State University	N/A	N/A	N/A
Navy/Marine Corps			
University of Utah ⁶	32	\$498,635	\$75,000
Total	827	\$3,501,466	\$1,252,113

N/A = not available

Note:

1. Includes cadets attending Utah Valley University. Due to an incomplete information request response, enrollment last updated for 2015–16 academic year. Scholarships for that year adjusted for inflation to 2019 dollars. Stipend estimate not available.
2. Includes cadets attending Salt Lake Community College, Weber State University and Westminster College.
3. Does not represent all Army ROTC cadets and scholarships paid in Utah as the program at Weber State University did not respond to Gardner Institute requests.
4. Includes cadets attending Utah Valley University and Southern Utah University.
5. Includes cadets attending Salt Lake Community College and Westminster College.
6. Includes cadets attending Weber State University and Westminster College.

Source: Personal communication with individual Reserve Officer Training Corps programs

During the 2019–2020 academic year, at least 809 ROTC cadets attended Utah colleges and universities. Many of them received student aid from the Department of Defense, at least \$3.5 million in scholarships and \$1.5 million in stipends, collectively. The Gardner Institute did not receive complete responses from every Air Force and Army ROTC program. However, Table 36 is more complete than a corresponding table for 2015. Compared with the Institute's previous study, researchers were able to document 242 more cadets in the 2019–2020 academic year, as well as \$1.8 million in additional student aid, after adjusting for inflation to \$2.9 million in 2015. These

differences are largely due to improved ROTC program responsiveness for this study, although some programs did grow.

From Fall 2019 to Summer 2020, 392 college students participated in Air Force ROTC programs. At USU, over \$676,500 in scholarships and stipends benefitted 142 Air Force cadets. The U of U enrolled 140 cadets and provided \$563,750 in student aid during the academic year. Finally, 110 Air Force cadets from BYU and UVU were awarded an estimated \$201,000 in scholarships, aside from stipends.

With three out of four programs reporting, Army ROTC involved at least 403 cadets in Utah during the 2019–2020 school year. A Utah County battalion enrolled 248 cadets from BYU, UVU, and SUU. They received a collective \$1.2 million in scholarships and stipends. USU’s battalion had 78 cadets and provided almost \$269,400 in student aid. Finally, the U of U enrolled 77 cadets in Army ROTC classes and paid \$1.2 million in student aid. Researchers did not receive information from WSU’s Army ROTC program.

Table 37: Statewide Economic Impacts of Federal ROTC Employment, 2019

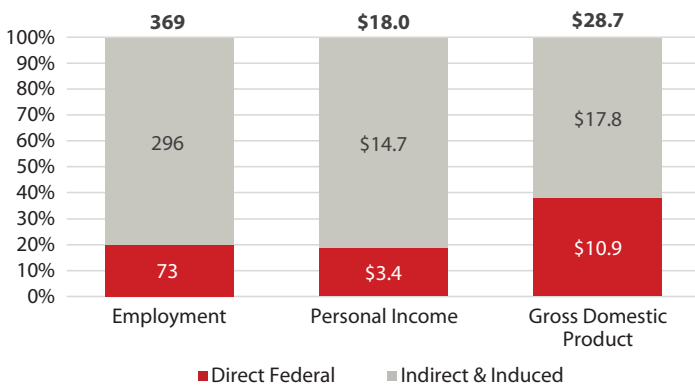
(Thousands of Dollars)

Category	Direct	Indirect & Induced	Total
Employment	73	296	369
Personal Income	\$3,374.0	\$14,651.6	\$18,025.6
Gross Domestic Product	\$10,920.1	\$17,810.3	\$28,730.4

Source: Kem C. Gardner Policy Institute analysis using the REMI PI+ model and student and young adult spending profiles from the U.S. Department of Education, Integrated Postsecondary Education Data System, and the U.S. Bureau of Labor Statistics, Consumer Expenditure Survey

Figure 18: Statewide Economic Impacts of Federal ROTC Employment, 2019

(Millions of Dollars)



Source: Kem C. Gardner Policy Institute analysis using the REMI PI+ model and student and young adult spending profiles from the U.S. Department of Education, Integrated Postsecondary Education Data System, and the U.S. Bureau of Labor Statistics, Consumer Expenditure Survey

The state’s only Naval ROTC unit involved 32 cadets at the U of U, including two from Westminster, and one from WSU. Scholarship and stipend recipients among these Navy and Marine Corps cadets received over \$573,600 during the 2019–2020 academic year.

The economic impact of federal employment by ROTC programs in 2019 included 369 jobs and \$18.0 million in personal income (Table 37 and Figure 18). The Gardner Institute estimated economic impacts for the 2019 calendar year based on 2019–2020 academic-year inputs. This part of the analysis does not include the nine civilian jobs at ROTC programs that were funded by the state government. Unlike federal military and civilian jobs, state-funded employment is supported by money from within Utah, not outside dollars coming into the state.

Economic impacts include 73 federal military and civilian jobs in direct employment at ROTC units, which provided annual personal incomes estimated at \$3.4 million. Utah spending from those personal incomes and from \$4.7 million in scholarships and stipends generated an additional 296 indirect and induced jobs and \$14.7 million in personal income.⁵ Overall, ROTC contributed \$28.7 million to the state’s GDP.

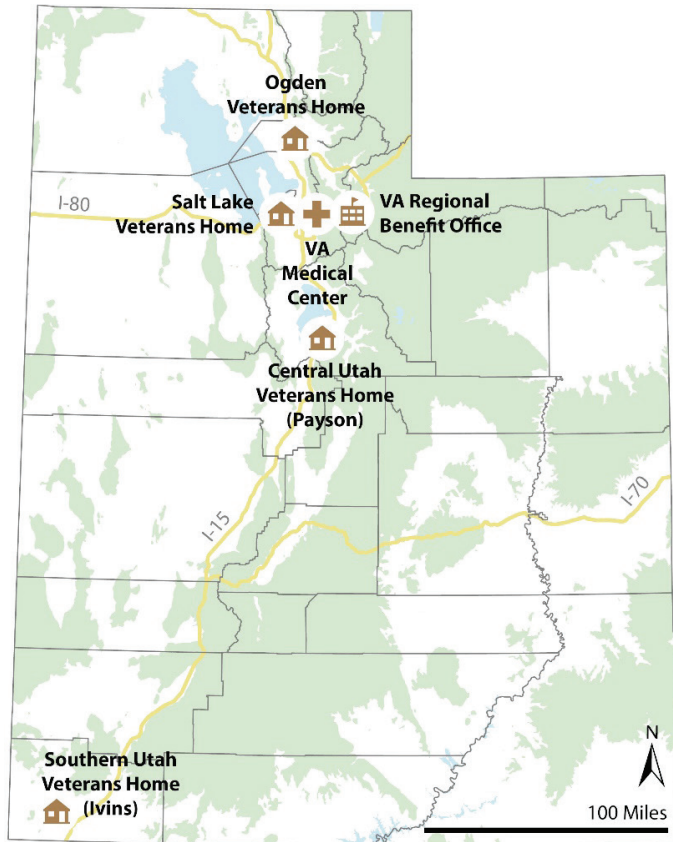
The fiscal impacts associated with these economic impacts include \$902,200 in state income and sales tax revenues, and \$671,800 in education and non-education expenditures (Table 38). This produces a positive net revenue impact of \$230,300.

Table 38: Statewide Fiscal Impacts of Federal ROTC Employment, 2019

(Thousands of Dollars)

Impact	Amount
Personal Income Tax Revenues	\$437.2
Corporate Income Tax Revenues	\$39.2
State Sales Tax Revenues	\$425.8
Total State Revenues	\$902.2
Non-Education Expenditures	\$362.1
State Public Education Expenditures	\$117.0
Higher Education Expenditures	\$192.7
Total State Operating Expenditures	\$671.8
Net State Operating Revenue	\$230.3

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 Gardner Policy Institute fiscal model



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

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.

From FY 2015 to FY 2019, total in-state federal spending on behalf of veterans grew by 10.1%, increasing from \$2.0 billion

From FY 2015 to FY 2019, total in-state federal spending on behalf of veterans grew by 10.1%, increasing from \$2.0 billion inflation-adjusted dollars to nearly \$2.2 billion.

Table 39: Direct Effects Comparison for Veterans in Utah, FY 2015 and FY 2019

(Millions of Dollars)

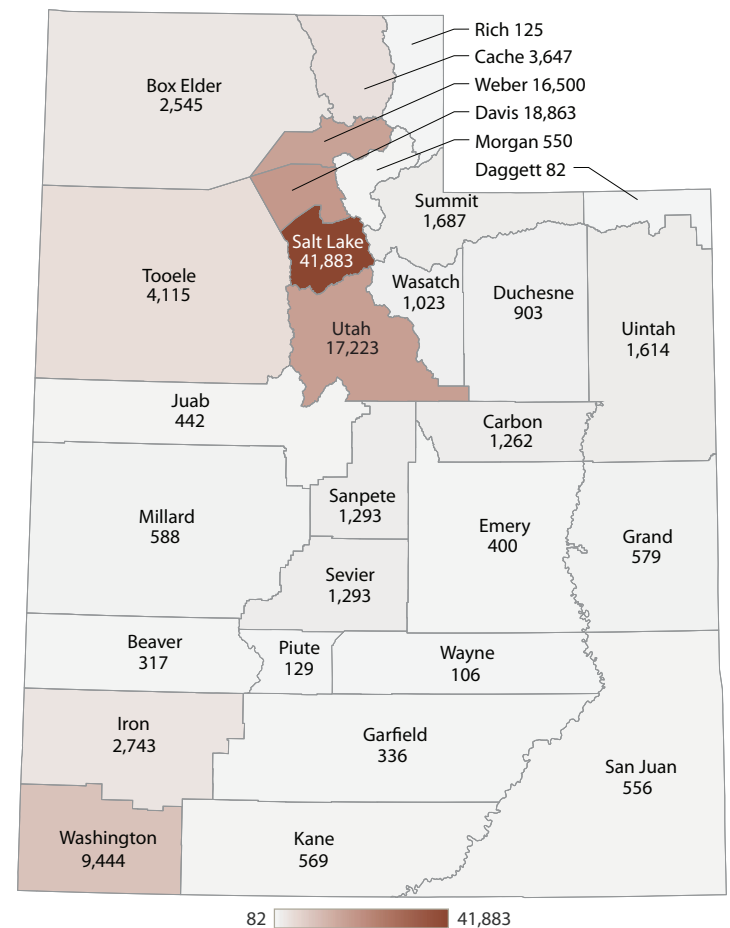
Impact	2015*	2019	Change
Direct Employment (jobs)	3,010	3,972	32.0%
VA SLC Health Care System	2,365	3,174	34.2%
VA Regional Benefit Office	645	798	23.8%
Total Compensation	\$315.3	\$423.1	34.2%
Total VA Transfer Payments	\$642.9	\$710.3	10.5%
DOD military pensions	\$477.3	\$475.6	-0.3%
Construction Expenditures	\$3.8	\$4.3	12.0%
Medical Care Expenditures	\$527.6	\$547.8	3.8%
VA Grants to Utah Recipients	\$26.9	\$34.8	29.5%

Note: The VA SLC Health Care System and Regional Benefit Office did not have FY 2019 employment and payroll data available. FY 2020 data was substituted, as numbers were similar to FY 2019.

* All 2015 spending has been inflation adjusted to 2019 dollars.

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 19: Veterans by County in Utah, 2019



Source: U.S. Department of Veterans Affairs, National Center for Veterans Analysis and Statistics; U.S. Department of Defense, Office of the Actuary, 2019 Statistical Report on the Military Retirement System; U.S. Census Bureau

inflation-adjusted dollars to nearly \$2.2 billion (Table 39). Additionally, there are millions of dollars of VA contract spending in Utah that do not come through the local office or regional contract office (see Defense Contracts and Grants section).

There were 130,817 veterans in Utah in 2019, 17,762 of which were military retirees; this is a decrease of about 20,000 (13%) veterans compared with 2015. The largest numbers of veterans were in Salt Lake, Davis, Utah and Weber counties (Table 40 and Figure 19). Retirees are concentrated in Davis, Salt Lake and Weber counties, with relatively strong presences in Utah and Washington counties too. Veterans represented 6.5% of Utah's adult population in 2019.

Table 40: Veterans by County in Utah, 2019

County	Military Retirees	All Veterans	Share of Adult Population
Beaver	40	317	7.5%
Box Elder	339	2,545	7.5%
Cache	474	3,647	4.5%
Carbon	87	1,262	8.5%
Daggett	8	82	10.7%
Davis	4,494	18,863	9.6%
Duchesne	48	903	7.0%
Emery	25	400	5.6%
Garfield	17	336	9.0%
Grand	35	579	7.8%
Iron	319	2,743	7.6%
Juab	50	442	6.0%
Kane	48	569	10.4%
Millard	60	588	6.7%
Morgan	149	550	8.2%
Piute	13	129	11.3%
Rich	10	125	8.1%
Salt Lake	4,076	41,883	5.5%
San Juan	27	556	5.0%
Sanpete	155	1,293	6.2%
Sevier	117	1,293	9.0%
Summit	219	1,687	5.9%
Tooele	495	4,115	9.5%
Uintah	88	1,614	6.9%
Utah	1,941	17,223	4.4%
Wasatch	117	1,023	4.9%
Washington	1,159	9,444	7.8%
Wayne	8	106	5.6%
Weber	3,144	16,500	10.8%
Total	17,762	130,817	6.5%

Note: Military retiree counts are for September 30 of each year. Veteran and adult populations are estimated as of July 1.
 Source: U.S. Department of Veterans Affairs, National Center for Veterans Analysis and Statistics; U.S. Department of Defense, Office of the Actuary, 2019 Statistical Report on the Military Retirement System and supporting data received by email in response to an information request; Kem C. Gardner Policy Institute Population Estimates

Medical Facilities

The medical facilities and veterans homes together employ nearly 3,200 people with a payroll of \$349.8 million, an increase of 809 jobs and \$92.4 million in compensation from FY 2015 inflation-adjusted amounts. In FY 2019, the VA spent \$4.3 million on construction in Salt Lake County and \$547.8 million on medical care statewide (Table 39). In addition, the VA funded \$34.8 million in grants to state, local and nonprofit organizations in Utah. Almost \$30.1 million of this grant money went to the four veterans homes in the state.

Table 41: VA Medical Care Expenditures in Utah by County of Patient Residence, FY 2019

County	Medical Care Expenditures		Patients Served	
	Dollars (Thousands)	Share	Unique Patients	Share
Beaver	\$1,410.9	0.3%	77	0.2%
Box Elder	\$8,236.6	1.5%	693	1.9%
Cache	\$8,668.0	1.6%	889	2.4%
Carbon	\$5,149.4	0.9%	403	1.1%
Daggett	\$347.4	0.1%	34	0.1%
Davis	\$54,506.3	10.0%	4,619	12.3%
Duchesne	\$5,647.1	1.0%	363	1.0%
Emery	\$2,215.0	0.4%	161	0.4%
Garfield	\$881.1	0.2%	97	0.3%
Grand	\$4,024.9	0.7%	271	0.7%
Iron	\$7,153.2	1.3%	848	2.3%
Juab	\$2,630.5	0.5%	165	0.4%
Kane	\$1,724.5	0.3%	171	0.5%
Millard	\$1,479.1	0.3%	138	0.4%
Morgan	\$2,260.5	0.4%	142	0.4%
Piute	\$330.4	0.1%	31	0.1%
Rich	\$394.7	0.1%	31	0.1%
Salt Lake	\$278,609.1	50.9%	13,750	36.7%
San Juan	\$2,244.6	0.4%	207	0.6%
Sanpete	\$5,113.2	0.9%	402	1.1%
Sevier	\$4,530.4	0.8%	327	0.9%
Summit	\$3,794.1	0.7%	342	0.9%
Tooele	\$17,949.3	3.3%	1,160	3.1%
Uintah	\$5,979.3	1.1%	530	1.4%
Utah	\$44,100.5	8.1%	3,749	10.0%
Wasatch	\$3,073.6	0.6%	284	0.8%
Washington	\$25,915.8	4.7%	3,364	9.0%
Wayne	\$382.1	0.1%	35	0.1%
Weber	\$49,011.4	8.9%	4,167	11.1%
Total	\$547,762.9	100%	37,450	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.
 Source: U.S. Department of Veterans Affairs, National Center for Veterans Analysis and Statistics

Table 42: Income and Financial Support Received by Utah Veterans, FY 2019 (Thousands of Dollars)

County	Compensation & Pensions ¹	Military Retiree Pensions ²	Education & Employment ³	Insurance & Indemnities ⁴	Total
Beaver	\$1,216.4	\$768.1	\$60.8	\$30.8	\$2,076.1
Box Elder	\$10,468.0	\$7,256.5	\$1,095.0	\$108.1	\$18,927.6
Cache	\$16,249.2	\$13,331.9	\$4,778.7	\$138.1	\$34,497.9
Carbon	\$6,060.1	\$1,693.4	\$257.2	\$188.3	\$8,198.9
Daggett	\$327.6	\$173.4	\$7.7	\$0.0	\$508.7
Davis	\$103,685.0	\$121,813.9	\$15,628.3	\$1,272.8	\$242,400.0
Duchesne	\$3,982.6	\$962.5	\$167.8	\$17.6	\$5,130.6
Emery	\$1,657.6	\$591.1	\$108.6	\$33.5	\$2,390.9
Garfield	\$1,198.9	\$498.3	\$37.1	\$1.0	\$1,735.3
Grand	\$2,269.4	\$1,060.0	\$67.0	\$10.7	\$3,407.2
Iron	\$14,454.9	\$8,375.2	\$8,081.5	\$183.2	\$31,094.7
Juab	\$2,431.4	\$832.2	\$219.4	\$0.7	\$3,483.7
Kane	\$2,963.9	\$1,167.2	\$110.8	\$87.5	\$4,329.4
Millard	\$2,439.8	\$1,310.5	\$101.6	\$28.5	\$3,880.3
Morgan	\$3,359.4	\$5,180.5	\$319.1	\$32.7	\$8,891.6
Piute	\$385.5	\$277.6	\$24.1	\$26.8	\$714.0
Rich	\$457.4	\$304.4	\$24.5	\$0.0	\$786.3
Salt Lake	\$180,963.4	\$104,266.3	\$30,557.5	\$2,793.7	\$318,580.9
San Juan	\$2,252.1	\$686.6	\$229.7	\$7.8	\$3,176.2
Sanpete	\$5,704.7	\$3,057.2	\$363.2	\$45.2	\$9,170.3
Sevier	\$5,264.8	\$2,247.2	\$194.7	\$70.1	\$7,776.8
Summit	\$4,620.1	\$9,723.0	\$739.7	\$273.3	\$15,356.0
Tooele	\$20,197.1	\$10,758.8	\$2,209.5	\$176.3	\$33,341.7
Uintah	\$4,959.3	\$1,858.0	\$394.4	\$96.8	\$7,308.6
Utah	\$65,353.6	\$57,575.7	\$13,294.3	\$1,110.8	\$137,334.4
Wasatch	\$3,616.1	\$4,028.5	\$425.8	\$26.8	\$8,097.2
Washington	\$53,645.2	\$35,287.7	\$7,254.9	\$893.4	\$97,081.1
Wayne	\$284.4	\$123.1	\$8.8	\$29.1	\$445.4
Weber	\$82,652.0	\$80,434.8	\$11,794.4	\$981.3	\$175,862.5
Total	\$603,120.0	\$475,643.6	\$98,556.0	\$8,664.8	\$1,185,984.5

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 \$445.9 million in DOD payments to veterans who retired from the armed forces, usually after at least 20 years of service, as well as \$29.7 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.

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

In FY 2019 the VA's Salt Lake City Health Care System, which includes clinics, vet centers and veterans homes throughout the state, served 37,450 unique patients who live in Utah (Table 41). Medical care expenses for these patients amounted to \$547.8 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 26.9% of medical care spending. About 37% of Utah patients receiving medical care from the VA in FY 2019 lived in Salt Lake County, down 2.7 percentage points from FY 2015.

Benefits

Total transfer payments to veterans in Utah were \$1.2 billion in FY 2019. 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 42). The largest of these was VA compensation and pensions, totaling \$603.1 million, an increase of \$107.8 million (34%) from FY 2015 inflation-adjusted data. Military retiree pensions were second at \$475.6 million. In FY 2019, the VA paid \$98.6 million in education and employment benefits and \$8.7 million in insurance and indemnities; decreasing from FY 2015 inflation-adjusted

amounts by 30.2% and 35.8%, respectively. Following the veteran population, the largest amounts of payments went to Salt Lake (\$318.6 million), Davis (\$242.4 million), Weber (\$175.9 million) and Utah (\$137.3 million) counties. In addition, the regional benefits office in Salt Lake City provides 798 jobs with a \$73.3 million payroll, an increase of 153 jobs and \$15.4 million in compensation from FY 2015.

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 \$53.1 million in FY 2019. This is 9.0% less compared with the \$58.3 million in veteran contract spending in FY 2015 inflation-adjusted data. Three sectors accounted for 81.3% of the total: health care (\$24.6 million), construction (\$12.5 million), and manufacturing (\$6.0 million). Another 10.9% (\$5.8 million) went to administration and waste management (Table 43 and Figure 20). Additional VA contract spending in Utah that did not come through the local office or regional network contract office is included in "Impacts of Non-Installation Defense Contracts" in the Contacts and Grants section.

The impacts on Utah's economy of federal spending on veterans, comprising VA benefits, VA operations, VA grants and DOD pensions, include 36,140 jobs (direct plus indirect and induced), \$3.3 billion in personal income, and \$3.2 billion in state GDP (Table 44). The impacts of military pensions alone were about 8,500 jobs, \$900.5 million in personal income, and \$735.6 million in state GDP. Statewide, the impact of federal spending

Table 43: Regional and Local Office VA Contract Spending in Utah by Industry, FY 2019

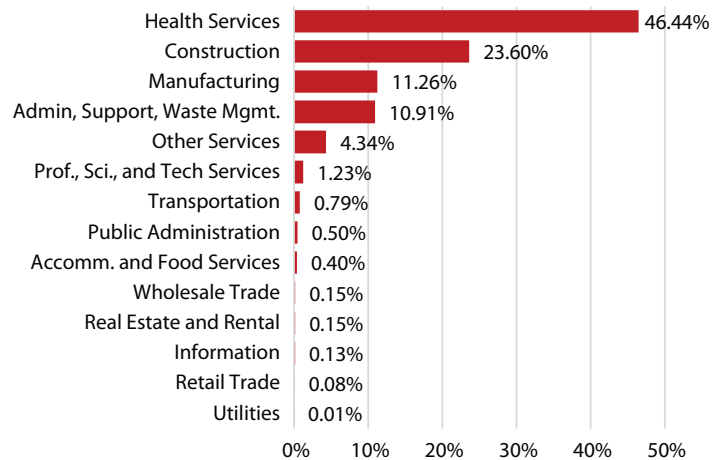
Sector	Amount
Utilities	\$4,095
Construction	\$12,523,851
Manufacturing	\$5,974,792
Wholesale Trade	\$81,296
Retail Trade	\$44,539
Transportation	\$420,933
Information	\$69,161
Real Estate and Rental	\$77,459
Professional, Scientific and Technical Services	\$653,945
Admin, Support, and Waste Management	\$5,787,533
Health Care and Social Assistance	\$24,638,962
Accommodation and Food Services	\$209,973
Other Services	\$2,303,934
Public Administration	\$265,872
Total	\$53,056,343

Note: Amounts are dollars obligated.
Source: Kem C. Gardner Policy Institute analysis of data from USAspending.com

for veterans are sizable, accounting for 1.8% of employment, 2.2% of personal income, and 1.8% of GDP (Figure 21).

Veteran spending also impacted 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 \$162.5 million in state income and sales taxes and \$157.3 million in state education and non-education spending (Table 45). Federal funding for veterans'

Figure 20: Regional and Local Office VA Contract Spending in Utah by Industry, FY 2019



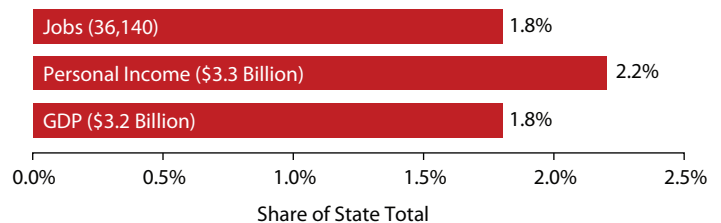
Note: Amounts are dollars obligated.
Source: Kem C. Gardner Policy Institute analysis of data from USAspending.com

Table 44: Statewide Economic Impacts of Federal Spending for Veterans, 2019
(Millions of Dollars)

Impact	Amount
Total Employment	36,140
Personal Income	\$3,282.8
Gross Domestic Product	\$3,215.3

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

Figure 21: Statewide Economic Impacts of Federal Spending for Veterans, 2019



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 45: Statewide Fiscal Impacts of Federal Spending for Veterans, 2019

(Millions of Dollars)

Impact	Amount
Personal Income Tax Revenues	\$79.6
Corporate Income Tax Revenues	\$5.3
State Sales Tax Revenues	\$77.5
Total State Revenues	\$162.5
Non-Education Expenditures	\$96.0
State Public Education Expenditures	\$43.4
Higher Education Expenditures	\$17.9
Total State Operating Expenditures	\$157.3
Net State Operating Revenue	\$5.2

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

education may offset somewhat the \$17.9 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 \$5.2 million in revenue.

Utah's veteran population and supporting organizations provided far-reaching benefits to counties throughout Utah. Table 46 shows combined direct, indirect and induced impacts, with emphasis on 10 counties which each derived at least 347 jobs and \$25.3 million in personal income and GDP from federal spending for veterans in 2019.

Salt Lake, the county with the largest economy and population in Utah, can attribute about 2% of its economic activity in 2019 to veteran pensions, VA health care, and other VA and DOD

Table 46: Economic Impacts of Federal Spending for Veterans by County, 2019

(Shares of County Totals, Millions of Dollars)

County	Employment		Personal Income		Gross Domestic Product	
	Number	Share	Amount	Share	Amount	Share
Salt Lake	19,483	2.1%	\$1,372.6	2.2%	\$1,916.2	2.1%
Utah	4,185	1.1%	\$419.5	1.6%	\$321.9	1.2%
Davis	4,192	2.1%	\$538.1	3.1%	\$306.9	2.0%
Weber	3,387	2.4%	\$351.4	3.2%	\$247.5	2.3%
Washington	1,493	1.5%	\$151.9	2.3%	\$116.0	1.6%
Summit	564	1.3%	\$73.3	1.3%	\$71.7	1.4%
Cache	812	1.0%	\$73.7	1.5%	\$59.4	1.1%
Toole	378	1.6%	\$75.5	2.8%	\$35.3	1.5%
Box Elder	355	1.2%	\$42.1	2.0%	\$29.1	1.1%
Iron	347	1.3%	\$43.6	2.5%	\$25.3	1.3%
All Others	945	0.7%	\$141.0	1.4%	\$86.0	0.6%
Total	36,140	1.8%	\$3,282.8	2.2%	\$3,215.3	1.8%

Note: Employment and GDP are by place of work. Personal income is by place of residence. Shares equal employment, personal income and GDP impacts divided by total employment, personal income and GDP in the county (or state for the "Total" row), respectively.

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

spending for this population (Table 46). That year, because of this spending, Salt Lake County held 19,483 jobs and received over \$1.3 billion and \$1.9 billion in personal income and GDP, respectively.

Three counties—Utah, Davis, and Weber—owe roughly 1% to 3% of their jobs, personal income and GDP to federal spending for veterans in the state. Each county benefitted from between about 3,400 and 4,200 jobs, aggregate personal income between \$351.4 million and \$538.1 million, and GDP between \$247.5 million and \$321.9 million.

Department of Defense Retired Civilians

Many retirees who live in Utah once held civilian jobs with the Department of Defense (DOD) under permanent or temporary appointments. The Office of Personnel Management (OPM)—which manages pensions for the federal civilian workforce—sends hundreds of millions of dollars annually in pension payments to Utah DOD retirees. Since the vast majority of retiree pension money comes from outside of Utah, these dollars have an economic impact that grows the state’s economy.

In 2019, Utah was home to a total of 19,430 retired DOD civilians. The majority of these retirees live in counties in close proximity to a military installation, such as Hill AFB in Davis

Total pension payments to retirees in Utah were over \$600 million in FY 2019, averaging \$31,327 per retiree.

Table 47: DOD Retired Civilians and Pension Payments by County in Utah, 2019

County	Retirees	Share	Pension Payments*	Share
Beaver	20	0.1%	\$582,648	0.1%
Box Elder	599	3.1%	\$18,022,716	3.0%
Cache	325	1.7%	\$9,012,612	1.5%
Carbon	28	0.1%	\$679,752	0.1%
Daggett	14	0.1%	\$278,832	0.0%
Davis	5,213	26.8%	\$171,758,724	28.2%
Duchesne	41	0.2%	\$1,045,500	0.2%
Emery	18	0.1%	\$524,328	0.1%
Garfield	12	0.1%	\$382,200	0.1%
Grand	20	0.1%	\$503,004	0.1%
Iron	112	0.6%	\$3,558,480	0.6%
Juab	56	0.3%	\$1,386,852	0.2%
Kane	29	0.1%	\$821,784	0.1%
Millard	27	0.1%	\$630,900	0.1%
Morgan	237	1.2%	\$8,527,152	1.4%
Piute	8	0.0%	\$243,144	0.0%
Rich	9	0.0%	\$325,284	0.1%
Salt Lake	2,973	15.3%	\$81,541,560	13.4%
San Juan	6	0.0%	\$138,072	0.0%
Sanpete	81	0.4%	\$2,191,440	0.4%
Sevier	62	0.3%	\$1,376,280	0.2%
Summit	97	0.5%	\$3,061,860	0.5%
Tooele	1,656	8.5%	\$48,217,308	7.9%
Uintah	29	0.1%	\$714,708	0.1%
Utah	873	4.5%	\$25,304,496	4.2%
Wasatch	49	0.3%	\$1,818,408	0.3%
Washington	966	5.0%	\$32,522,364	5.3%
Wayne	10	0.1%	\$275,100	0.0%
Weber	5,860	30.2%	\$193,235,424	31.7%
Total	19,430	100%	\$608,680,932	100%

* Annual pensions are calculated from monthly rates.

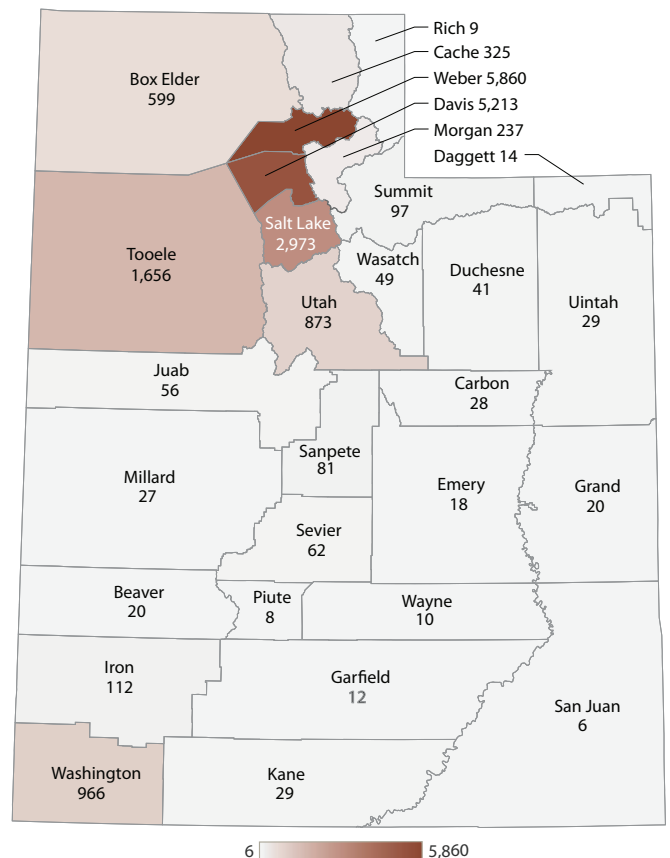
Source: Kem C. Gardner Policy Institute analysis of data from the United States Office of Personnel Management

County or the Army Depot and Dugway Proving Ground in Tooele County. The largest numbers of retirees were in Weber (5,860), Davis (5,213), Salt Lake (2,973) and Tooele (1,656) counties (Table 47 and Figure 22). While over 80% of all retirees resided within these four counties, at least six retirees resided within each of the 25 other counties in Utah.

Total pension payments to retirees in Utah were over \$600 million in FY 2019, averaging \$31,327 per retiree (Table 47). Following the retiree population, 81.3% of payments went to Weber (\$193.2 million), Davis (\$171.8 million), Salt Lake (\$81.5 million) and Tooele (\$48.2 million) counties.

The impacts on Utah’s economy of federal pension spending by retired civilians include almost 11,000 jobs, \$1,144.2 million in personal income, and \$926.6 million in state GDP (Table 48).

Figure 22: DOD Retired Civilians by County in Utah, 2019



Source: Kem C. Gardner Policy Institute analysis of data from the United States Office of Personnel Management

These totals represent between 0.51% and 0.78% of all Utah jobs, personal income and GDP (Figure 23).

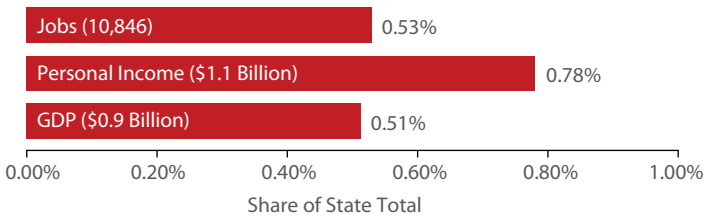
While the impacts of retired civilians are sizable, these figures alone do not account for the full extent of payments to civilian retirees. Prior to the late 1980s, DOD civilian retirees received only a pension and did not pay into or collect from Social Security. Beginning in 1987, the previous arrangement was replaced with the Federal Employees Retirement System (FERS).⁶ In addition to a Basic Benefits plan (i.e., pension), the new FERS includes Social Security and a Thrift Savings Plan, similar to a standard 401(k). Incorporating retiree Social Security and 401(k) benefits spent in Utah would paint a more accurate picture of the true value of retirement benefits for all DOD civilian retirees. However, this data is not publicly available and would be difficult to estimate.

Table 48: Statewide Economic Impacts of DOD Retired Civilians Pension Payments, 2019
(Millions of Dollars)

Impact	Amount
Total Employment	10,846
Personal Income	\$1,144.2
Gross Domestic Product	\$926.6

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

Figure 23: Statewide Economic Impacts of DOD Retired Civilians Pension Payments, 2019



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

Table 49: Statewide Fiscal Impacts of DOD Retired Civilians Pension Payments, 2019
(Millions of Dollars)

Impact	Amount
Personal Income Tax Revenues	\$27.8
Corporate Income Tax Revenues	\$1.7
State Sales Tax Revenues	\$27.0
Total State Revenues	\$56.4
Non-Education Expenditures	\$33.3
State Public Education Expenditures	\$15.1
Higher Education Expenditures	\$6.2
Total State Operating Expenditures	\$54.6
Net State Operating Revenue	\$1.8

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

DOD civilian retiree spending also impacted the state's finances. The combined effects of personal income tax revenues, corporate income tax revenues, and state sales tax revenues produced an estimated \$56.4 million in state income and sales taxes and \$54.6 million in state education and non-education spending (Table 49). Personal income and sales tax revenues were the primary sources of income from retirees, each generating around \$27.5 million in state revenue. However, economic migrants and dependents of retirees prompted additional public investments—the largest being \$33.3 million in non-education expenses. Netting out expenditures from taxes, the net fiscal impact was \$1.8 million in state operating revenue.

The economic activity of DOD retired civilians reached communities throughout Utah, with at least six local jobs being directly or indirectly supported by pension spending in every county. Even with its far reach, three-fourths of all economic impacts were in Salt Lake, Weber, and Davis counties.

Salt Lake County had the largest share of economic benefits: 3,182 full- and part-time jobs and \$236.1 million in personal income, amounting to \$337.0 million in local GDP (Table 50). Weber and Davis counties owe roughly 1% to 3% of their jobs, personal income, and GDP to pension spending of civilian retirees in the state. Residents of each county benefitted with 2,730 and 2,282 jobs, \$313.0 and \$286.0 million in personal income, and \$200.1 million and \$165.6 million in GDP, respectively. Tooele also had relatively large impacts, similarly ranging between 1% and 3% of countywide jobs, personal income, and GDP.

Table 50: Economic Impacts of DOD Retired Civilians Pension Payments, 2019
(Shares of County Totals, Millions of Dollars)

County	Employment		Personal Income		Gross Domestic Product	
	Number	Share	Amount	Share	Amount	Share
Salt Lake	3,182	0.3%	\$236.1	0.4%	\$337.0	0.4%
Weber	2,730	1.9%	\$313.0	2.8%	\$200.1	1.8%
Davis	2,282	1.2%	\$286.0	1.7%	\$165.6	1.1%
Utah	867	0.2%	\$77.9	0.3%	\$68.4	0.3%
Washington	429	0.4%	\$48.2	0.7%	\$34.2	0.5%
Tooele	309	1.3%	\$65.8	2.5%	\$27.9	1.2%
Cache	330	0.4%	\$25.7	0.5%	\$26.5	0.5%
Summit	155	0.4%	\$14.0	0.3%	\$20.4	0.4%
Box Elder	249	0.8%	\$33.0	1.6%	\$19.3	0.7%
All Others	314	0.2%	\$44.7	0.4%	\$27.1	0.2%
Total	10,846	0.5%	\$1,144.2	0.8%	\$926.6	0.5%

Note: Employment and GDP are by place of work. Personal income is by place of residence. Shares equal employment, personal income and GDP impacts divided by total employment, personal income and GDP in the county (or state for the "Total" row), respectively.

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

Defense Contracts and Grants

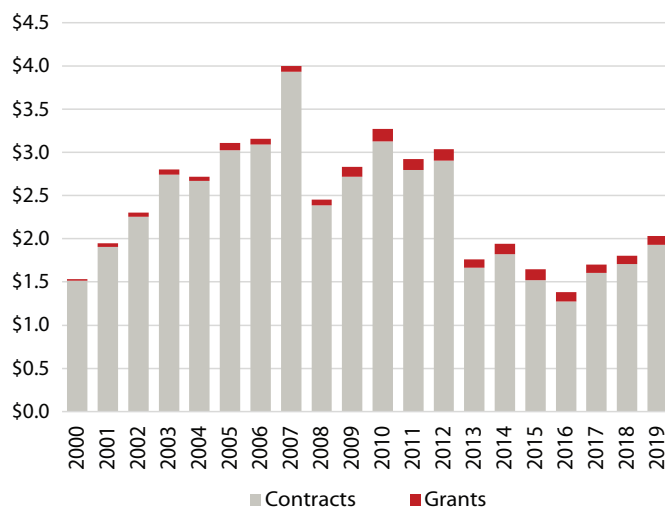
In FY 2019, Utah's economy benefited from \$4.4 billion in federal funding from defense contracts and grants including all sub-awards. Much of this activity is included in impacts for Utah defense installations and organizations. This section emphasizes additional economic and fiscal impacts from Department 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 2019. Then, economic and fiscal impact results for 2019 are given separately for non-installation contracts and all grants.

DOD and VA Prime Contracts and Grants in Utah, FY 2000–FY 2019

From FY 2015 to FY 2019, the total value of DOD and VA prime contracts and grants in Utah grew by 23%, increasing \$400 million inflation-adjusted dollars. This is still well below the 20-year peak of \$4.0 billion reached in 2007, just before the financial crisis (Figure 24 and Table 51). Total DOD and VA contracts and grants fell to a 20-year low of \$1.4 billion in FY

Figure 24: Defense Contracts and Grants in Utah, Prime Awards FY 2000–FY 2019

(Billions of Constant FY 2019 Dollars)



Note: Includes awards performed in Utah from the Department of Defense and Department of Veterans Affairs.
Source: USAspending.gov

Table 51: Defense Contracts and Grants in Utah, Prime Awards, FY 2000–FY 2019

(Millions of Constant FY 2019 Dollars)

Fiscal Year	Contracts			Grants			Contracts & Grants		
	DOD	VA	Total	DOD	VA	Total	DOD	VA	Total
2000	\$1,473.4	\$18.0	\$1,491.3	\$41.4	\$1.9	\$43.3	\$1,514.7	\$19.9	\$1,534.6
2001	\$1,865.4	\$39.9	\$1,905.3	\$40.6	\$2.1	\$42.7	\$1,906.0	\$42.0	\$1,948.0
2002	\$2,204.4	\$50.4	\$2,254.8	\$47.8	\$2.1	\$49.9	\$2,252.2	\$52.5	\$2,304.7
2003	\$2,713.1	\$59.6	\$2,772.7	\$28.9	\$2.2	\$31.1	\$2,742.0	\$61.8	\$2,803.8
2004	\$2,636.4	\$43.4	\$2,679.8	\$34.6	\$2.3	\$36.9	\$2,671.0	\$45.7	\$2,716.7
2005	\$2,983.3	\$82.2	\$3,065.5	\$38.8	\$2.2	\$41.0	\$3,022.1	\$84.5	\$3,106.5
2006	\$3,060.4	\$66.5	\$3,127.0	\$28.0	\$2.3	\$30.3	\$3,088.4	\$68.9	\$3,157.3
2007	\$3,898.4	\$66.9	\$3,965.3	\$35.5	\$0.0	\$35.5	\$3,933.9	\$66.9	\$4,000.7
2008	\$2,331.6	\$70.4	\$2,402.0	\$52.4	\$0.1	\$52.5	\$2,384.0	\$70.5	\$2,454.5
2009	\$2,643.2	\$110.1	\$2,753.4	\$75.6	\$0.0	\$75.6	\$2,718.8	\$110.1	\$2,829.0
2010	\$3,071.1	\$128.0	\$3,199.2	\$52.9	\$16.2	\$69.1	\$3,124.0	\$144.3	\$3,268.3
2011	\$2,721.6	\$118.7	\$2,840.3	\$71.7	\$11.5	\$83.1	\$2,793.3	\$130.2	\$2,923.5
2012	\$2,849.8	\$103.8	\$2,953.6	\$55.8	\$27.6	\$83.4	\$2,905.6	\$131.4	\$3,037.0
2013	\$1,618.5	\$94.6	\$1,713.0	\$48.4	\$1.4	\$49.8	\$1,666.8	\$96.0	\$1,762.8
2014	\$1,723.4	\$99.2	\$1,822.6	\$98.3	\$20.8	\$119.1	\$1,821.7	\$120.0	\$1,941.7
2015	\$1,437.8	\$92.2	\$1,530.0	\$85.8	\$29.3	\$115.1	\$1,523.6	\$121.5	\$1,645.1
2016	\$1,198.8	\$108.2	\$1,307.0	\$74.0	\$2.0	\$76.0	\$1,272.8	\$110.3	\$1,383.0
2017	\$1,441.1	\$67.4	\$1,508.5	\$164.5	\$30.4	\$194.9	\$1,605.7	\$97.7	\$1,703.4
2018	\$1,631.2	\$67.8	\$1,699.0	\$74.8	\$27.0	\$101.8	\$1,706.0	\$94.8	\$1,800.8
2019	\$1,864.0	\$67.6	\$1,931.7	\$63.1	\$34.8	\$97.9	\$1,927.2	\$102.4	\$2,029.6

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.
Source: USAspending.gov

Table 52: Value of Defense Contracts and Grants Performed in Utah, FY 2019

(Millions of Dollars)

Type of Contract or Grant	Contracts			Grants			Contracts & Grants		
	DOD	VA	Total	DOD	VA	Total	DOD	VA	Total
Utah Prime Awards (Unadjusted) ¹	\$1,864.0	\$67.6	\$1,931.7	\$63.1	\$34.8	\$97.9	\$1,927.2	\$102.4	\$2,029.6
Utah Prime Awards (Adjusted) ²	\$1,747.0	\$58.6	\$1,805.6	\$63.1	\$34.8	\$97.9	\$1,810.1	\$93.3	\$1,903.5
Add: Utah Sub-Awards for Non-Utah Primes ³	\$2,694.4	\$0.6	\$2,695.0	\$6.5	\$0.0	\$6.5	\$2,700.9	\$0.6	\$2,701.5
Subtract: Out-of-State Sub-Awards for Utah Primes ³	\$171.9	\$0.5	\$172.3	\$5.7	\$0.0	\$5.7	\$177.6	\$0.5	\$178.0
Total Awards (Net)	\$4,269.5	\$58.7	\$4,328.2	\$64.0	\$34.8	\$98.7	\$4,333.5	\$93.5	\$4,427.0

1. Adjusted amounts exclude contracts and grants to companies without a Utah presence, since most of the associated economic activity likely did not accrue to Utah.

2. 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.

Source: USAspending.gov

2016, and increased every year since (through at least FY 2019) under an administration focused on national defense spending. Contracts and grants included here are prime awards, without subcontracts or sub-awards for grants performed in Utah.

DOD contracting consistently makes up a majority share of total contract and grant prime awards, ranging from 87% to 97% depending on the year. Total grant awards typically are between 1% and 11% of total awards. VA contracts make up the difference. In FY 2019, DOD contracts and grants accounted for 95% of total Utah awards; the remaining 5% came from the VA.

FY 2019 Contracts and Grants

Economic impact analysis in this section includes defense contract and grant sub-awards, in addition to the prime awards in Table 51. Also, Table 52 shows a downward adjustment from \$2.0 billion in FY 2019 DOD and VA contracts and grants to \$1.9 billion after verifying each contractor and grantee's presence in Utah. Additions and subtractions to account for in-state and out-of-state contract and grant sub-awards combined add a noteworthy \$2.5 billion. Total adjusted prime and sub-awards equal \$4.4 billion, with 98% coming from the DOD.

From FY 2015 to FY 2019, total in-state contract and grant spending increased by nearly 150%, from \$1.8 billion inflation-adjusted dollars to over \$4.4 billion (Table 53). When viewing adjusted prime contracts and grants, Utah brought in \$1.9 billion in FY 2019, an increase of about 23% compared with the \$1.5 billion in FY 2015. Even larger than Utah's gains in prime awards was the net \$2.3 billion increase in sub-awards from FY 2015 to FY 2019. Subcontracts from just three organizations—Northrop Grumman, L-3 Communications, and Moog Inc.—represented 80% of all sub-award increases for the period, totaling \$2.0 of \$2.5 billion in net sub-awards. Of the three, Northrop Grumman and its subsidiary ATK Launch Systems accounted for \$1.6 billion (62%) of Utah's net sub-award contracts in FY 2019; the vast majority of these came from prime contracts through Lockheed Martin Corporation in California.

From FY 2015 to FY 2019, the total value of DOD and VA prime contracts and grants in Utah grew 23%, increasing \$400 million inflation-adjusted dollars.

Table 53: Utah Defense Contracts and Grants Comparison, FY 2015 and FY 2019

(Millions of Dollars)

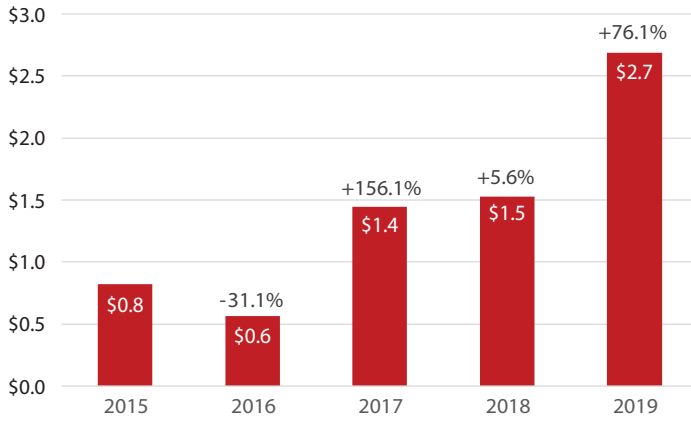
Type of Contract or Grant	2019	2015 ³	Difference	Change
Utah prime awards (unadjusted)	\$2,029.6	\$1,619.1	\$410.5	25.4%
Utah prime awards (adjusted) ¹	\$1,903.5	\$1,542.5	\$361.0	23.4%
Add: Utah sub-awards for non-Utah primes ²	\$2,701.5	\$303.1	\$2,398.5	791.4%
Subtract: Out-of-state sub-awards for Utah primes ²	\$178.0	\$69.9	\$108.1	154.6%
Total Awards (Net)	\$4,427.0	\$1,775.6	\$2,651.3	149.3%

Note: FY 2015 unadjusted amounts pulled from USAspending.gov in 2021 have changed slightly compared with the Gardner Institute's 2017 report. Figure 24 and Table 51 uses the most current data from USAspending.gov, while this table uses FY 2015 data directly from the previous defense study for comparison's sake.

- 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.
- 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.
- All FY 2015 spending has been inflation adjusted to FY 2019 dollars.

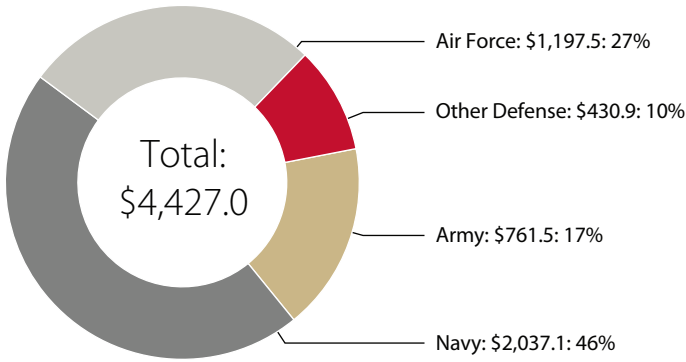
Source: USAspending.gov

Figure 25: Utah Defense Subcontracts, FY 2015–FY 2019
(Billions of Dollars; Annual Percentage Change)



Note: Amounts are for DOD and VA subcontracts performed in Utah, whether the associated prime award was from an in-state or out-of-state company.
Source: Kem C. Gardner Policy Institute analysis of data from USASpending.gov

Figure 26: Total DOD and VA Contracts and Grants by Service, FY 2019



Note: The "Other Defense" category includes contracts and grants from the Department of Veterans Affairs, Defense Logistics Agency, Defense Contract Management Agency, Missile Defense Agency, Defense Health Agency, Defense Advanced Research Projects Agency, U.S. Special Operations Command, and 12 other offices within the DOD.
Source: Kem C. Gardner Policy Institute analysis of data from USASpending.gov

Award amounts of subcontracts where Utah is the primary place of performance have increased in recent years, rising by over 150% from FY 2016 to FY 2017 and over 75% from FY 2018 to FY 2019 (Figure 25). Back in FY 2015 and FY 2016, companies performed less than \$1 billion in defense subcontracts in Utah, adjusted for inflation. By FY 2019, defense subcontracts reached \$2.7 billion.

Figure 26 displays the \$4.4 billion in total contracts and grants broken out by service. In FY 2019, the Navy supported over \$2 billion in contracts and grants in Utah, 46% of the \$4.4 billion total. The Air Force was the next largest, supporting \$1.2 billion or 27%, followed by the Army at \$762 million and other defense making up the remaining \$431 million.

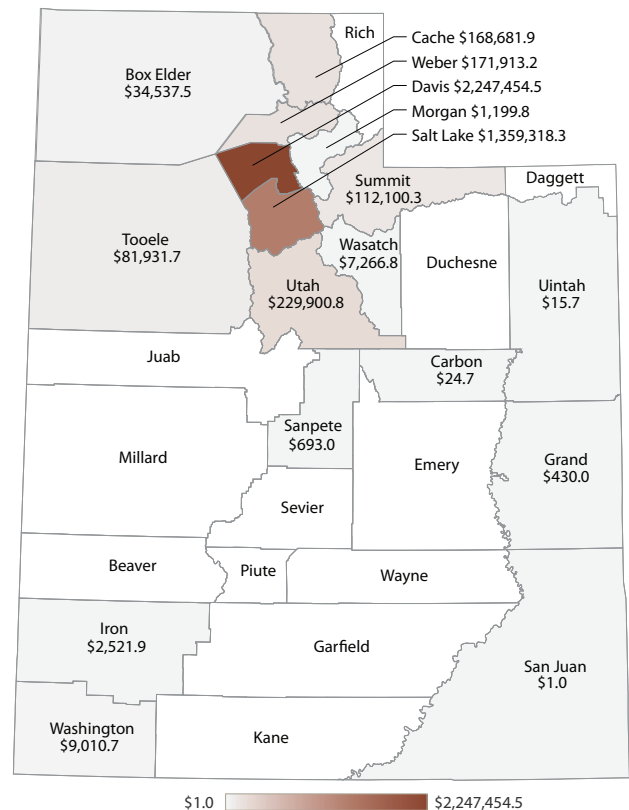
The \$4.4 billion of defense contract and grant spending in Utah in FY 2019 was spread across 17 of the state's 29 counties. The same two counties accounting for the majority share of

Table 54: Total DOD and VA Contract and Grant Dollars Obligated in Utah by County, FY 2019

County	Amount	Share
Davis	\$2,247,454,530	50.8%
Salt Lake	\$1,359,318,317	30.7%
Utah	\$229,900,751	5.2%
Weber	\$171,913,244	3.9%
Cache	\$168,681,903	3.8%
Summit	\$112,100,323	2.5%
Tooele	\$81,931,654	1.9%
Box Elder	\$34,537,501	0.8%
Washington	\$9,010,709	0.2%
Wasatch	\$7,266,798	0.2%
Iron	\$2,521,860	0.1%
Morgan	\$1,199,759	0.0%
Sanpete	\$693,020	0.0%
Grand	\$430,024	0.0%
Carbon	\$24,676	0.0%
Uintah	\$15,749	0.0%
San Juan	\$983	0.0%
Total	\$4,427,001,800	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.
Source: Kem C. Gardner Policy Institute analysis of data from USASpending.gov

Figure 27: Total DOD and VA Contract and Grant Dollars in Utah by County, FY 2019
(Thousands of Dollars)



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

contracts in FY 2015—Davis and Salt Lake—accounted for more than 80% of total DOD and VA contract and grant spending in FY 2019. Organizations in Davis County received over \$2.2 billion, 51% of the statewide total (Table 54 and Figure 27). Salt Lake County captured 31%, with \$1.4 billion. Utah County came in third with \$230.0 million and 5% of the total. The remaining 14 counties received a combined \$590.3 million in defense spending, 13% of the total.

Table 55: DOD and VA Contracts and Grants in Utah by Industry, FY 2019

Sector	Amount
Mining	\$166,770
Utilities	\$6,201,858
Construction	\$187,360,995
Manufacturing	\$1,592,481,939
Wholesale Trade	\$24,563,110
Retail Trade	\$2,536,942
Transportation	\$22,644,621
Information	\$15,595,093
Real Estate and Rental	\$263,312
Professional, Scientific and Technical Services	\$2,318,506,672
Admin, Support, and Waste Management	\$56,151,314
Educational Services	\$72,663,228
Health Care and Social Assistance	\$66,533,324
Arts, Entertainment, and Recreation	\$6,000
Accommodation and Food Services	\$3,315,138
Other Services	\$17,493,861
Public Administration	\$40,517,623
Total	\$4,427,001,800

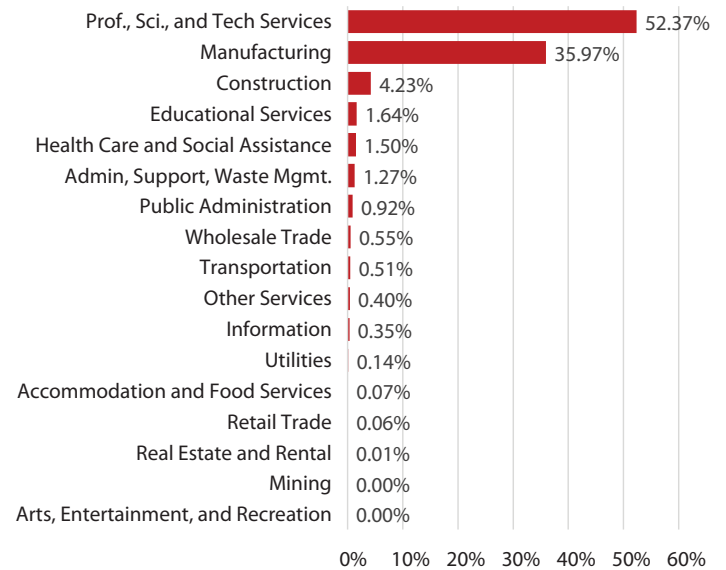
* \$37.1 million of the public administration amount consists of DOD grants to the Utah National Guard.
Source: Kem C. Gardner Policy Institute analysis of data from USASpending.gov

Table 56: Top 10 Defense Contractors in Utah, FY 2019

Company	Amount	Share
Northrop Grumman	\$1,664,276,281	38.5%
L-3 Communications	\$735,883,230	17.0%
Moog Inc.	\$181,389,688	4.2%
Boeing	\$174,245,237	4.0%
Klune Industries	\$146,043,957	3.4%
Utah State University*	\$132,168,277	3.1%
Triumph Gear Systems	\$110,362,135	2.5%
HHI Corporation	\$71,182,211	1.6%
Rockwell Collins	\$44,691,228	1.0%
Sarcos Robotics	\$37,385,760	0.9%
Total	\$3,297,628,005	76.2%

Note: Includes subsidiaries and joint ventures. Shares are of total FY 2019 DOD and VA contracts of \$4.4 billion.
Source: Kem C. Gardner Policy Institute analysis of data from USASpending.gov

Figure 28: DOD and VA Contracts and Grants in Utah by Industry, FY 2019



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

Table 57: Number of Utah Contracts and Contractors from DOD and VA, FY 2019

Type of Contract	DOD	VA	Total
Prime Contracts	22,407	657	23,064
Subcontracts	1,301	1	1,302
Total Number of Contracts	23,708	658	24,366
Contractors Receiving Prime Awards*	776	204	N/A
Contractors Receiving Sub Awards*	114	1	N/A

N/A = not available

* 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.
Source: USASpending.gov

Analyzing DOD and VA spending by industry reveals that just two sectors—professional, scientific and technical services and manufacturing—accounted for 88% of all FY 2019 defense contracts and grants in Utah. The professional, scientific and technical services sector received 52% of defense spending in the state, with \$2.3 billion in contracts and grants, while manufacturing received 36%, almost \$1.6 billion (Table 55 and Figure 28). The next largest sector was construction, with 4% and \$187.4 million. All other sectors' shares were less than 2% each.

Of the \$4.3 billion in defense contracts in Utah, \$3.3 billion (76%) went to 10 contractors. (Table 56). The largest was Northrop Grumman and its subsidiaries (such as ATK), winning \$1.7 billion in contracts, 39% of the total. L-3 Communications received \$735.9 million, 17%. Moog Inc. came in a distant third, with \$181.4 million, representing 4% of all contracts.

Between 776 and 1,095 companies performed DOD or VA contracts in Utah during FY 2019, depending on the degree of overlap in companies with both prime and subcontracts and

companies working for both DOD and VA (Table 57). These companies and other organizations performed over 23,700 DOD contracts and nearly 660 VA contracts, for a total of 24,366 defense contracts in FY 2019. Details for federal grants are discussed in “Impacts of Defense Grants” below.

Impacts of Non-Installation Defense Contracts

Utah’s military bases and organizations are not the only conduits for DOD and VA contract dollars coming into the state. Though Utah’s defense establishment directly and indirectly attracts federal funds, most contract and grant funding does not pass through in-state military installations. In addition to the \$848.4 million in contracts that the Gardner Institute was able to assign to a Utah military installation or VA office, companies in Utah received an additional \$3.5 billion (80%) in DOD and VA contracts in FY 2019. The majority of these contract dollars—almost \$2 billion (56%)—went to professional, scientific and technical services firms (Table 58 and Figure 29). An additional \$1.3 billion purchased manufacturing services (38%), and nearly \$108 million went toward construction (3%).

Northrop Grumman was the largest non-installation contractor, claiming \$1.6 billion—about 46%—of non-installation awards in FY 2019. Over \$1.5 billion of this flowed through Northrop’s Innovation Systems office in Magna, in Salt Lake County. L-3 Communications was the next largest contractor, taking \$725 million, a 21% share of all non-installation contracts. About \$364 million of this went to L-3’s Communication Systems-West office in Salt Lake City.

These additional DOD and VA contracts supported over 73,000 jobs in Utah in 2019 and \$4.0 billion in personal income

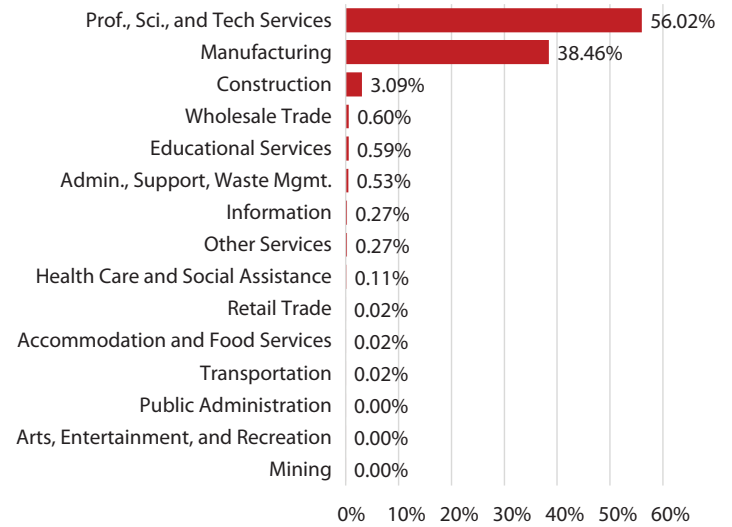
Table 58: Non-Installation DOD and VA Contracts Performed in Utah by Industry, FY 2019

Sector	Amount
Mining	\$5,982
Construction	\$107,693,619
Manufacturing	\$1,338,391,774
Wholesale Trade	\$20,887,051
Retail Trade	\$629,685
Transportation	\$544,725
Information	\$9,438,518
Professional, Scientific and Technical Services	\$1,949,292,431
Admin, Support, and Waste Management	\$18,414,465
Educational Services	\$20,591,896
Health Care and Social Assistance	\$3,984,647
Arts, Entertainment, and Recreation	\$5,995
Accommodation and Food Services	\$617,614
Other Services	\$9,351,333
Public Administration	\$20,044
Total	\$3,479,869,780

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

Figure 29: Non-Installation DOD and VA Contracts Performed in Utah by Industry, FY 2019

(Share of Total)



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

Table 59: Statewide Economic Impacts of Non-Installation DOD and VA Contracts with Utah Companies, 2019

(Millions of Dollars)

Category	Direct*	Indirect & Induced	Total
Employment	27,102	46,023	73,125
Personal Income	\$1,799.3	\$2,195.8	\$3,995.1
Gross Domestic Product	\$1,969.1	\$4,199.5	\$6,168.6

* Direct employment and personal income were estimated by the REMI PI+ model and were not obtained directly from the contract recipients.

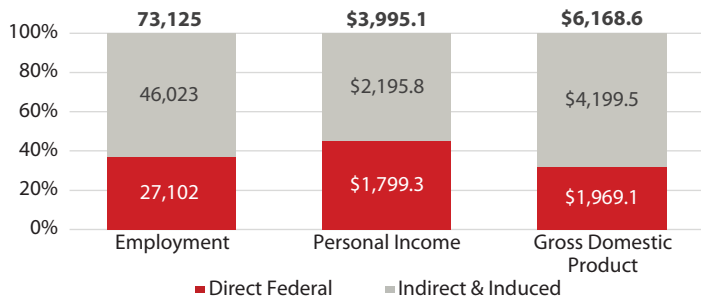
Source: Kem C. Gardner Policy Institute analysis using the REMI PI+ model

(Table 59 and Figure 30). This includes over 27,100 jobs at the contractors themselves, paying \$1.8 billion in personal income. Non-installation contracts contributed almost \$6.2 billion to state GDP. The associated fiscal impacts included \$204.7 million in state income and sales tax revenues and \$103.9 million in state expenditures, for net revenues of \$100.8 million (Table 60).

Recipients of the \$3.5 billion in DOD and VA non-installation contracts produced direct employment, personal income and GDP impacts in every county in Utah during 2019. Between 33% and 42% of impacts went to Salt Lake County, where these additional defense contracts provided nearly 24,000 jobs, \$1.4 billion in personal income, and \$2.6 billion in GDP (Table 61). Davis County job impacts were larger than Salt Lake County’s, with an impressive 29,305 jobs. The county was second in personal income and GDP, amounting to \$1.2 billion and \$2.1 billion, respectively. With Davis being smaller than Salt Lake, these impacts represented a significantly larger share of Davis’ economy, accounting for 15.3% of total jobs, 7.1% of total personal income, and 13.9% of GDP.

Figure 30: Statewide Economic Impacts of Non-Installation DOD and VA Contracts with Utah Companies, 2019

(Millions of Dollars)



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

Table 60: Statewide Fiscal Impacts of Non-Installation Contracts with Utah Companies, 2019

(Millions of Dollars)

Impact	Amount
Personal Income Tax Revenues	\$96.9
Corporate Income Tax Revenues	\$13.4
State Sales Tax Revenues	\$94.4
Total State Revenues	\$204.7
Non-Education Expenditures	\$53.8
State Public Education Expenditures	\$27.8
Higher Education Expenditures	\$22.3
Total State Operating Expenditures	\$103.9
Net State Operating Revenue	\$100.8

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

Table 61: Economic Impacts of Non-Installation DOD and VA Contracts with Utah Companies by County, 2019

(Shares of County Totals, Millions of Dollars)

County	Employment		Personal income		Gross Domestic Product	
	Number	Share	Amount	Share	Amount	Share
Salt Lake	23,889	2.6%	\$1,392.8	2.3%	\$2,575.6	2.9%
Davis	29,305	15.3%	\$1,200.5	7.1%	\$2,113.2	13.9%
Weber	5,463	3.9%	\$499.9	4.7%	\$408.9	3.8%
Utah	4,758	1.3%	\$364.4	1.4%	\$406.4	1.5%
Cache	5,387	6.8%	\$221.6	4.4%	\$298.6	5.4%
Summit	1,162	2.7%	\$91.0	1.7%	\$145.5	3.0%
All Others	3,161	1.0%	\$224.9	1.0%	\$220.4	0.8%
Total	73,125	3.6%	\$3,995.1	2.7%	\$6,168.6	3.4%

Note: Employment and GDP are by place of work. Personal income is by place of residence. Shares equal employment, personal income and GDP impacts divided by total employment, personal income and GDP in the county (or state for the "Total" row), respectively.

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

Beyond Salt Lake and Davis, impacts begin to taper with Weber, Utah, Cache, and Summit counties. However, these impacts are still significant, with each county having at least 1,100 jobs, \$90 million in personal income, and \$145 million in GDP, which make up between 1% and 7% of county totals.

Impacts of Defense Grants

Both the DOD and the VA fund grants to Utah recipients; these totaled \$98.8 million in FY 2019. Nearly 60% of the DOD's \$64.0 million in grants to the state went to the Utah National Guard (\$37.1 million) to help fund its operations (Table 62). Another \$24.3 million went to Utah universities, companies and nonprofit organizations to support scientific, medical, sustainability and technological research. The remaining \$2.6 million went to Herriman City, the Governor's Office of Economic Development, Layton City, and the Department of Environmental Quality. After the National Guard, the University of Utah was the largest single recipient of DOD grants, with \$20.0 million. Other large defense grantees in FY 2019 were Brigham Young University with \$2.1 million, Herriman City with \$1.4 million, and Utah State University with \$1.1 million.

The Department of Veterans Affairs funded \$34.8 million in grants to Utah recipients in FY 2019. All of these funds went to either veterans homes across the state or to other organizations providing social services to veterans, such as the Road Home and the Housing Authority of Salt Lake City (Table 63). The largest beneficiaries were veterans homes, receiving \$6.1 to \$8.7 million, followed by the Road Home (\$1.0 million). The remaining social service organizations each received from \$12,000 to over

Table 62: DOD Grants and Cooperative Agreements in Utah, FY 2019

Recipient	Amount
Utah National Guard	\$37,089,291
University of Utah	\$20,012,269
Brigham Young University	\$2,135,455
City of Herriman: National Guard and Military Operations and Maintenance Projects	\$1,400,000
Utah State University	\$1,067,388
GOED: Procurement Technical Assistance Program	\$620,438
Western Institute for Biomedical Research	\$567,753
Layton City Corporation: HAFB and Utah Test and Training Range (UTTR) Land Use Study	\$346,177
Colorado State University: Dugway Cultural Resource Support	\$233,433
Utah DEQ: Environmental Restoration Program	\$218,000
Space Environment Corporation	\$153,072
Canines With A Cause Foundation, Inc.	\$150,000
Total	\$63,993,276

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

Table 63: VA Grants to Utah Recipients, FY 2019

Recipient	Amount
George E. Wahlen Ogden Veterans Home	\$8,676,378
Central Utah Veterans Home, Payson	\$8,094,434
Southern Utah Veterans Home, Ivins	\$7,877,254
Utah State Veterans Nursing Home, Salt Lake City	\$6,076,719
The Road Home	\$1,034,114
Homeless Veterans Fellowship	\$1,019,436
Housing Authority of Salt Lake City	\$907,301
First Step House, Inc.	\$531,940
National Ability Center	\$294,415
The University of Utah	\$250,000
Continue Mission	\$12,404
Total	\$34,774,395

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

Table 64: Statewide Economic Impacts of DOD and VA Grants to Utah Recipients, 2019

(Thousands of Dollars)

Category	Direct*	Indirect & Induced	Total
Employment	869	970	1,839
Personal Income	\$43,601.7	\$43,630.9	\$87,232.6
Gross Domestic Product	\$37,712.5	\$91,317.8	\$129,030.4

* Direct employment and personal income 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

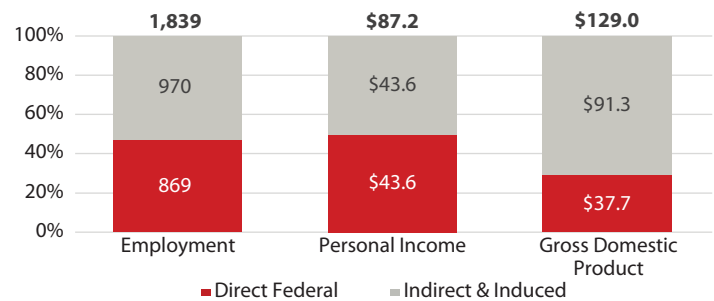
\$1,000,000. VA grants are included in the economic and fiscal impacts shown below and in the Veterans section.

In modeling the economic and fiscal impacts of DOD and VA grants, the Gardner Institute did not include DOD grants to the Utah National Guard, assuming these amounts were captured by their spending numbers, or to Utah cities, the Governor's Office of Economic Development, or the Department of Environmental Quality. After these adjustments, Institute researchers modeled \$58.5 million of DOD and VA grants in Utah. The economic impacts of these grants consisted of 1,839 jobs and over \$87.2 million in personal income in 2019. This includes an estimated 869 direct jobs created by grant recipients with \$43.6 million in personal income. The grants contributed to an estimated \$129.0 million to the state's GDP (Table 64 and Figure 31). These impacts led to \$4.4 million in state tax revenues and \$2.6 million in expenditures, for a net state fiscal impact of \$1.7 million in revenue (Table 65).

The universities, veterans homes and other Utah organizations receiving DOD or VA grants in 2019 are spread across eight counties, mostly along the Wasatch Front. Including indirect and induced effects from the \$58.5 million in grants modeled, these organizations' activity supported employment (at least one job) and production in a total of 19 counties.

Figure 31: Statewide Economic Impacts of DOD and VA Grants to Utah Recipients, 2019

(Millions of Dollars)



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

Table 65: Statewide Fiscal Impacts of DOD and VA Grants to Utah Recipients, 2019

(Thousands of Dollars)

Impact	Amount
Personal Income Tax Revenues	\$2,116.0
Corporate Income Tax Revenues	\$207.1
State Sales Tax Revenues	\$2,060.5
Total State Revenues	\$4,383.6
Non-Education Expenditures	\$1,365.1
State Public Education Expenditures	\$707.0
Higher Education Expenditures	\$565.7
Total State Operating Expenditures	\$2,637.7
Net State Operating Revenue	\$1,745.9

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

Salt Lake captured over 45% of the impacts, with defense grants providing 884 jobs and \$39.2 million in personal income, and adding \$70.9 million to its local GDP in 2019. Utah County was the next largest beneficiary. Defense grants directly and indirectly provided 331 jobs, \$15.7 million in personal income, and \$19.4 million in GDP. Weber, Washington and Davis counties were the next largest beneficiaries, as detailed in Table 66.

Table 66: Economic Impacts of DOD and VA Grants to Utah Recipients by County, 2019

(Shares of County Totals, Thousands of Dollars)

County	Employment		Personal Income		Gross Domestic Product	
	Number	Share	Amount	Share	Amount	Share
Salt Lake	884	0.1%	\$39,235.5	0.1%	\$70,938.2	0.1%
Utah	331	0.1%	\$15,722.5	0.1%	\$19,399.8	0.1%
Weber	249	0.2%	\$8,813.9	0.1%	\$13,760.5	0.1%
Washington	182	0.2%	\$6,132.0	0.1%	\$10,829.1	0.1%
Davis	67	0.0%	\$8,545.4	0.1%	\$5,109.3	0.0%
All Others	126	0.0%	8,783	0.0%	8,993	0.0%
Total	1,839	0.1%	\$87,232.6	0.1%	\$129,030.4	0.1%

Note: Employment and GDP are by place of work. Personal income is by place of residence. Shares equal employment, personal income and GDP impacts divided by total employment, personal income and GDP in the county (or state for the "Total" row), respectively.

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

Trends in Defense Employment and Compensation

The analysis of defense employment and personal income in Utah in previous sections thus far has relied on detailed information reported directly from defense organizations for 2019. Similar extensive data collection for previous years was not feasible. In this section, we show 29-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 2019 job totals from the two approaches is 6%, 34,694 jobs according to BEA and BLS versus 36,875 jobs reported by Utah defense organizations for this study.

Defense Employment in Utah, 1990–2019

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 32 and Figure 33). In 2019, military personnel and civilians with federal defense jobs made up about 2.1% of Utah’s employment total, down from 2.3% in 2015 and 5.5% 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

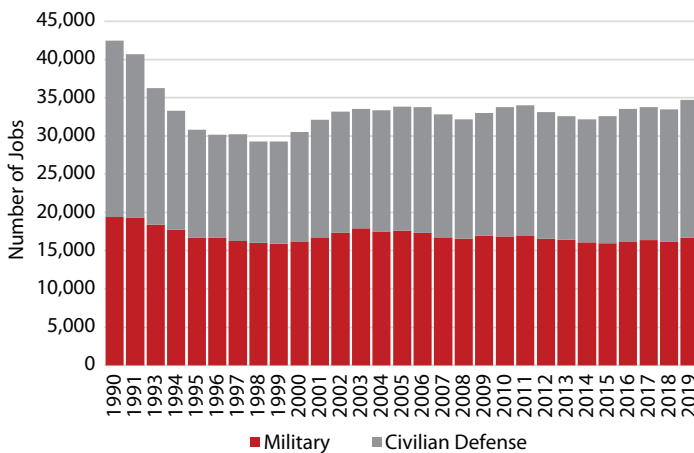
from 2000 to 2019. For the same period, while defense employment increased 14%, employment in the economy as a whole grew by 44%, resulting in defense’s shrinking share.

Between 1990 and 2019, the total number of defense jobs statewide decreased by almost a fifth, 18%. The decline occurred mainly in the early 1990s due to military downsizing (Table 67). Utah’s economy has become increasingly diversified with robust non-defense employment growth of 118% for the same period. However, in recent years total defense employment has been on the mend, increasing from 32,565 to 34,694 jobs between 2015 and 2019, a 7% increase.

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 2019 in other sections of this report.

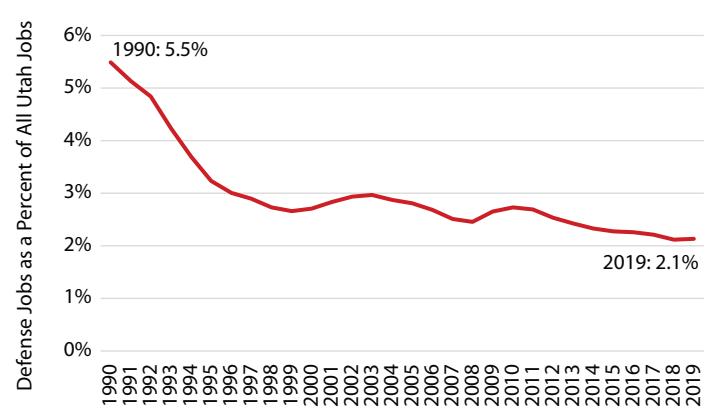
At 19,399 jobs in 1990, military employment in Utah was the highest it had been in the previous 20 years. Since then, the number of military jobs has declined to 16,661 in 2019. Military

Figure 32: Military and Federal Civilian Defense Employment in Utah, 1990–2019



Source: Bureau of Economic Analysis, Bureau of Labor Statistics

Figure 33: Defense Share of Total Employment in Utah, 1990–2019



Source: Bureau of Economic Analysis, Bureau of Labor Statistics

Table 67: Defense Employment in Utah, Selected Years 1990–2019

Category	1990	1995	2000	2005	2010	2015	2019
Military	19,399	16,695	16,222	17,608	16,886	15,962	16,661
Federal Civilian	23,075	14,134	14,291	16,232	16,881	16,603	18,033
Total Defense	42,474	30,829	30,513	33,840	33,767	32,565	34,694
Share of All Utah Jobs	5.5%	3.2%	2.7%	2.8%	2.7%	2.3%	2.1%

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

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 2019, 83% of federal civilian defense employment was in the national security sector, with 14,881 jobs in 15 counties in Utah.

Statewide, the number of federal civilian defense jobs declined by 22% from 1990 to 2019, while the total number of civilian jobs more than doubled. Federal civilian defense employment in Utah fell 43% 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 26% to over 18,000 jobs in 2019. Nearly half (46%) of that growth came from federal civilian employment in hospitals. Over this period the number of national security jobs in Utah increased by 16%, while medical jobs for federal civilians grew by a robust 118%.

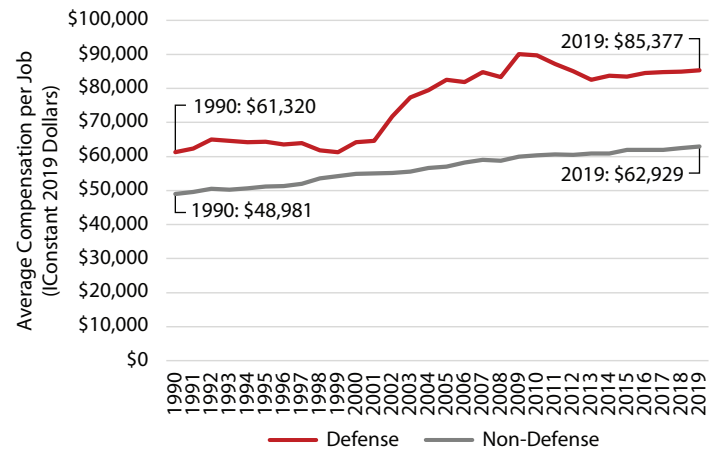
Compensation from Defense Employment, 1990–2019

From 1990 to 2019, compensation per federal defense job in Utah remained considerably higher than Utah's average compensation rate, with the gap widening over the period (Figure 34). Compensation per federal defense job, including military and civilian employment, grew by 40% in inflation-adjusted dollars over 29 years. In contrast, steady growth in non-defense compensation resulted in a 29% gain from 1990 to 2019.

In 1990, federal defense jobs in Utah offered an average of \$61,320 in compensation, 25% more than the \$48,981 at non-defense jobs (both in inflation-adjusted 2019 dollars). By 2019, the federal defense advantage had grown to 36%, with federal defense jobs offering an average of \$85,377 in compensation versus \$62,929 for all other Utah jobs.

Average compensation per military job in Utah was \$52,850 in 2019, lower 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-

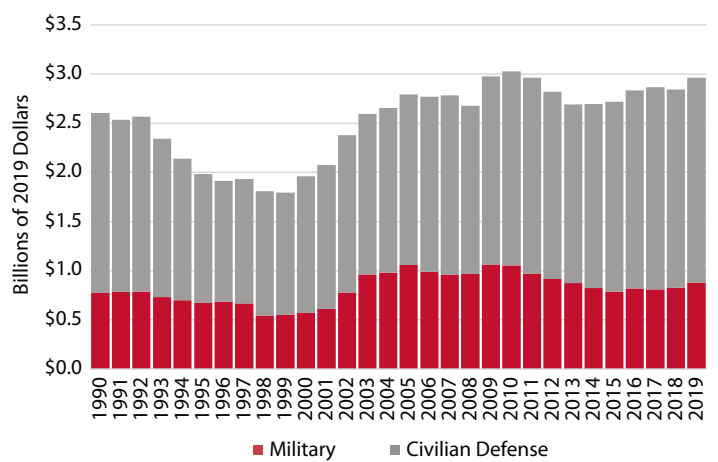
Figure 34: Compensation per Utah Job, Defense versus Non-Defense, 1990–2019



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

Figure 35: Military and Federal Civilian Defense Estimated Total Compensation in Utah, 1990–2019

(Billions of Constant 2019 Dollars)



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

duty military personnel, on the other hand, earn considerably more than the average civilian employee in Utah.

Over 30 years, aggregate federal defense compensation for military and civilian employees in Utah rose 14% in inflation-adjusted dollars, from \$2.6 billion in 1990 to \$3.0 billion in 2019 (Figure 35). This growth occurred in spite of the fact that the number of federal defense jobs in the state fell 18% during the same period (Table 67). Total defense compensation has increased by about \$244 million since 2015.

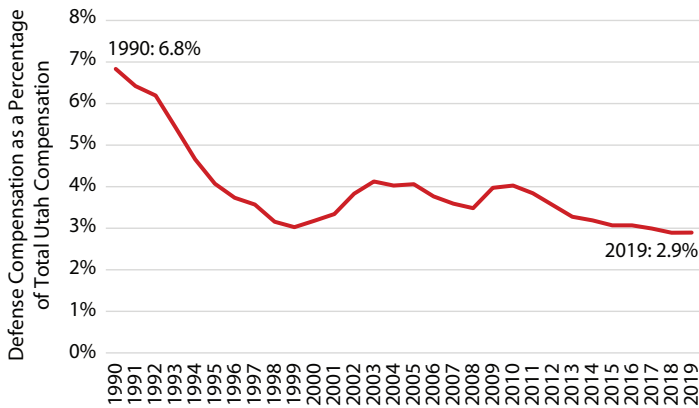
Civilians accounted for more than two-thirds (70%) of the 2019 compensation total. From 2000 to 2019, military compensation and federal civilian defense compensation grew at comparable rates, 54% and 50%, respectively.

Table 68: Estimated Defense Compensation in Utah, Selected Years 1990–2019
(Millions of Constant 2019 Dollars)

Category	1990	1995	2000	2005	2010	2015	2019
Military	\$771	\$674	\$570	\$1,058	\$1,052	\$787	\$881
Federal Civilian	\$1,833	\$1,311	\$1,389	\$1,734	\$1,977	\$1,931	\$2,081
Total Defense	\$2,605	\$1,984	\$1,959	\$2,793	\$3,029	\$2,718	\$2,962
Share of Utah Compensation	6.8%	4.0%	3.2%	4.0%	4.0%	3.0%	2.9%

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

Figure 36: Defense Share of Total Compensation in Utah, 1990–2019



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

From 1990 to 2019, the share of total Utah compensation earned by defense employees fell from 6.8% to 2.9% (Figure 36). During each year from 1990 to 2019, federal defense activity in Utah accounted for a larger share of the state’s employee compensation than of its jobs (compare Figure 33, above, and Figure 36). For example, 2.1% of Utah employment in 2019 came from federal defense jobs, while these jobs paid 2.9% of total compensation in the state. As shown in Figure 34, 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 1999, Utah is nearing peak numbers, as defense compensation was \$3.03 billion in 2010 and reached \$2.96 billion in 2019, even after accounting for inflation (Table 68).

Northrop Grumman was awarded \$13.3 billion in September 2020, and the full program is estimated to cost more than \$75 billion dollars over its 30-year lifespan.

From 1990 to 2000, military compensation in Utah fell from \$771 million to \$570 million in inflation-adjusted 2019 dollars. War in Afghanistan and Iraq in a post-9/11 environment brought increased pay, with compensation fluctuating between \$964 million and \$1.1 billion from 2003 to 2010. Since then, military compensation to Utahns has declined somewhat to \$881 million in 2019. However, compensation has steadily increased year-over-year since 2015, growing nearly 12% by 2019. This is largely due to increased military spending from changes in political leadership.

Compensation received by federal civilian employees in defense jobs in Utah amounted to \$2.1 billion in 2019. That represents a 14% increase since 1990 and a 65% increase since the 20-year low in 1999, based on inflation-adjusted amounts. From 2015 to 2019, federal civilian compensation has increased 9%.

In 2019, 82% of federal civilian defense compensation came from national security jobs, down from 94% in 1990. Civilian compensation from federal medical centers for veterans and service members in Utah, primarily in Salt Lake and Davis counties, increased by a staggering 220%, from \$118.1 million in 1990 to \$382.0 million in 2019. In recent history, federal civilian medical compensation has outperformed national security, increasing by 15% compared to 7% since 2015.

Recent history has shown small gains in total defense employment and compensation in Utah, and this trend is expected to continue. In 2020, Northrop Grumman was the prime awardee for the Ground Based Strategic Deterrent (GBSD) contract, which will replace the United States’ current ground ballistic missile force. The United States Air Force manages the project and Northrop has elected to locate its operations in the Falcon Hill National Aerospace Research Park adjacent to Hill Air Force Base. Northrop Grumman was awarded \$13.3 billion in September 2020, and the full program is estimated to cost more than \$75 billion dollars over its 30-year lifespan. This project alone will create thousands of high-paying federal jobs in Utah for years to come.

Methodology

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 2019 and acknowledges the useful assistance from various individuals.

Data Collection

Much of the data used in this study was obtained directly from defense organizations in Utah. The Gardner 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 Acknowledgments).

In some instances, workload or disclosure concerns at the organizations limited staff's ability to respond fully to Gardner Institute requests. The previous Gardner defense study, 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](https://www.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 2019 and 2020, calendar year or federal fiscal year (unless otherwise noted). At the time the data collection process was undertaken, 2019 was the most recent common year for which complete, reliable information could be obtained from the disparate published and unpublished sources employed.

For this study, Gardner Institute researchers met with personnel from Hill Air Force Base, Dugway Proving Ground, Tooele Army Depot, and Utah National Guard. Onsite and virtual 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. The research did not require on-site meetings for VA centers and 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.

The three military installations (Hill AFB, Tooele, and Dugway) and the Utah National Guard provided non-payroll spending amounts for FY 2019 in response to our information requests. Where necessary, these data were supplemented with publicly available federal spending data from [USAspending.gov](https://www.usaspending.gov). [USAspending.gov](https://www.usaspending.gov) was also the principal source for VA contracts and grants, as well as DOD contracts and grants 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](https://www.usaspending.gov). DOD retired civilian counts and pensions were provided by the United States Office of Personnel Management (OPM). 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.

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 in a region, the region's employment and income increase as well. REMI produces estimates of these increases over multiple years.

REMI PI+ version 2.3.1 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 2019 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.

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 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 2019, and the monetized value added they created. Researchers also generated an array of outputs to inform the fiscal impact estimates.

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 multiyear 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 multiyear 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 multiyear 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.

Endnotes

1. Utah Department of Workforce Services (November 2020). Largest Employers by County. <https://jobs.utah.gov/wi/data/library/firm/majoremployers.html>
2. Healthcare (TRICARE) beneficiaries include active-duty personnel, retirees, and families in Utah.
3. Hill AFB's direct employment of 19,832 federal jobs includes 19,822 jobs in Davis County and 10 recruiters with the 348th and 368th Recruiting Squadrons working across the state.
4. DPG provided the Gardner Institute RIAC-specific visitation for FY 2019, since base-wide visitation was unavailable.
5. Methods for estimating student expenditure categories for ROTC stipend amounts follow a 2019 report by the Gardner Institute, supplemented by Consumer Expenditure Survey estimates for adults under age 25 in the West. Oh, A., Benway, DJ, & Spolsdoff, J. (July 2019). Utah System of Higher Education: State Aid Project. *Kem C. Gardner Policy Institute, University of Utah*. https://ushe.edu/wp-content/uploads/pdf/reports/gardner-policy/USHE_Comprehensive_Tuition-Aid_Report.pdf
6. United States Office of Personnel Management (n.d.). Retirement Services: FERS Information. <https://www.opm.gov/retirement-services/fers-information/>
7. United States Office of Personnel Management (November 2020). Employment of Veterans in the Federal Executive Branch. <https://www.fedshirevets.gov/veterans-council/veteran-employment-data/employment-of-veterans-in-the-federal-executive-branch-fy2018.pdf>

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Utah Army National Guard:

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Cpl Stewart, Company F, 2nd Battalion, 23rd Marine Regiment, U.S. Marine Corps
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Kari Tilton, Chief of Public Affairs, 419th Fighter Wing, Hill Air Force Base, U.S. Air Force

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Daniel Puleio, Public Affairs, Navy Talent Acquisition Group Rocky Mountain, U.S. Navy
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Joseph Costello, Supply Technician, Naval ROTC, University of Utah
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TSgt Jacob Welcome, NCOIC of Personnel, Air Force ROTC, University of Utah
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 Charles W. Sorenson
 James Lee Sorenson
 Vicki Varela
 Ted Wilson

Ex Officio (invited)

Governor Spencer Cox
 Speaker Brad Wilson
 Senate President
 Stuart Adams
 Representative Brian King
 Senator Karen Mayne
 Mayor Jenny Wilson
 Mayor Erin Mendenhall

Kem C. Gardner Policy Institute Staff and Advisors

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 Jennifer Robinson, Associate Director
 Shelley Kruger, Accounting and Finance Manager
 Colleen Larson, Administrative Manager
 Dianne Meppen, Director of Survey Research
 Pamela S. Perlich, Director of Demographic Research
 Juliette Tennert, Chief Economist
 Nicholas Thiriot, Communications Director
 James A. Wood, Ivory-Boyer Senior Fellow

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 Jennifer Leaver, Senior Tourism Analyst

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 Theresa Foxley, EDCUtah
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 Wesley Smith, Western Governors University