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IDAHO NATIONAL GUARD ECONOMIC IMPACT STUDY

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CHAPTER 1: EXECUTIVE SUMMARY

IDAHO NATIONAL GUARD ECONOMIC IMPACT STUDY

October, 2015

Richard Gardner, Bootstrap Solutions

EXECUTIVE SUMMARY

This study examines the total economic contribution of the the Idaho National Guard and National Security in Idaho, addressing the separate impacts of the following:

- The economic impacts of the Idaho Army National Guard in the Treasure Valley
- The economic impacts of the Idaho National Guard in the rest of the state
- The economic impacts of the Idaho Air National Guard and the Idaho Military Division

Several categories within the areas listed above are analyzed: personnel, operations and maintenance, and cooperative agreements. The impacts of training expenditures and construction are also discussed, as well as non-quantifiable benefits of the National Guard on communities in the state and on National Security.

This study relies on IMPLAN (Impact Analysis for Planning), a model and set of county-specific data maintained by the Minnesota IMPLAN Group, Inc. The data is from the year 2013 and is corrected for inflation to 2014 dollars. It includes data for 505 separate sectors of the U.S. Economy. Several types of economic impact are analyzed:

- *Direct Impacts* are changes in economic activity associated with the project or program being studied. In this case, they are the expenditures made to support the Idaho Army National Guard.
- *Indirect Impacts* are changes in economic activity made by the businesses providing goods and services to, or using the goods and services of, the project or program. Here it is the expenditures made by businesses providing goods and services to the Idaho Army National Guard or using National Guard services.
- *Induced Impacts* are changes in economic activity that flow from employees using their wages to purchase goods and services needed in their households.

The total quantifiable economic impacts of the national security footprint in Idaho are aggregated from the separate analyses outlined above.

Personnel Summary

The table below summarizes the total direct employment by the Idaho National Guard and related national security apparatus. In FY2014 there were 1,201 civilian employees and 4,054 military employees, holding full, part-time, or seasonal jobs for the National Guard in Idaho, for a total of **5,255** employees.

The size of National Guard employment will come as a surprise to many because the employees are measured inside a number of separate programs. Rarely are the four civilian employee types and up to six military employee categories summed up in this way to obtain total national security employment within a state.

Table 1-1. FY2014 IDNG Statewide Personnel Budget

Type	Number	Total Wages, Allowances & Benefits
State Technician	314	\$20,671,000
Federal Technician	795	\$65,352,000
Federal Contract Employees	83	\$4,659,000
Non-Appropriated Fund Employees (NAFE)	9	\$321,000
Civilian Sub-Total	1,201	
Active Duty Special Work (ADSW) and Active Guard and Reserve (AGR)	631	\$51,001,000
Substance Abuse (ADOS)	4	\$292,000
Total Full Time Mobilization Augmentee (FTMA)	0	\$0
Mobilized Traditional Soldier (M-Day Mob)	8	\$1,232,000
Traditional Soldier Not Mobilized (M-Day) and Traditional Soldier Active Duty for Training (ADT)	3,411	\$39,589,000
Military Sub-Total	4,054	
TOTAL EMPLOYMENT	5,255	\$183,116,000

Summary of Direct Impacts

In all, expenditures by the Idaho National Guard and the national security apparatus amount to nearly \$319 million. About 21% of those expenditures were for equipment and materials made outside Idaho, which have no effect on the Idaho economy. The direct impacts of the National Guard within Idaho amount to nearly \$251 million. Two-thirds of total expenditures, or 85% of direct impacts are for labor.

Table 1-2. Idaho National Guard Direct Economic Impacts

Category	Total Expenditures	Labor	Materials	Total Direct Impact
IDARNG - Ada County	\$156,871,000	\$92,367,000	\$10,903,000	\$103,270,000
IDARNG - Rest-of-Idaho	\$29,090,000	\$25,686,000	\$1,125,000	\$26,811,000
IDARNG Ave Construction	\$17,396,000	\$5,636,000	\$11,760,000	\$17,396,000
Idaho Air Guard	\$90,484,000	\$73,362,000	\$5,749,000	\$79,142,000
IMD Personnel Salary & Benefits	\$6,642,000	\$6,642,000		\$6,642,000
Military Mgt Operations & Maintenance	\$495,000	\$161,000	\$334,000	\$495,000
Bureau of Homeland Security O & M	\$2,695,000	\$985,000	\$1,710,000	\$2,695,000
Public Safety Communications O & M	\$1,033,000	\$214,000	\$819,000	\$1,033,000
Grant Programs	<u>\$13,880,000</u>	<u>\$7,719,000</u>	<u>\$5,447,000</u>	<u>\$13,166,000</u>
TOTAL	\$318,586,000	\$212,772,000	\$37,847,000	\$250,650,000

Summary of Total Economic Impacts

The direct impacts can then be introduced into the 2013 IMPLAN model of Idaho's economy, corrected to 2014 dollars, in order to obtain the indirect and induced impacts. The activities of the 5,632 employees of the National Guard in Idaho lead to a total of 10,742 jobs within Idaho. These employees receive total compensation in wages and benefits of \$347.8 million per year. They generate economic activity totaling \$484.5 million.

The total impacts can be separated by program. The table below shows the employment, labor income, and economic output generated by the Idaho Army National Guard, the Idaho Air Guard, and the Idaho Military Division. More detail is described in Chapters 3, 4, 5, 6, and 7 of this report.

Table 1-3. Total Economic Impacts of the IDNG by Program

Program	Total Impacts on Employment	Total Impacts on Labor Income	Total Impacts on Economic Output
ID Army National Guard	7,394	\$189,118,000	\$285,920,000
Idaho Air Guard	2,801	\$136,027,000	\$155,354,000
ID Military Division	<u>547</u>	<u>\$22,622,000</u>	<u>\$43,256,000</u>
TOTAL IMPACTS	10,742	\$347,767,000	\$484,530,000

Source: IMPLAN, 2013 data

Notes: Program impacts include personnel and Operations and Management direct impacts Employment includes all full, part-time, and seasonal jobs in Idaho. Labor Income and Output expressed in 2014 \$.

Comparisons to the Idaho Economy

One question that arises in considering the economic impacts of an organization is what these large numbers really mean- a comparison to the economic equivalent at the state level is illuminating. For instance, the total employment impacts of the Idaho National Guard are 10,742 jobs, which is 1.18 percent of the total employment of the Idaho economy in 2013, or 911,428 full, part-time, and seasonal jobs. Another way to say this is that in the absence of the Idaho National Guard, there would be over one percent fewer jobs in Idaho. Similarly, the \$347.8 million in labor income derived from those jobs is 1.09% of all labor income in Idaho. Labor income consists of wages, benefits, and the proprietors' income generated by the self-employed. Chapter 9 provides more detail on these numbers.

In terms of economic output, the \$484.5 million in economic activity generated by the activities of the Idaho national security apparatus amounts to 0.32% of the Idaho gross domestic product. The reason that this percentage is smaller than those for employment and labor income is that the output of the Idaho National Guard are public services that are not re-sold into the economy. If the National Guard produced cars or computer chips that were sold to consumers or other businesses, then the percentage of economic output would be higher.

Finally, it is worthwhile to compare the Idaho National Guard to other major employers in Idaho. Table 9-5 shows the top employers in the Idaho economy from both the public and private sector for FY2014, the same time period as this study. The 5,255 employees calculated in Table 9-1 mean that **the Idaho National Guard would rank fourth among Idaho employers**, behind St Lukes, Wal-Mart, and Micron Technology, but ahead of BYU-Idaho, the University of Idaho, and Boise State University. One important caution to this ranking is that nearly two-thirds of the Guard's employees are part-time workers who average 61 days of work per year.

Fiscal Impacts to the State of Idaho

A rule of thumb is that a dollar of labor income will generate five cents of tax revenue to the State of Idaho. This revenue may come as sales tax, income tax, gasoline tax, liquor tax, or many other state taxes. If this 5% rule is applied to the total labor income generated by the Idaho National Guard of \$348 million, then \$17.4 million in tax revenues of any kind accrue to the coffers of the State of Idaho. For comparison, a total of \$6,480,400 of Idaho General Account funding supports the Idaho Military Division and the Idaho National Guard in FY2015. Because the vast majority of the Idaho National Guard comes from federal funds, state government receives far more than it costs in tax revenues.

CHAPTER 2: METHODS AND APPROACH

An *economic impact study* looks at the change in economic activity within a region, typically resulting from the expansion of a business, or the construction of a new project, or the start of a new program. It looks at the marginal change in the economy from a base condition.

This analysis is more properly termed an *economic contributions study*. Here we seek to examine the contribution of an industry or firm to the economy of a region. In this case, we are measuring the contribution of the Idaho National Guard and the entire national security apparatus in the State of Idaho.

Both types of studies rely on an input-output model, whose underlying theory was developed by Leontief in the 1950s. An input-output model is essentially a snapshot of the economy at a point in time. I-O models are constructed based on the concept that all industries within an economy are linked together: the output of one industry becomes the input of another industry until all final goods and services are produced.

It portrays all the economic linkages between sectors of the economy in a large data matrix. The columns in the matrix might be described as the “recipe” of goods and services that are required as inputs to produce another good or service.

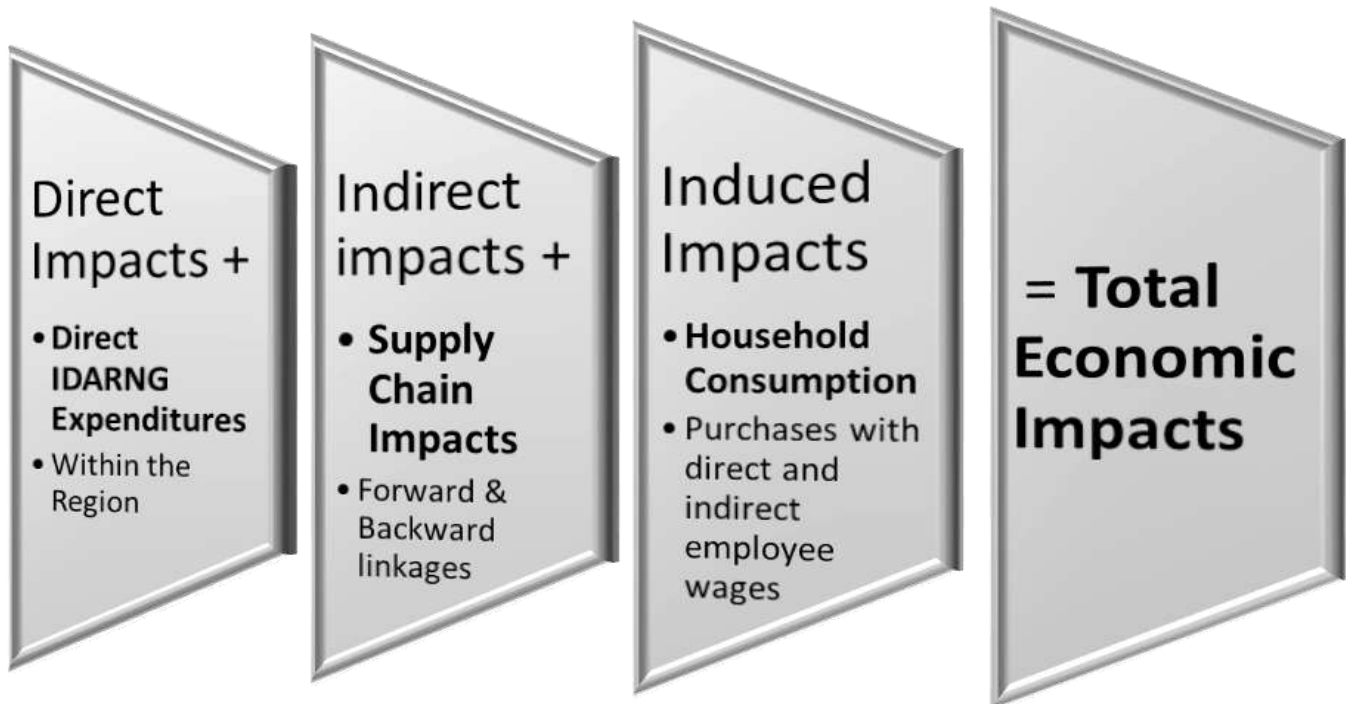
This study relies on IMPLAN (Impact Analysis for Planning), a model and set of county-specific data maintained by the Minnesota IMPLAN Group, Inc. The data is from the year 2013 and is corrected for inflation to 2014 dollars. It includes data for 505 separate sectors of the U.S. economy.

Figure 2-1 shows how economic impacts are comprised of direct, indirect, and induced impacts:

- *Direct Impacts* are changes in economic activity associated with the project or program being studied. In this case, they are the expenditures made to support the Idaho Army National Guard.
- *Indirect Impacts* are changes in economic activity made by the businesses providing goods and services to, or using the goods and services of, the project or program. Here it is the expenditures made by businesses providing goods and services to the Idaho Army National Guard or using National Guard services.
- *Induced Impacts* are changes in economic activity that flow from employees using their wages to purchase goods and services needed in their households.

It is the indirect and induced impacts that form what are commonly called the “multiplier or ripple effects,” and these are estimated by the input-output model. A multiplier is calculated as the direct impacts divided by the total impacts.

Figure 2-1: Elements of Total Economic Impacts



An example might help communicate these concepts. Consider a factory that makes car engines. The expenditures to hire the employees, buy the engine parts, and operate the factory are the direct effects. Indirect effects can be backward or forward linkages. Backward linkages are the provision of engine parts and the electricity, water, and telecommunications services to keep the factory operating. Forward linkages include the car assembly plants that combine the engine into a complete vehicle and the car dealers who sell the finished cars to customers.

Note that in the case of the National Guard, the forward linkages are much smaller than for other businesses. That is because the “products” of the National Guard are public goods like public safety, national security, disaster readiness, etc. These products are not re-sold into the economy in the way that a manufacturer’s products are. (One possible exception is the way that trainings at OCTC are “sold” to out-of-state units.) Forward and backward linkages make up the indirect impacts. Finally, the employees of both the car engine factory and the forward- and backward-linked businesses receive wages and spend them in the economy to support their families. These household consumption expenditures are called the induced impacts.

A study only measures the economic activity which occurs within a defined region. This economic contributions study has defined the State of Idaho as the study region. Purchases that are made to firms outside the state are not counted as impacts, but are considered *leakage* from the state economy. The more an economy leaks, the smaller the economic multipliers. And in general, the smaller the region, the more an economy will leak. This makes sense as the United States

economy produces nearly all the goods and services required, while a given rural county may not have any businesses in one or more industries, e.g. car manufacturing. Similarly, a state like Idaho does not have as complete a set of economic sectors as do states like California, Illinois, or New York. An implication for the 2015 study update is that there should be slightly less leakage from the Idaho state economy, than from the 3-county region that was analyzed in the 2012 study.

It is the direct impacts that must be specified into the IMPLAN model. This study has gathered all direct expenditures from the IDNG for the most recent fiscal year, or in some cases an average of the last three fiscal years. These expenses are broken into those which occur within the Idaho, and those which occur outside Idaho and may be excluded from this analysis. This is especially important for the National Guard, because many significant expenditures, such as for military vehicles, equipment, and ammunition, occur outside the region. In fact, many expenditures are made directly from federal Department of Defense budgets.

In addition, expenditures are divided into materials versus labor wherever possible. In some cases, such as contracted construction services, best professional estimates are made to separate out the cost of equipment use and business overhead from actual wages and benefits paid.

Source of Funding: Note that this economic study does not care about the source of the funds. State and federal dollars are comingled in this analysis, while they are carefully separated in an accounting framework for budgeting purposes.

Accounting Stance: The accounting stance refers to the geographic region that is being studied. As previously mentioned, the accounting stance for this study is the State of Idaho. The 2012 study used a three county region of Ada, Elmore, and Canyon counties.

With and Without Principle: One simple principle guides the analysis of both economic impact and cost-benefit studies. The With-and-without principle asks the analyst to imagine the state of the economy with and without the thing being studied. In other words, *what would the State of Idaho's economy look like in the absence of the Idaho National Guard?* On a smaller scale, the scenarios analyzed after the base case ask questions about the state of the economy with and without a land swap to improve the OCTC, or with and without the construction of a set of regional readiness centers.

One-Time Expenditures: This study estimates impacts of one-time expenditures, such as construction projects to improve the Orchard Combat Training Center, separately from the on-going operations of the IDARNG. Both types of impacts make meaningful contributions to the regional economy, but the operations impacts tend to create permanent jobs with recurring impacts. Construction impacts can approach the on-going nature of operations impacts, if a series of construction projects are undertaken each year in roughly the same amount.

Chapter 3: Impacts of Idaho Army National Guard In the Treasure Valley

Chapter Summary

The impacts of the Idaho Army National Guard are presented in two separate chapters. This chapter focuses on Army Guard activities in Ada County either at Gowen Field or the Orchard Combat Training Center. It duplicates the work done in 2012 and allows comparisons between the studies. Army Guard facilities and activities in the rest of Idaho are portrayed separately.

Table 3-1. Summary of Direct Impacts of IDARNG Operations

Type of Expenditure	2012 - 2014 Average			
	Total Expenditures	Local Labor	Local Materials & Services	Total Local Direct Impacts
Personnel	\$83,066,000	\$83,066,000		\$83,066,000
O&M Facilities	\$13,679,000	\$8,104,000	\$5,576,000	\$13,680,000
Cooperative Agreements	\$3,515,000	\$1,197,000	\$2,318,000	\$3,515,000
O&M - Wheeled Vehicles	\$553,000		\$33,000	\$33,000
O&M - Tracked Vehicles	\$3,374,000		\$77,000	\$77,000
O&M - Aircraft	\$52,684,000		\$2,899,000	\$2,899,000
TOTALS	\$156,871,000	\$92,367,000	\$10,903,000	\$103,270,000

Note: All direct impacts reported in 2014 \$.

The direct impacts of the Idaho Army National Guard are summarized in Table 3-1. Of an estimated \$156.9 million in expenditures in FY2014, \$103.3 million, or nearly two-thirds (65.8%), were expended locally within the Idaho economy. Because most parts and materials are supplied from federal contracts, nearly 90% of local expenditures were for labor costs, mostly military personnel in training here or in service abroad.

Note that local impacts in FY2014 are 16% lower than the \$123.1 million local impact in FY2011. This is largely due to the 305 soldiers mobilized and deployed overseas in 2011. The updated results include for the first time the \$3.5 million in expenditures made for Army Cooperative Agreements.

TOTAL ECONOMIC IMPACTS OF IDARNG

From the estimates of direct impacts of personnel, operations and maintenance, and cooperative agreements by the Idaho Army National Guard, the full economic impacts can now be estimated. The direct impacts were entered into an IMPLAN input-output model for Idaho.

Table 3-2 shows the direct impacts of IDARNG operations, with total direct employment of 2,254 taken from Table 3-3 and labor of \$92.4 million and output of \$103.3 million coming from Table 3-1. Indirect impacts reflect the forward and backward business linkages, which are limited in the case of the National Guard, because so many of their supplies and equipment are manufactured out of state. However, indirect impacts do include the contractors to IDARNG and those associated with the Cooperative Agreements. Thus, 1,086 additional jobs, \$26.5 million in labor income and \$49.9 million in output are added by indirect impacts. Induced impacts flow from the expenditure of labor income by direct and indirect employees on household consumption goods and services. Induced impacts are larger, adding 1,302 employees, \$27.0 in labor income and \$51.4 million in total output. All told, the Idaho Army National Guard has total economic impacts that contribute employment of 4,643, labor income of \$145.9 million, and total economic output of \$204.6 million to the state economy of Idaho. Dividing total impacts by direct impacts yields Type II multipliers of 2.06 for employment, 1.58 for labor income, and 1.98 for economic output.

Table 3-2. Total Economic Impacts, IDARNG Operations

Impact Type	Employment	Labor Income	Output
Direct Impacts	2,254	\$92,367,000	\$103,270,000
Indirect Impacts	1,086	\$26,504,000	\$49,869,000
Induced Impacts	<u>1,302</u>	<u>\$27,003,000</u>	<u>\$51,431,000</u>
Total Impacts	4,643	\$145,874,000	\$204,570,000
Multitipliers (SAM Type II)	2.06	1.58	1.98

Source: Minnesota IMPLAN Group, Inc., 2013

Notes: Employment includes all full, part-time, and seasonal jobs.

All dollar estimates in 2014 \$.

Fiscal Impacts

A detailed fiscal impact analysis is beyond the scope of this study. Being a unit of state government, the Idaho Army National Guard does not pay corporate income tax, property tax, nor does it pay sales tax on its purchases. However, many of the businesses linked to IDARNG activities will be taxpaying entities, and the people employed directly by IDARNG and indirectly as contractors will pay taxes on their income and taxable purchases.

Idaho Division of Financial Management estimated that 5.0% of total personal income becomes some form of state tax revenue (Ferguson, 2015). Applying this rule of thumb to the labor income from operations yields a conservative estimate of \$4.6 million in state tax revenues generated by

IDARNG activities in Ada County. This should be viewed as a minimum because there will be taxable purchases made by businesses supplying goods and services to IDARNG, together with corporate income tax paid on income from business done with IDARNG, that are not included in the estimate.

DIRECT IMPACTS

Direct impacts are the economic activities that flow from a business or project. In the case of the Idaho Army National Guard, the business is providing for our public interests in national and domestic security, with a secondary mission in emergency response. The direct impacts are best measured through the economic transactions made with the regional economy. Five types of direct impacts can be examined for the IDARNG:

- Personnel Costs
- Facility Operations Costs (for Orchard Training Area and Gowen Field facilities)
- Cooperative Agreements
- Equipment Operations Costs

Personnel

The number of full and part-time employees of the Idaho Army National Guard working in the Treasure Valley at either Gowen Field or the Orchard Combat Training Center is much larger than many people realize. The National Guard is a unit of state government that is almost entirely funded by federal dollars. Because of the way that funds flow into the organization, no single budget reveals the large number of employees at IDARNG. As Table 3-3 shows, there are nine different types of employees who may be considered state employees, federal government employees, or military employees of some status.

When mobilized for full-time duty, the wages of National Guard members are paid directly from Army budgets. However, there are no deployed soldiers in 2014 or 2015, which is the main reason that the \$83.1 million in total payroll is lower than the \$115.7 million in FY 2011.

Table 3-3 shows that the Idaho Army National Guard employs a total of 2,254 people within the Treasure Valley. By number of employees, IDARNG would rank the eighth largest employer in the Treasure Valley, ahead of Hewlett-Packard and just behind Albertson's. The total payroll including benefits amounts to \$83.1 million. All the labor expenditures can be considered locally spent.

Table 3-3. FY2014 IDARNG Treasure Valley Personnel Budget

Type	Number	Total Wages, Allowances & Benefits
State Technician	131	\$7,551,000
Federal Technician	486	\$39,892,000
Federal Contract Employees	68	\$3,817,000
Military	1,560	
Active Duty Special Work (ADSW) and Active Guard and Reserve (AGR)	263	\$21,263,000
Total Full Time Mobilization Augmentee (FTMA)	0	\$0
Mobilized Traditional Soldier (M-Day Mob)	0	\$0
Traditional Soldier Not Mobilized (M-Day) and Traditional Soldier Active Duty for Training (ADT)	1,297	\$10,222,000
Non-Appropriated Fund Employees (NAFE)	9	\$321,000
	2,254	\$83,066,000

While the state expenditures for salary, benefits and allowances are actual, a different approach was used to estimate military payroll because federal expenditures are not captured locally. Instead, total payroll was estimated using the number of soldiers in each rank of soldier, warrant officer, or officer, their average longevity, times the salary, allowances, and benefits linked to that rank and longevity. Soldiers were assumed married for calculating housing allowances and benefits.

Here is a brief description of each of the nine types of employees at the Idaho Army National Guard:

- **State Technician** – These are permanent state employees of the Military Division of the Governor’s Office whose pay and allowances are 100% federally reimbursed by the Department of Defense through National Guard Bureau. Most employees are *dual status* in that they are also required to be members of the Idaho National Guard.
- **Federal Technician** – These are permanent, indefinite, or temporary federal civilian employees of the U.S. Department of Defense on the general service pay schedule. Most are *dual status* in that they are also required to be members of the Idaho National Guard.
- **Federal Contract Employees** – These are employees of federal contract firms, typically supplying support to some piece of military equipment, software or providing some specialized training.

- **Military**
 - a. **Active Duty Special Work (ADSW)** - These are traditional soldiers placed on temporary full time status to augment the labor force during periods of high labor demands. Pay and allowances are commensurate with full time.
 - b. **Active Guard and Reserve (AGR)** - These are full time National Guard Soldiers responsible for the day to day administrative, supply and training preparation duties of the military units. Their pay and allowances are the same as active duty soldiers.
 - c. **Full Time Mobilization Augmentee (FTMA)** - These are traditional soldiers put on full time status to fill positions vacant due to deployment of the permanent employee. There are none currently, as there are no deployed soldiers.
 - d. **Mobilized Traditional Soldier (M-Day Mob)** - These are National Guard soldiers who have been mobilized and deployed on active duty. Their pay is shifted to the federal US Army and Department of Defense. They receive housing and subsistence allowances in addition to salary. However, there are thankfully no soldiers deployed in 2015.
 - e. **Traditional Soldier Not Mobilized (M-Day)** – These are your typical National Guard members, living in the community and doing training one weekend a month, two weeks of annual training (summer camp) and additional training, work details, and when needed emergency state and community disaster duty. They typically work 63 days per year.
- **Non-Appropriated Fund Employees (NAFE)** – There are a few employees who are paid only from fee revenue. Cleaning crews for lodging rented by out-of-region units and the recycling program are examples.

There is a tenth personnel category called Traditional Soldier Active Duty for Training. These are traditional soldiers temporarily placed on active duty for special training or to support training. Such trainings might last a few days to a few weeks. This category was included in the 2012 study. However, because it is a temporary condition of traditional M-Day soldiers, and because the people in the category are in a constant state of flux, it is ignored in this 2015 study, with all traditional soldiers captured in the M-Day status.

Facility Operations and Maintenance Expenditures

The Idaho Army National Guard has a large physical plant to maintain and operate each year. This includes numerous buildings at the Gowen Field complex that are used for administration, classrooms, billeting, medical services, equipment maintenance, and mobilization activities. In addition, there are the facilities at the Orchard Combat Training Center, including the Snake River Training Facility MATES, six tactical training bases, and numerous firing ranges with support buildings, a live-fire shoot house, and battle command center.

Table 3-4 shows the average of the last three year's budgets for O & M costs for the Idaho Army National Guard. These costs consist of expenses related to building operations and upkeep, planning and design costs for base improvements, and utility costs. Maintaining the facilities cost about \$11.3 million; planning and design ran under \$1.0 million, and utility costs approach \$1.5 million, for a total cost of \$13.7 million. Of these costs, roughly \$10.7 million was contracted labor, while \$3.0 million was for supplies, materials, and equipment. All these expenditures are purchased locally within Idaho. Compared to the 2012 study, the O&M costs in Table 3-4 are sharply higher, \$13.7 million versus \$4.1 million in 2012. Most of the difference comes from sharply higher spending for Building Maintenance and Restoration and Modernization Projects in recent years.

Table 3-4. IDARNG Facilities Operations & Maintenance Budget in the Treasure Valley

Expense	FY 2012-14 Average		
	Total Cost	Labor Costs	Material Costs
Facility Engineering Services	\$356,583	\$86,252	\$270,331
Real Property Services	\$5,966	\$5,966	
Grounds Services	\$230,173	\$224,966	\$5,207
Janitorial Services	\$153,021	\$142,548	\$10,473
Indoor/Outdoor Pest Control	\$19,991	\$19,397	\$594
Refuse Service	\$85,486	\$85,486	\$0
Fire Services	\$730,178	\$35,516	\$694,662
Leases	\$75,017	\$75,017	
Snow Removal	\$1,503	\$1,503	
Replacement Barracks Furniture	\$103,333		\$103,333
Milcon Tails	\$163,000		\$163,000
Building Maintenance	\$5,453,136	\$5,219,114	\$234,022
Restoration and Modernization Projects	\$3,878,946	\$1,291,689	\$2,587,257
Building O&M Sub Total	\$11,256,332	\$9,774,711	\$1,481,622
Master Planning	\$216,303	\$182,916	\$33,387
A&E Planning & Design Type A	\$614,472	\$614,472	
A&E Supervision, Insp & Admin	\$118,866	\$118,866	
Planning & Design SubTotal	\$949,642	\$916,254	\$33,387
Water	\$180,375		\$180,375
Wast Water	\$29,403		\$29,403
Electricity	\$857,928		\$857,928
Natural Gas	\$304,974		\$304,974
Propane/Fuel Oil	\$15,024		\$15,024
Celluar Telephone Service	\$15,816		\$15,816
Chemical Latrines	\$69,905		\$69,905
Line Communication Services	\$0		\$0
Utilites Sub Total	\$1,473,424	\$0	\$1,473,424
Total Total	\$13,679,398	\$10,690,965	\$2,988,433

Cooperative Agreement Expenditures

The Idaho Army National Guard has entered into a number of cooperative agreements with the State of Idaho to secure aspects of their operations. These agreements are for Security, Distance Learning, Environmental, Family Support, and RTLP. The personnel to implement these agreements are captured in the State Technicians line of personnel costs. Table 3-5 displays the other costs of these agreements, totaling some \$3.5 million. Expenditures have been broken into \$1.2 million in labor and \$2.3 million in materials, based on the best estimates of IMD financial managers. Note that these Cooperative Agreements extend beyond the Treasure Valley to serve the entire state.

Table 3-5. IDARNG Cooperative Agreement Expenditures

Expense Category	2012 - 2014 Average	% Labor	Local Labor Cost	% Materials	Local Materials Cost
Communication Cost	640,288			100%	\$640,288
Emp Development Costs	29,527	50%	\$14,763	50%	\$14,763
Emp Travel Costs	83,636			100%	\$83,636
General Services	778,537	100%	\$778,537		
Professional Services	224,311	100%	\$224,311		
Repair & Maint Serv	312,267	50%	\$156,133	50%	\$156,133
Fuel & Lubricants	2,808			100%	\$2,808
Computer Supplies	117,830			100%	\$117,830
Rep & Maint Supplies	354,215			100%	\$354,215
Other Supplies	256,498			100%	\$256,498
Utility Charges	44,640			100%	\$44,640
Rentals & Oper Leases	205,209			100%	\$205,209
Computer Equipment	201,216			100%	\$201,216
Other Equipment	218,219			100%	\$218,219
Misc Expenditures	45,408	50%	\$22,704	50%	\$22,704
	\$3,514,607		\$1,196,449		\$2,318,159

Notes:

General Services = General +Admin+Computer services

Other Supplies = Inst & Resident, Specific Use, and Admin supplies

Other Equipment = Motorized-Nonmotorized, Office, and Specific Use equipment

Misc Expenditures = Misc expenditures + Mfg & Merch costs + Insurance

Vehicle and Aircraft Operations and Maintenance Expenditures

While soldiers are clearly the National Guard's most valuable resource, the equipment used in combat lies at the heart of its operations. While the majority of these costs are incurred outside Idaho, these expenditures offer the reader some sense of the scale of IDARNG operations. These O&M costs are broken into three areas—Wheeled vehicles, tracked vehicles, and aircraft.

Table 3-6 shows in detail the O&M cost of wheeled vehicles in the military fleet for FY2011, updated to 2014 dollars using the GNP Implicit Price Deflator. There are three types of cost in the cost of operating these vehicles. The first column shows the cost of *Petroleum, Oil, and Lubricants* for these military vehicles. Note that these are provided under a national military contract, so that the only local expenditure is the cost of delivery from a wholesale supplier. The second cost is for *Organizational Repair Parts*, which are the parts used to make local repairs at IDARNG facilities with IDARNG personnel. Again, an estimated 90% of these parts are specific to these vehicles and supplied under military contract from outside the region. The third column in Table 3-6 is for Depot Level Repairs. These larger components are rebuilt outside the region and sent to IDARNG for installation by IDARNG personnel. The total cost per mile of operating these vehicles is surprisingly high compared to civilian vehicles. Note that the costs in Table 3-6 do not include depreciation of the cost of the vehicle itself, or the cost of labor by military mechanics.

The number of vehicles and their average use per year is for FY2014. In total, IDARNG spent \$475,000 on operating a total of 448 wheeled vehicles in FY2014. Of that amount, only \$33,000 can be considered local expenditures.

Table 3-6. O & M Costs, Wheeled Tactical Vehicles at IDARNG, Gowen Field and OTA

Vehicle	Petroleum Oil & Lubricants CLS III ¹	Org Repair Parts CLS IX ²	Depot Level Repairs CLS IX ³	Total Cost Per Mile	Number of Vehicles	Ave Miles per Vehicle ⁴	Cost per Vehicle	Total Cost	Local Expenditures
Armored Security Vehicle	\$3.72	\$0.71	\$2.91	\$7.34	7	160	\$1,173.75	\$8,216	\$288
High Mobility Multipurpose Wheeled Vehicle (HMMVV) Series	\$0.23	\$0.85	\$0.03	\$1.11	153	1,145	\$1,270.14	\$194,331	\$16,866
2 1/2 Ton trucks	\$0.39	\$0.96	\$0.23	\$1.58	50	1,160	\$1,833.05	\$91,652	\$6,707
5 Ton Trucks	\$0.62	\$0.41	\$0.31	\$1.34	44	600	\$803.71	\$35,363	\$1,892
Light Equipment Transport (14T)	\$0.59	\$0.25	\$0.24	\$1.08	4	900	\$970.11	\$3,880	\$196
Medium Equipment Transport (MET) 20T	\$0.62	\$0.41	\$0.31	\$1.34	2	16,986	\$22,753.09	\$45,506	\$2,435
Heavy Equipment Transport (HET)	\$1.11	\$8.57	\$0.60	\$10.28	3	325	\$3,339.90	\$10,020	\$890
Heavy Expanded Mobile Tactical Truck (HEMTT) series	\$1.04	\$0.99	\$1.36	\$3.39	41	620	\$2,102.21	\$86,191	\$3,844
Fuel Truck	\$0.62	\$0.41	\$0.31	\$1.34	19	1160	\$1,553.84	\$29,523	\$1,580
Wrecker	\$0.39	\$0.45	\$1.90	\$2.74	18	1350	\$3,701.47	\$66,626	\$1,564
Dump Truck	\$0.62	\$0.41	\$0.31	\$1.34	13	1100	\$1,473.47	\$19,155	\$1,025
ENG MISC	\$1.11	\$8.57	\$0.60	\$10.28	19	185	\$1,901.18	\$36,122	\$3,208
Forklift	\$0.23	\$0.85	\$0.03	\$1.11	37	80	\$88.74	\$3,283	\$285
TOTALS					448			\$475,160	\$33,119

Notes

1. Petroleum, Oil & Lubricants Nearly all through the Defense Logistic Agency. Assume 5% local trucking/delivery cost.
2. Organizational repair parts - brakes, track, parts replaced by local mechanics. Estimate 10% local parts & 90% through military channels.
3. Depot Level repairable - Engines, transmissions, differentials. Major components rebuilt at depots 100% off site military facilities.
4. Estimates based on budgeting factors and FY2014 data. Costs updated to 2014 \$ by GNP implicit deflator.
5. Actual miles vary greatly due to deployments and training cycles

Tanks and other tracked vehicles are much more expensive to operate, but this is an important component of training at this site. Cost per mile ranges from \$8.85 per mile for personnel carriers to \$331.88 per mile for a tank retriever. Table 3-7 lists the costs of operating and maintaining the 73 tracked vehicles at Gowen Field and the Orchard Combat Training Center. In total these costs were estimated for FY2014 to be \$1,927,000, of which \$77,000 is estimated to have been spent locally.

It is important to note that for all vehicles and aircraft, the amount of use will vary from year to year. The FY2014 was higher than FY2011 year for local vehicle use, due to the deployment of the 116th Battalion in the first study, but not currently, which removed many Idaho soldiers from their normal training exercises in FY2011.

Table 3-7. O & M Costs, Tracked Vehicles at IDARNG, Gowen Field and OTA

Operation & Maintenance Costs - Tracked vehicles, IDARNG at Gowen Field & OCTC

Vehicle	Petroleum Oil & Lubricants CLS III ¹	Org Repair Parts CLS IX ²	Depot Level Repairs CLS IX ³	Total Cost Per Mile ⁴	Number of Vehicles	Ave Miles per Vehicle ⁴	Cost per Vehicle	Total Cost	Local Expenditures
Personnel and Equipment									
Carriers	\$0.92	\$6.33	\$1.60	\$8.85	12	180	\$1,594	\$19,123	\$1,467
Artillery and Support Tracks	\$2.85	\$27.43	\$38.07	\$68.35	3	84	\$5,741	\$17,223	\$727
Bradley series	\$2.91	\$34.58	\$104.49	\$141.98	18	210	\$29,816	\$536,679	\$13,620
Tank Retrievers	\$4.96	\$47.89	\$279.03	\$331.88	10	50	\$16,594	\$165,938	\$2,518
M1 series tanks	\$19.10	\$126.04	\$127.41	\$272.55	29	150	\$40,883	\$1,185,595	\$58,982
Bulldozers	\$2.85	\$27.43	\$38.07	\$68.35	1	40	\$2,734	\$2,734	\$115
TOTALS					73			\$1,927,293	\$77,429

Notes:

1. Petroleum, Oil & Lubricants all purchased through the Defense Logistic Agency. Assume 5% local trucking/delivery cost.
2. Organizational repair parts - brakes, track, parts replaced by local mechanics. Estimated 10% local parts & 90% through military channels.
3. Depot Level Repairable - Engines, transmissions, differentials. Major components rebuilt at depots 100% off site military facilities.
4. Mileage estimates based on budgeting factors and FY2014 data, costs adjusted to FY2014 by GNP implicit price deflator.
5. Actual miles vary greatly due to deployments and training cycles

Finally, Table 3-8 displays O&M costs for army aircraft stationed at Gowen Field and used at the Orchard Combat Training Center. A total of 27 aircraft flew a total of 5,868 hours at a total cost of \$69.4 million. Of that total, an estimated \$2.9 million was spent within Idaho. The aircraft cost data are averaged over two or three years, while inventory and use are from 2014. Actual use varies widely by year, and the aircraft mix changes as improvements pass through the ranks of National Guard use and needs evolve. Eleven drones are listed in the inventory, but operating costs were not yet available.

Table 3-8. O & M Costs, Army Aircraft, Gowen Field

	Number of Aircraft	Petroleum Oil & Lubricants CLS III ¹	Org Repair Parts & Consumables CLS IX ²	Depot Level Repairs CLS IX ³	Operating Cost per Hour	Total Hours Flown	Total Cost	Local Expenditures
Fixed Wing								
C-12	1	\$248	(1)	(1)	\$1,356	660	\$895,000	\$8,000
Helicopters								
AH-64 Apache	17	\$554	\$6,503	\$8,360	\$16,489	3,710	\$61,175,000	\$2,515,000
UH-60 Blackhawk	7	\$353	\$3,250	\$2,143	\$5,746	1,074	\$6,172,000	\$368,000
UH-72	2	\$371	(1)	(1)	\$2,686	424	\$1,139,000	\$8,000
Drones ⁶	11					320		
TOTAL	38					5,868	\$69,381,000	\$2,899,000

Notes:

1. C-12 and UH-72 are not tactical aircraft and all maintenance is centrally funded by Dept of the Army contract.
2. The AH-64s are being phased through AH-64D upgrades leaving only 17 of the authorized 24
3. Operating cost per hour does not include crewmember cost.
4. Costs updated to FY2014 dollars using GNP implicit price deflator.
5. Aircraft numbers and hours for FY2014
6. Cost of drone operation unavailable.

Fuel Costs

The cost of surface and aviation fuel are already included in the O&M costs above. Fuel use is shown here for information purposes only. Note that fuel is purchased under a federal military contract, so that the only local expenditure is for fuel delivery to the base.

Table 3-9. Total Fuel Use & Cost

Year	2014 Average Cost per Gallon	Gallons	Total Fuel Cost
Unleaded			
2012		13,722	
2013		10,051	
2014		6,810	
2012-2014 Average	\$3.61	10,194	\$36,802
Diesel			
2012		45,278	
2013		26,346	
2014		13,071	
2012-2014 Average	\$3.57	28,232	\$100,787
Army/MATES Aviation Fuel			
2012		168,234	
2013		308,120	
2014		1,135,607	
2012-2014 Average	\$3.68	537,320	\$1,977,339

Construction

Average construction costs were included in the FY2011 study. Construction is analyzed in a separate chapter of this study.

Chapter 4: Impacts of Idaho Army National Guard in the Rest-of-Idaho

Summary

The 2012 study analyzed the economic impacts of the Idaho Army National Guard (IDARNG) in Ada, Canyon, and Elmore counties of the Treasure Valley, or more specifically the impacts of activities at Gowen Field and the Orchard Combat Training Center (OCTC). Chapter 4 analyzes the impact of the Idaho Army National Guard in the remainder of the state.

Table 4-1 summarizes the direct expenditures into the Idaho economy. There are 1,530 employees of the Army National Guard posted outside Ada County. An estimated 96% of the \$26.8 million in expenditures is for labor, with only \$1.1 million dollars spent on local materials and services.

Table 4-1. Total Direct Impacts of IDARNG Rest-of-Idaho

Type of Expenditure	FY2014 or 2012 - 2014 Average			
	Total Expenditures	Local Labor	Local Materials & Services	Total Local Direct Impacts
Personnel	\$21,838,000	\$21,838,000		\$21,838,000
O&M Facilities	\$4,879,000	\$3,848,000	\$1,031,000	\$4,879,000
Cooperative Agreements	\$0	\$0	\$0	\$0
O&M - Wheeled Vehicles	\$732,000		\$48,000	\$48,000
O&M - Tracked Vehicles	\$1,641,000		\$46,000	\$46,000
O&M - Aircraft	\$0		\$0	\$0
TOTALS	\$29,090,000	\$25,686,000	\$1,125,000	\$26,811,000

Note: FY2014 data for personnel and vehicle inventories and usage. FY2012-14 average costs for O&M facilities.

The next table shows that the 1,530 Guard employees ripple through the economy to create a total of 2,538 full, part-time, or seasonal jobs. The \$25.7 million in labor income grows to \$33.9 million in total labor impacts. The \$26.8 million in economic activity multiplies to \$52.1 million in total economic impacts. Note that the IMPLAN program automatically allows for leakage of economic activity across state borders.

Table 4-2. Total Economic Impacts of IDARNG Rest-of-Idaho

Impact Type	Employment	Labor Income	Output
Direct Impacts	1,530	\$25,686,000	\$26,811,000
Indirect Impacts	183	\$1,938,000	\$6,146,000
Induced Impacts	<u>825</u>	<u>\$6,267,000</u>	<u>\$19,186,000</u>
Total Impacts	2,538	\$33,891,000	\$52,143,000
Multpliers (SAM Type II)	1.66	1.32	1.94

Source: Minnesota IMPLAN Group, Inc., 2013

Notes: Employment includes all full, part-time, and seasonal jobs.

All dollar estimates in 2014 \$.

Facilities

The facilities at Gowen Field and OCTC are by far the largest in the state and soldiers from all over Idaho, as well as many from beyond Idaho, train in the Treasure Valley. However, the Idaho Army National Guard has a statewide presence that is significant in terms of economic impact, assets held, and disaster response capability. This chapter analyzes the Guard's impact across the rest of Idaho.

The Idaho Army National Guard currently has 27 facilities, listed in Table 4-3. There are twenty armories located across Idaho. These armories typically include one or more classrooms, a computer lab, locker room, secured equipment room, exercise room, and a large open bay for training and exercises. A fenced yard with outbuildings to house vehicles and equipment rounds out each facility. Several of the rural armories are co-located with a county fairgrounds. Each region of the state has at least one larger and re-modeled facility. Seven of the armories also have a FMS maintenance shop associated with them, but operating independently. Many of these facilities have been modernized in recent years with incremental improvements from existing budgets.

Table 4-3. Idaho Army National Guard Facilities in Rest-of-Idaho**Idaho Army National Guard Facilities in Rest-of-Idaho**

Location	Title	Address	Zone
1 Bonners Ferry Armory	Armory	6566 Main St. Bonners Ferry, ID 83805	11
2 Post Falls	FMS 7	5453 E. Seltice Way Post Falls, ID 83854	11
3 Moscow Armory	Armory	1011 Harold St. Moscow, ID 83843	11
4 Orofino Armory	Armory	10210 Highway 12 Box 1461 Orofino ID, 83544	11
5 Lewiston	FMS 1	2707 16th Ave. Lewiston, ID 83501	11
6 Grangeville Armory	Armory	105 NE 4th St. Grangeville, ID 83530	11
7 Payette Armory	Armory	1921 Center Ave. Payette, ID 83661	11
8 Emmette Armory	Armory	2175 S. Johns Ave. Box 368 Emmett, ID 83617	11
9 Wilder Armory	Armory	20675 Gravelly Ln. Wilder, ID 83676	11
10 Caldwell Armory RC	Armory	1200 S. Kimball Caldwell, ID 83605	11
11 Caldwell	FMS 2	700 W Warehouse St. Caldwell, ID 83605	11
12 Nampa	FMSS 2	212 N Kings Rd. Nampa, ID 83687	11
13 Hailey Armory	Armory	704 S 4th St. Box 118 Hailey, ID 83333	11
14 Gooding Armory	Armory	417 N Main St. Gooding, ID 83330	11
15 Jerome	FMS 4	125 2nd Ave. E Jerome, ID 83338	11
16 Jerome Armory	Armory	601 2nd Ave. W Jerome, ID 83338	11
17 Twin Falls Armory	Armory	1069 Frontier Rd. Twin Falls, ID 83301	11
18 Burley Armory	Armory	1059 Airport Way Burley, ID 83318	12
19 Rupert Armory	Armory		12
20 Preston Armory	Armory	594 N State St. Preston, ID 83263	12
21 Pocatello	FMS 5	10714 Fairgrounds Rd. Pocatello, ID 83202	12
22 Blackfoot Armory	Armory	260 Rich Ln. Blackfoot, ID 83221	12
23 Idaho Falls	FMS 6	575 W 21st St. Idaho Falls, ID 83402	12
24 Rigby Armory	Armory	165 W 2nd St. Rigby, ID 83442	12
25 Driggs Armory	Armory	547 N Main St. Driggs, ID 83422	12
26 Rexburg Armory	Armory	330 W 7th S Rexburg, ID 83440	12
27 St. Anthony Armory	Armory	1003 W Main St. Saint Anthony, ID 83445	12

Personnel

Table 4-4 summarizes the personnel assigned to these statewide facilities. There are some 76 state or federal technicians who are full-time employees at these facilities. Another nine are federal contract employees. A total of 1,445 military personnel are assigned to these armories, and there are a total of 1,530 full or part-time employees of the Army National Guard posted outside of Ada County.

Note that each armory will have one or more Military Occupation Specialties associated with that unit. In some cases, that MOS may be an elite units like the Calvary Scouts stationed in Caldwell. These elite units may attract Guard soldiers who live far outside the location in North Idaho or even Nevada. Similarly, Idahoans may choose to travel to a neighboring state for their occupational specialty. The study assumes these employees balance on average, as detailed data are not available.

Table 4-4. Personnel Summary Expenditures – IDARNG Rest-of-Idaho

Type	Number	Total
State Technician	36	\$2,361,000
Federal Technician	40	\$3,145,000
Federal Contract Employees	9	\$505,000
Military	1,445	
Active Duty Special Work (ADSW) and Active Guard and Reserve (AGR)	96	\$6,864,000
Total Full Time Mobilization Augmentee (FTMA)	0	\$0
Mobilized Traditional Soldier (M-Day Mob)	0	\$0
Traditional Soldier Not Mobilized (M-Day) and Traditional Soldier Active Duty for Training (ADT)	1,349	\$8,963,000
Non-Appropriated Fund Employees (NAFE)	0	
	1,530	\$21,838,000

Operations & Maintenance

Table 4-5 below details the local expenditures of the Army National Guard to operate and maintain the units and facilities statewide. O&M expenditures averaged nearly \$4.9 million over the last three years. This total cost is just over one-third the O&M costs for Ada County facilities. Building maintenance projects account for the majority of expenses, with \$3.3 million. Utility costs are less than \$400,000, and architect and engineering services averaged \$127,000.

Table 4-5. Operations & Maintenance Expenditures – Rest-of-Idaho

Expense	FY 2012-14 Average		
	Total Cost	Labor Costs	Material Costs
Facility Engineering Services	\$286	\$185	\$101
Master Planning	\$623	\$623	
Real Property Services	\$0		
Grounds Services	\$54,997	\$44,839	\$10,157
Janitorial Services	\$9,191	\$2,220	\$6,971
Indoor/Outdoor Pest Control	\$2,862	\$1,724	\$1,138
Refuse Service	\$47,737	\$47,737	
Fire Services	\$2,791	\$2,618	\$173
Leases	\$115,022		\$115,022
Snow Removal	\$6,670	\$6,670	
Replacement Barracks Furniture	\$0		
Milcon Tails	\$59,413		\$59,413
Building Maintenance	\$3,323,808	\$1,661,904	\$1,661,904
Restoration and Modernization Proje	\$752,281	\$250,510	\$501,772
Building O&M Sub Total	\$4,375,682	\$2,019,031	\$2,356,651
	\$0		
A&E Planning & Design Type A	\$117,785	\$117,785	
A&E Supervision, Inspr & Admin	\$8,393	\$8,393	
Planning & Design SubTotal	\$126,178	\$126,178	\$0
	\$0		
Water	\$36,113		\$36,113
Wast Water	\$13,782		\$13,782
Electricity	\$197,203		\$197,203
Natural Gas	\$109,047		\$109,047
Propane/Fuel Oil	\$19,863		\$19,863
Celluar Telephone Service	\$1,481		\$1,481
Chemical Latrines	\$0		
Line Communication Services	\$0		
Utilites Sub Total	\$377,488	\$0	\$377,488
Total Total	\$4,879,348	\$2,145,209	\$2,734,139

Cooperative Agreements

There are no cooperative agreements beyond lease arrangements to report.

Wheeled Vehicle O & M

Table 4-6 shows in detail the O&M cost of wheeled vehicles in the military fleet for FY2011, updated to 2014 dollars using the GNP Implicit Price Deflator. There are three types of cost in the cost of operating these vehicles. The first column shows the cost of *Petroleum, Oil, and Lubricants* for these military vehicles. Note that these are provided under a national military contract, so that

the only local expenditure is the cost of delivery from a wholesale supplier. The second cost is for *Organizational Repair Parts*, which are the parts used to make local repairs at IDARNG facilities with IDARNG personnel. Again, an estimated 90% of these parts are specific to these vehicles and supplied under military contract from outside the region. The third column in Table 3-6 is for Depot Level Repairs. These larger components are rebuilt outside the region and sent to IDARNG for installation by IDARNG personnel. The total cost per mile of operating these vehicles is surprisingly high compared to civilian vehicles. Note that the costs in Table 3-6 do not include depreciation of the cost of the vehicle itself, or the cost of labor by military mechanics.

The number of vehicles and their average use per year is for FY2014. In total, IDARNG spent \$475,000 on operating a total of 448 wheeled vehicles in FY2014. Of that amount, only \$33,000 can be considered local expenditures.

Table 4-6. Operations & Maintenance Costs – Wheeled Tactical Vehicles, IDARNG Rest-of-Idaho

Vehicle	Petroleum Oil & Lubricants CLS III ¹	Org Repair Parts CLS IX ²	Depot Level Repairs CLS IX ³	Total Cost Per Mile	Number of Vehicles	Ave Miles per Vehicle ⁴	Cost per Vehicle	Total Cost	Local Expenditures
Armored Security Vehi High Mobility Multipurpose Wheeled Vehicle (HMMVV) Series	\$3.72	\$0.71	\$2.91	\$7.34	8	160	\$1,173.75	\$9,390	\$329
2 1/2 Ton trucks	\$0.23	\$0.85	\$0.03	\$1.11	239	1,145	\$1,270.14	\$303,563	\$26,347
5 Ton Trucks	\$0.39	\$0.96	\$0.23	\$1.58	46	1,160	\$1,833.05	\$84,320	\$6,170
Light Equipment Transport (14T)	\$0.62	\$0.41	\$0.31	\$1.34	93	600	\$803.71	\$74,745	\$4,000
Medium Equipment Transport (MET) 20T	\$0.59	\$0.25	\$0.24	\$1.08	6	900	\$970.11	\$5,821	\$294
Heavy Equipment Transport (HET)	\$0.62	\$0.41	\$0.31	\$1.34	0	16,986	\$22,753.09	\$0	\$0
Heavy Expanded Mobile Tactical Truck (HEMTT) series	\$1.11	\$8.57	\$0.60	\$10.28	0	325	\$3,339.90	\$0	\$0
Fuel Truck	\$1.04	\$0.99	\$1.36	\$3.39	121	620	\$2,102.21	\$254,367	\$11,344
Wrecker	\$0.62	\$0.41	\$0.31	\$1.34	21	1,160	\$1,553.84	\$32,631	\$1,746
Dump Truck	\$0.39	\$0.45	\$1.90	\$2.74	8	1,350	\$3,701.47	\$29,612	\$695
ENG MISC	\$0.62	\$0.41	\$0.31	\$1.34	16	1,100	\$1,473.47	\$23,576	\$1,262
Forklift	\$1.11	\$8.57	\$0.60	\$10.28	46	185	\$1,901.18	\$87,454	\$7,766
	\$0.23	\$0.85	\$0.03	\$1.11	11	80	\$88.74	\$976	\$85
TOTALS					615			\$732,206	\$48,485

Notes

- Petroleum, Oil & Lubricants Nearly all through the Defense Logistic Agency. Assume 5% local trucking/delivery cost.
- Organizational repair parts - brakes, track, parts replaced by local mechanics. Estimate 10% local parts & 90% through military channels.
- Depot Level repairable - Engines, transmissions, differentials. Major components rebuilt at depots 100% off site military facilities.
- Estimates based on budgeting factors and FY2014 data. Costs updated to 2014 \$ by GNP implicit deflator.
- Actual miles vary greatly due to deployments and training cycles

Tracked Vehicle O & M

Tracked vehicles are much more expensive to operate, but they are important component of training. Cost per mile ranges from \$8.85 per mile for personnel carriers to \$331.88 per mile for a tank retriever. Table 3-7 lists the costs of operating and maintaining the 120 tracked vehicles at IDARNG facilities across Idaho, but outside of Ada County. In total these costs were estimated for FY2014 to be \$1,641,000, of which \$46,000 is estimated to have been spent locally. It is important to note that for all vehicles and aircraft, the amount of use will vary from year to year.

Table 4-7. Operations & Maintenance Costs – Tracked Vehicles, IDARNG Rest-of-Idaho

Operation & Maintenance Costs - Tracked vehicles, IDARNG in Rest-of-Idaho

Vehicle	Petroleum	Org Repair	Depot	Total	Number	Ave	Cost per	Total Cost	Local
	Oil & Lubricants	Parts	Level Repairs	Cost Per Mile ⁴		Miles per Vehicle ⁴			
	CLS III ¹	CLS IX ²	CLS IX ³		of Vehicles				Expenditures
	per mile	per mile	per mile						
Personnel and Equipment Carriers	\$0.92	\$6.33	\$1.60	\$8.85	27	180	\$1,594	\$43,027	\$3,301
Artillery and Support Tracks	\$2.85	\$27.43	\$38.07	\$68.35	32	84	\$5,741	\$183,717	\$7,755
Bradley series	\$2.91	\$34.58	\$104.49	\$141.98	43	210	\$29,816	\$1,282,067	\$32,536
Tank Retrievers	\$4.96	\$47.89	\$279.03	\$331.88	6	50	\$16,594	\$99,563	\$1,511
M1 series tanks	\$19.10	\$126.04	\$127.41	\$272.55	0	150	\$40,883	\$0	\$0
Bulldozers	\$2.85	\$27.43	\$38.07	\$68.35	12	40	\$2,734	\$32,807	\$1,385
TOTALS					120			\$1,641,181	\$46,488

Notes:

1. Petroleum, Oil & Lubricants all purchased through the Defense Logistic Agency. Assume 5% local trucking/delivery cost.
2. Organizational repair parts - brakes, track, parts replaced by local mechanics. Estimated 10% local parts & 90% through military channels.
3. Depot Level Repairable - Engines, transmissions, differentials. Major components rebuilt at depots 100% off site military facilities.
4. Mileage estimates based on budgeting factors and FY2014 data, costs adjusted to FY2014 by GNP implicit price deflator.
5. Actual miles vary greatly due to deployments and training cycles

Army Guard Aircraft O&M

There are no Army Guard aircraft in Idaho stationed outside of Gowen Field.

Chapter 5: Idaho Air National Guard Impacts

Summary

The direct economic impacts of the Idaho Air Guard of nearly \$79 million per year were estimated using FY2014 data for personnel and for training and visiting unit expenditures. Cooperative agreements, O&M, and fuel expenses were based on a three-year average for FY2012-14 to smooth annual variations. Local expenditures were parsed out of total costs based on spending patterns and the experienced judgments of Guard purchasing agents and the authors.

The direct impacts are summarized in the table below in the following categories:

- Personnel – Salaries, allowances, and benefits of 1,388 Air Guard personnel who may be state technicians, federal technicians or contract employees, or any of four military employee categories. All benefits are assumed to be spent within Idaho.
- Cooperative Agreements – Several agreements made with the Idaho Military Division to provide needed services.
- Operations & Maintenance – Payments to the Boise Airport under the joint use agreement, grounds and janitorial services, all maintenance and restoration project costs, utilities, and on-going information technology purchases.
- Training Expenses – Lodging, meal, supplies, and contracting costs of Air Guard training exercises.
- Vehicle Maintenance – Purchases of local parts & lubricants with government purchase cards and delivery costs of federally-contracted parts.
- Fuel – The delivery costs associated with aviation fuel, diesel and unleaded gasoline purchases.
- Visiting Unit Expenditures – Lodging, per diem, and personal expenditures by units visiting from outside Idaho.

Table 5-1. Idaho Air Guard Direct Economic Impacts

Category	Total Expenditures	Labor	Materials	Total Direct Impact
Personnel Salary, Allowances, & Benefits	\$72,807,000	\$72,807,000		\$72,807,000
Cooperative Agreements	\$1,135,000	\$166,000	\$969,000	\$1,135,000
Operations & Maintenance	\$3,942,000	\$389,000	\$3,522,000	\$3,942,000
Training Expenses	\$236,000		\$236,000	\$236,000
Vehicle Maintenance	\$93,000		\$70,000	\$70,000
Fuel	\$11,915,000		\$596,000	\$596,000
Visiting Unit Expenditures	\$356,000		\$356,000	\$356,000
TOTAL	\$90,484,000	\$73,362,000	\$5,749,000	\$79,142,000

These direct economic impacts were then fed into an input-output economic model called IMPLAN. The model generates indirect and induced impacts within the State of Idaho that are consequences of the direct impacts.

Indirect impacts are those purchases of goods or services by businesses that provide goods or services to the National Guard, or who use National Guard services. *Induced impacts* are changes generated in the economy by employees who spend their wages on goods and services.

Table 5-2. Air Guard Total Economic Impacts

Impact Type	Employment	Labor Income	Output
Direct Impacts	1,388	\$73,361,000	\$79,142,000
Indirect Impacts	652	\$22,244,000	\$38,351,000
Induced Impacts	761	\$40,422,000	\$37,861,000
Total Effect	2,801	\$136,027,000	\$155,354,000
Multpliers (SAM Type II)	2.02	1.85	1.96

Source: Minnesota IMPLAN Group, Inc., 2013

Notes: Employment includes all full, part-time, and seasonal jobs in Idaho
Labor Income and Output expressed in 2014 \$.

For the Idaho Air Guard, the 1,388 jobs generated directly lead, in turn, to 652 indirect and 761 induced jobs. Thus, the total number of full, part-time, or seasonal jobs that are created by the presence of the Idaho Air Guard is 2,801.

Similarly, those 1,388 direct jobs generate a total of \$73.4 million in compensation, or labor income. That direct effect leads to an additional \$22.2 million in indirect, and \$40.4 in induced labor income, for a total labor income impact of \$136.0 million.

Finally, the \$79.1 million of economic activity is generated directly by the Idaho Air Guard. This causes \$38.4 million in indirect economic output and \$37.9 million in induced economic output for a total impact on economic output of \$155.4 million.

Lastly, the Idaho Division of Financial Management estimated that 5.0% of total personal income becomes some form of state tax revenue (Ferguson, 2015). Applying this rule of thumb to the total labor income impact of \$136.0 million yields a conservative estimate of \$6.8 million in state tax revenues generated by the presence of the Idaho Air Guard. This is a minimum estimate because there will be taxable purchases generated by businesses serving the Guard, as well as corporate income taxes paid by these businesses that are not included in this estimate.

ESTIMATING THE DIRECT IMPACTS OF THE IDAHO AIR GUARD

Direct impacts are the economic activities that flow from a business or project. In the case of the Idaho Air National Guard, the business is providing for our public interests in national and domestic security, with a secondary mission in emergency response. The direct impacts are best measured through the economic transactions made with the regional economy. Six types of direct impacts can be examined for the IDANG:

- 1) Personnel
- 2) Operations & Maintenance
- 3) Vehicle Operations & Maintenance
- 4) Fuel
- 5) Training Expenditures
- 6) Visiting Unit Expenditures

Personnel

As with the Idaho Army National Guard, the number of full and part-time employees is larger than generally perceived, because employees are categorized in several different ways and paid from different budget sources. The Air Guard uses seven of the Army's ten categories of employee. The table below summarizes the number and cost of Idaho Air Guard personnel. All are based at Gowen Field, though some use the base and range facilities at Mountain Home.

Table 5-3. FY2014 Combined Air Guard Personnel Budget

Type	Number of Employees	Wages, Allowances, & Benefits
State Technician	64	\$4,117,000
Federal Technician	269	\$22,315,000
Federal Contract Employees	6	\$336,812
Military Sub-Total	1,049	
Active Guard and Reserve (AGR)	272	\$22,874,000
Substance Abuse (ADOS)	4	\$291,500
Mobilized Traditional Members (Mob'd)	8	\$1,232,300
Traditional Members	765	\$20,404,375
	1,388	\$71,570,987
Incentive Payouts		
(Bonus & Student Loans, FY12-14 Ave)		\$1,235,717
Total Personnel Costs		\$72,806,704

Note:

- 1) Expenditures expressed in 2014 \$
- 2) Fed Contract Employee wage is average of federal technicians

Here is a brief description of each of the seven types of employees at the Idaho Air National Guard:

State Technician – These are permanent state employees of the Military Division of the Governor’s Office whose pay and allowances are 100% federally reimbursed by the Department of Defense through National Guard Bureau. Most employees are *dual status* in that they are also required to be members of the Idaho National Guard.

Federal Technician – These are permanent, indefinite, or temporary federal civilian employees of the U.S. Department of Defense on the general service pay schedule. Most are *dual status* in that they are also required to be members of the Idaho National Guard.

Federal Contract Employees – These are employees of federal contract firms, typically supplying support to some piece of military equipment, software or providing some specialized training.

Military

Active Guard and Reserve (AGR) - These are full time National Guard members responsible for the day to day administrative, supply, and training preparation duties of the military units. Their pay and allowances are the same as active duty soldiers.

Substance Abuse (ADOS) – These are full-time substance abuse counselors working with the members.

Mobilized Traditional Members (Mob’d) – These are National Guard members who have been mobilized and deployed on active duty. Their pay is shifted to the federal US Air Force and Department of Defense. They receive housing and subsistence allowances in addition to salary.

Traditional Members – These are your typical National Guard members, living in the community and doing training one weekend a month, two weeks of annual training (summer camp) and additional training, work details, and when needed emergency state and community disaster duty.

Cooperative Agreements

The Idaho Air Guard has also entered into several cooperative agreements with the State of Idaho. These include agreements for FOMA, Fire, Security, environmental, and family support. While the personnel working under these agreements are already included in the personnel table above, Table 5-4 below represents other expenses associated with executing these cooperative agreements. These operating expenses averaged \$1.14 million over 20012-2014.

Table 5-4. Air Cooperative Agreements

Expense Category	2012-14 Ave	% Labor	Local Labor Cost	% Materials	Local Materials Cost
Communication Cost	\$866			100%	\$866
Emp Development Costs	\$35,656	50%	\$17,828	50%	\$17,828
Emp Travel Costs	\$31,239			100%	\$31,239
General Services	\$6,167	100%	\$6,167		
Professional Services	\$58,341	100%	\$58,341		
Repair & Maint Serv	\$137,870	50%	\$68,935	50%	\$68,935
Fuel & Lubricants	\$2,534			100%	\$2,534
Computer Supplies	\$78,085			100%	\$78,085
Rep & Maint Supplies	\$112,200			100%	\$112,200
Other Supplies	\$25,323			100%	\$25,323
Utility Charges	\$487,786			100%	\$487,786
Rentals & Oper Leases	\$113,631			100%	\$113,631
Computer Equipment	\$8,183			100%	\$8,183
Other Equipment	\$7,792			100%	\$7,792
Misc Expenditures	<u>\$29,713</u>	50%	<u>\$14,856</u>	50%	<u>\$14,856</u>
	\$1,135,385		\$166,127		\$969,258

Notes:

General Services = General +Admin+Computer services

Other Supplies = Inst & Resident, Specific Use, and Admin supplies

Other Equipment = Motorized-Nonmotorized, Office, and Specific Use equipment

Operations and Maintenance

It costs \$3,942,000 to operate and maintain the facilities of the Idaho Air Guard at Gowen Field, based on the average of the last three years. The vast majority (99.2%) is spent within Idaho, though things like most IT equipment are not manufactured here. Nearly 90% is spent on materials and services, with Guard members providing much of the labor. Janitorial labor is the exception. Utility services and routine IT equipment purchases cost roughly \$1.8 million per year.

The Air Guard pays about \$95,000 to the Boise Airport for its annual lease of a portion of the runways. There are some 62 buildings comprising a total of 566,000 square feet to be maintained. While the Air Guard has not engaged in the major construction that the Army Guard has done, it still expends about \$1.5 million per year on sustainment and restoration projects.

Table 5-5. IDANG Facilities Operations & Maintenance Budget

Service	Total Cost	% Labor	Local Labor Cost	% Materials	Local Materials Cost
Airport Joint Use Agreement	\$94,540	0.0%	\$0	100.0%	\$94,540
Grounds Services	\$37,759	100.0%	\$37,759	0.0%	\$0
Janitorial Services	\$248,356	100.0%	\$248,356	0.0%	\$0
Janitorial Supplies	\$13,373	0.0%	\$0	100.0%	\$13,373
Janitorial Contracts	\$11,472	50.0%	\$5,736	50.0%	\$5,736
Indoor Pest Control	\$22,999	85.0%	\$19,549	15.0%	\$3,450
Refuse Service	\$10,348	50.0%	\$5,174	50.0%	\$5,174
Building Maintenance Supplies	\$22,225	0.0%	\$0	100.0%	\$22,225
Building Maintenance Services	\$16,743	75.0%	\$12,557	25.0%	\$4,186
Maintenance and Repair	\$47,433	50.0%	\$23,716	50.0%	\$23,716
Minor Construction (Small Project)	\$150,117	0.0%	\$0	100.0%	\$150,117
Building O&M Sub-Total	\$675,364		\$352,847		\$322,517
Facility Sustainment Projects	\$549,903	0.0%	\$0	100.0%	\$549,903
Facility Restoration Projects	\$921,846	0.0%	\$0	100.0%	\$921,846
Facility Restoration Design	\$35,775	100.0%	\$35,775	0.0%	\$0
Sustainment, Restoration, and Maintenance Sub-Total	\$1,507,524		\$35,775		\$1,471,749
Water	\$51,645	0.0%	\$0	100.0%	\$51,645
Waste Water	\$5,020	0.0%	\$0	100.0%	\$5,020
Electricity	\$325,811	0.0%	\$0	100.0%	\$325,811
Natural Gas	\$105,536	0.0%	\$0	100.0%	\$105,536
Cellular Telephone Service	\$42,256	0.0%	\$0	100.0%	\$42,256
Line Communication Services	\$758,347	0.0%	\$0	100.0%	\$758,347
Local Telephone Services	\$16,429	0.0%	\$0	100.0%	\$16,429
DISA Services	\$9,604	0.0%	\$0	100.0%	\$9,604
IT Purchases					
Government Purchase Card	\$88,349	0.0%	\$0	100.0%	\$57,427
Fighter Wing Contracts	\$143,769	0.0%	\$0	100.0%	\$143,769
Range Squadron - Mt Home	\$211,850	0.0%	\$0	100.0%	\$211,850
Utilities Sub-Total	\$1,758,615		\$0		\$1,727,693
TOTAL	\$3,941,503		\$388,623		\$3,521,959

Notes:

1) Based on 3-Year average of 2012, 2013, & 2014 IDANG expenditure data.

Vehicle Operations & Maintenance

This category includes the upkeep of 21 A10s associated with the 190th Flight Squadron and some 306 wheeled vehicles. Clearly most aircraft parts are imported to the Idaho economy, but Table 5-6 outlines those acquired locally with government purchase cards, and the delivery fee associated with supplying stock parts. Local impacts totaled \$70,200 on average over the last three years.

Table 5-6. 124th FW Vehicle Maintenance Costs

	FY 12-14 Average		
	Transactions/ Items	Total Cost	Local Impact
Government Purchase Card	504	\$75,332	\$69,305
Supply/National Stock Numbered Items	100	<u>\$17,837</u>	<u>\$892</u>
TOTAL		\$93,169	\$70,197

Notes: 1) Assumes 8% of GPC transactions occur out-of-state.

2) Assumes 5% of cost of Supply/National Stock Numbered items
(Defense Logistic) goes to local margin for delivery.

In addition, the delivery cost associated with all fuel costs must be considered. Aviation fuel is supplied by Western Aircraft in Boise. The figures in Table 5-7 include fuel used by transient federal planes, such as Air Force One, as well as normal fuel used by the Air Guard fleet. The numbers in this table are three year averages combined with the 2014 price of fuel. The delivery margin is assumed to be five percent of the cost. Clearly, price has declined in 2015, and will always fluctuate with market conditions. Fuel costs averaged \$11.9 million, with an estimated \$596,000 as local impacts.

Table 5-7. Fuel Expenditures

	FY 12-14 Average (gal)	2014 Price (per gallon)	Total Fuel Expenditure	Local Expenditures
Aviation Fuel	3,158,545	\$3.68	\$11,623,446	\$581,172
Ground Fuel	81,184			
Diesel	44,651	\$3.57	\$159,405	\$7,970
Unleaded Gasoline	36,533	\$3.61	<u>\$131,884</u>	<u>\$6,594</u>
TOTAL			\$11,914,735	\$595,737

Notes:

- 1) Fuel consumption average of FY 2012-FY2014
- 2) Price is average for calendar year 2014
- 3) Ground fuel is split between 55% diesel and 45% unleaded gas, based on CY 2014 deliveries.
- 3) Local direct impacts are local delivery margin of the federal fuel contract, estimated to be 5%.

Training Expenditures

Air Guard members coming for their training duties are fed and housed at Guard expense. The cost of meals and lodging are summarized in Table 5-8 as the average of the last three years. These costs total nearly \$236,000, including the cost of training in fire suppression techniques.

Table 5-8. Idaho Air Guard Weekend Training Costs

FY 12-14 Average	Meals	Lodging	Supplies	Contractors	Total
Customers	12338	537			
Spent	\$68,958	\$71,789	\$13,112	\$48,733	\$202,592

Fire Supression MCA Supply/Training \$33,300

TOTAL LOCAL TRAINING EXPENDITURES **\$235,892**

Visiting Unit Expenditures

The last element of direct impacts caused by the presence of the Idaho Air Guard is the expenditures made by aviation units visiting Gowen Field for training exercises. The four units listed in Table 5-9 make regular trips to Idaho. Lodging and per diem are based on Idaho Air Guard actual costs. Personal spending by visiting crew are conservatively estimated to be \$15 per day. Visiting units create a direct impact of \$356,000 per year.

Table 5-9. Visiting Unit Expenditures

Unit	Trips Per Year	Length of Trip	Personnel	Cost of Lodging	Cost of Per Diem	Personal Expenditures	Total Local Expenditures
305th Rescue Squadron	1	14	22	\$25,564	\$12,628	\$4,620	\$42,812
34th Weapons School, Nellis	2	17	19	\$53,618	\$26,486	\$9,690	\$89,794
Singapore Air Force	1	21	58	\$101,094	\$49,938	\$18,270	\$169,302
NATO AWACS	1	14	28	\$32,536	\$16,072	\$5,880	\$54,488
TOTAL							\$356,396

Total Direct Impacts of the Idaho Air Guard

The direct impacts of the presence of the National Air Guard in Idaho can now be summarized in Table 5-10. The six types of direct impacts have a total of nearly \$75.0 million in 2014 dollars per year. The difference between the \$86.3 million in total expenditures and the \$75.0 million in direct impacts is spending that accrues out-of-state. The vast majority of direct impacts, 93.6%, is from expenditures for wages and benefits.

Table 5-10. Idaho Air Guard Direct Economic Impacts

Category	Total Expenditures	Labor	Materials	Total Direct Impact
Personnel Salary, Allowances, & Benefits	\$69,775,651	\$69,775,651		\$69,775,651
Operations & Maintenance	\$3,941,503	\$388,623	\$3,521,959	\$3,941,503
Training Expenses	\$235,892		\$235,892	\$235,892
Vehicle Maintenance	\$93,169		\$70,197	\$70,197
Fuel	\$11,914,735		\$595,737	\$595,737
Visiting Unit Expenditures	<u>\$356,396</u>		<u>\$356,396</u>	<u>\$356,396</u>
TOTAL	\$86,317,346	\$70,164,273	\$4,780,181	\$74,975,376

INDIRECT, INDUCED & TOTAL IMPACTS

For the Idaho Air Guard, the 1,388 jobs generated directly lead, in turn, to 654 indirect and 765 induced jobs. Thus, the total number of full, part-time, or seasonal jobs that are created by the presence of the Idaho Air Guard is 2,807. Although a large portion of the Air Guard jobs are part-time, this still means the Air Guard is a major employer within the Treasure Valley and Idaho. Similarly, those 1,388 direct jobs generate a total of \$70.2 million in compensation, or labor income. That direct effect leads to an additional \$21.3 million in indirect, and \$38.7 in induced labor income, for a total labor income impact of \$130.1 million.

Finally, the \$75.0 million of economic activity is generated directly by the Idaho Air Guard. This causes \$36.3 million in indirect economic output and \$35.9 million in induced economic output for a total impact on economic output of \$147.2 million.

Three multipliers can be imputed from these impacts. The Idaho Air Guard has an employment multiplier of 2.02, meaning that for each job created directly by the Air Guard another 1.02 jobs are created by indirect and induced impacts. The labor income multiplier is 1.85 and the economic output multiplier is 1.96. In rough terms each dollar spent by the Air Guard generates another dollar in impacts to the Idaho economy as it ripples through successive rounds of spending.

Table 5-11. Idaho Air Guard Total Economic Impacts

Impact Type	Employment	Labor Income	Output
Direct Impacts	1,388	\$70,164,273	\$74,975,376
Indirect Impacts	654	\$21,274,227	\$36,331,661
Induced Impacts	765	\$38,660,928	\$35,867,536
Total Effect	2,807	\$130,099,428	\$147,174,574
Multpliers (SAM Type II)	2.02	1.85	1.96

Source: Minnesota IMPLAN Group, Inc., 2013

Notes: Employment includes all full, part-time, and seasonal jobs in Idaho
Labor Income and Output expressed in 2014 \$.

Fiscal Impacts

Lastly, the Idaho Division of Financial Management estimated that 5.0% of total personal income becomes some form of state tax revenue (Ferguson, 2015)¹. Applying this rule of thumb to the total labor income impact of \$130.1 million yields a conservative estimate of \$6.5 million in state tax revenues of all types generated by the presence of the Idaho Air Guard. This is a minimum estimate because there will be taxable purchases generated by businesses serving the Guard, as well as corporate income taxes paid by these businesses that are not included in this estimate.

Asset Values

While it has no bearing on the direct impacts of the Air Guard, The value of the organization's assets can be calculated. This data comes from the US General Services Administration. The property value of the improvements made to the 354 acres of land leased at Gowen Field are composed of 62 buildings with an estimated value of \$57.3 million. Information technology adds another \$5.7 million, and 306 wheeled vehicles have a total value of \$16.2 million. The aircraft and weapons systems account for the great majority of assets at \$247.6 million. The total assets of the Idaho Air Guard are estimated to be \$326.9 million, again documenting the significant economic footprint of this unit of the national security system.

Table 5-12. Idaho Air Guard Asset Values

Asset	Value
Real Property	\$57,317,000
Information Technology	
IT Equipment	\$4,293,000
Personnel Wireless Communication System Equipment	\$1,456,000
Weapons Systems	
Aircraft	\$245,941,600
Small Weapons	\$1,697,000
All wheeled vehicles	<u>\$16,200,000</u>
TOTAL ASSET VALUE	\$326,904,600

Source: U.S. General Services Administration

¹ Note that this Idaho tax impact has decreased from 5.5% to 5% over the last six years due to an estimated \$500 million in recently legislated tax cuts. Simply put, the tax burden on economic activity in Idaho has been lessened.

Chapter 6: Economic Impacts of the Idaho Military Division

Chapter Summary

The direct impacts of the Idaho Military Division total over \$24.0 million. Nearly two-thirds of these expenditures are for labor within the Idaho economy, including the 83 estate employees within the Division. Some \$8.3 million was expended on materials sourced within the Idaho economy, but often not manufactured here.

Table 6-1. Idaho Military Division Direct Economic Impacts

Category	Total Expenditures	Labor	Materials	Total Direct Impact
Personnel Salary & Benefits	\$6,641,779	\$6,641,779		\$6,641,779
Military Mgt Operations & Maintenance	\$494,957	\$161,057	\$333,900	\$494,957
Bureau of Homeland Security O & M	\$2,695,032	\$984,716	\$1,710,317	\$2,695,032
Public Safety Communications O & M	\$1,032,734	\$214,260	\$818,474	\$1,032,734
Grant Programs	<u>\$13,879,893</u>	<u>\$7,719,277</u>	<u>\$5,447,222</u>	<u>\$13,166,499</u>
TOTAL	\$24,744,396	\$15,721,090	\$8,309,912	\$24,031,002

When these direct impacts are fed into the Idaho IMPLAN model, the indirect and induced impacts within the Idaho economy are estimated (Table 6-2). The entire Idaho Military Division creates total employment impacts of 547 full, part-time or seasonal jobs. It places a total of \$22.6 million in labor income and \$43.9 million of economic output into the Idaho economy. A rough estimate is that the activities of IMD place \$1,131,000 of all types of tax dollars into state government coffers. The multipliers mean that for every job created directly by the Idaho Military Division, there is another 0.58 jobs created elsewhere in the economy as a result. For every dollar of labor income paid to those employees, another 44 cents is generated in Idaho. For every dollar of economic activity created directly by IMD, another 77 cents is created by the multiplier effect. While these multipliers may seem low to the lay person, they are within normal ranges.

Table 6-2. Idaho Military Division Total Economic Impacts

Impact Type	Employment	Labor Income	Output
Direct Impacts	346	\$15,721,000	\$24,031,000
Indirect Impacts	68	\$2,752,000	\$6,246,000
Induced Impacts	<u>133</u>	<u>\$4,149,000</u>	<u>\$12,979,000</u>
Total Effect	547	\$22,622,000	\$43,256,000
Multipliers (SAM Type II)	1.58	1.44	1.80

Source: IMPLAN, 2013 data

Notes: Employment includes all full, part-time, and seasonal jobs in Idaho
Labor Income and Output expressed in 2014 \$.

These total impacts can be re-arranged to reflect the total impacts of each of the four IMD programs. These are reflected in Table 6-3. Though IMD only has 83 state employees directly hired, its grants support 308 local homeland security employees, contractors, and trainers. Note the total impacts of Table 6-3 match those in Table 6-2.

Table 6-3. Idaho Military Division Total Economic Impacts by Program

Program	Total Impacts on Employment	Total Impacts on Labor Income	Total Impacts on Economic Output
Military Management	51	\$2,697,940	\$3,923,084
Bureau of Homeland Security	126	\$6,784,554	\$11,334,024
Public Safety Communications	62	\$3,235,506	\$5,396,892
Grant Programs	<u>308</u>	<u>\$9,904,000</u>	<u>\$22,602,000</u>
Total Effect	547	\$22,622,000	\$43,256,000
Multpliers (SAM Type II)			

Source: IMPLAN, 2013 data

Notes: Program impacts include personnel and Operations and Management direct impacts
 Employment includes all full, part-time, and seasonal jobs in Idaho
 Labor Income and Output expressed in 2014 \$.

IMPACTS OF THE IDAHO MILITARY DIVISION

Direct impacts are the economic activities that flow from a business or project. The Idaho military Division provides an administrative home for the National Guard and the Bureau of Homeland Security within Idaho state government. It also is responsible for operating the Public Safety Communications system and the Idaho Emergency Communication Commission (E-911). IMD also maintains a number of cooperative agreements between Idaho and the federal National Guard, but these were reported as part of the Air and Army Guard impacts. The direct impacts are best measured through the economic transactions made with the state economy. Three types of direct impacts can be examined for the IMD:

1. Personnel
2. Operations & Maintenance
3. Grants to Local Units of Government

Personnel

A total of 83 people work for the Idaho Military Division. A majority of 66 persons are based in Ada County at Gowen Field, and 17 work elsewhere in Idaho. Here is a bit more about this unusual state agency, whose head is the Adjutant General, who reports to the Governor:

1. **Military Management:** This is a small group of 19 employees entirely based at Gowen Field. They provide administrative oversight to the National Guard and the other IMD programs, including human resource services and financial management. This program also manages the federal/state cooperative agreements with the Army and Air Guard in Idaho. These agreements help operate and maintain the Gowen Field and OCTC training complexes, the 25 readiness centers and the nine maintenance shops statewide
2. **Bureau of Homeland Security:** This agency largely federally-funded program develops and maintains a statewide disaster preparedness master plan. BHS works with local government units to train on disaster response and recovery. It also manages two grant programs. One is federal funds to counties, cities, tribes and local first responders to pay for payroll, equipment, supplies, and training. In this way Idaho has a system of regional response teams ready for any disaster. The second program is the Emergency Communications Commission (E-911) grant program. This is funded by the \$1.00 monthly fee paid on cell phone service contracts. It pays for equipment and services to maintain a consolidated statewide emergency communications system. There are 41 employees in BHS statewide, with 34 based in Ada County.
3. **Public Safety Communications:** The mission of the PSC is to provide interoperable communications capabilities between systems and jurisdictions across the state. It manages provider services and maintains the state microwave system. It also keeps an inventory of all communication equipment and ensures that the equipment is standardized to work in all conditions. The PSC program employs 23 people evenly split between Ada County and the rest of Idaho.

Table 6-4. Idaho Military Division Personnel Summary

	<u>Ada County</u>		<u>Rest-of-Idaho</u>		<u>IDAHO TOTAL</u>	
	Number of Employees	Salary & Benefits	Number of Employees	Salary & Benefits	Number of Employees	Salary & Benefits
Military Management	19	\$1,629,043	-	\$0	19	\$1,629,043
Bureau of Homeland Security	34	\$2,497,840	7	\$694,596	41	\$3,192,436
Public Safety Communications	13	\$943,293	10	\$877,008	23	\$1,820,301
IMD Total	66	\$5,070,175	17	\$1,571,604	83	\$6,641,779

The total economic impacts of the IMD personnel are displayed in Table 6-5. The 83 direct hires are multiplied just more than twice for total employment impacts of 168 jobs. Total labor income amounts to \$10.6 million, with \$13.3 million in total economic output.

Table 6-5. Total Economic Impacts of Idaho Military Division Personnel

Impact Type	Employment	Labor Income	Output
Direct Impacts	83	\$6,642,000	\$6,642,000
Indirect Impacts	39	\$2,009,000	\$2,954,000
Induced Impacts	46	\$1,964,000	\$3,680,000
Total Effect	168	\$10,615,000	\$13,276,000
Multipliers (SAM Type II)	2.02	1.60	2.00

Source: IMPLAN, 2013 data

Notes: Employment includes all full, part-time, and seasonal jobs in Idaho
Labor Income and Output expressed in 2014 \$.

Operations and Maintenance (O&M)

Military Management: Each of the three programs within the Idaho Military Division have operations and maintenance costs that are most easily reported separately. Military Management has an operating budget of nearly half a million dollars. One-third of that amount is comprised of local labor and two-thirds is comprised of materials or utility services.

Table 6-6. Military Management Operations & Maintenance Expenditures

Expense Category	2012-2014 Average	% Labor		% Materials		Local Materials Cost
		Labor	Local Labor Cost	Materials	Local Materials Cost	
Communication Cost	\$15,998			100%		\$15,998
Emp Development Costs	\$5,480	50%	\$2,740	50%		\$2,740
Emp Travel Costs	\$15,267			100%		\$15,267
General Services	\$27,863	100%	\$27,863			
Professional Services	\$21,228	100%	\$21,228			
Repair & Maint Serv	\$95,345	50%	\$47,673	50%		\$47,673
Fuel & Lubricants	\$2,187			100%		\$2,187
Computer Supplies	\$12,608			100%		\$12,608
Rep & Maint Supplies	\$17,199			100%		\$17,199
Other Supplies	\$24,325			100%		\$24,325
Insurance	\$68,088			100%		\$68,088
Utility Charges	\$17,931			100%		\$17,931
Rentals & Oper Leases	\$4,798			100%		\$4,798
Bldg Improvements	\$1,667			100%		\$1,667
Computer Equipment	\$12,407			100%		\$12,407
Other Equipment	\$29,458			100%		\$29,458
Misc Expenditures	\$123,105	50%	\$61,553	50%		\$61,553
Military Mgt Total	\$494,957		\$161,057			\$333,900

Notes:

General Services = General +Admin+Computer services

Other Supplies = Inst & Resident, Specific Use, and Admin supplies

Other Equipment = Motorized-Nonmotorized, Office, and Specific Use equipment

Misc Expenditures = Misc expenditures + Mfg & Merch costs

Fed into the IMPLAN program for Idaho, Table 6-7 shows the direct, indirect, and induced impacts of the Military Management program. Total economic impacts of the military Management O & M expenditures are 13 jobs, \$268,000 in labor income and \$884,000 in economic output.

Table 6-7. Total Economic Impacts of IMD Military Management Program

Impact Type	Employment	Labor Income	Output
Direct Impacts	5	\$161,000	\$495,000
Indirect Impacts	4	\$57,000	\$214,000
Induced Impacts	4	\$50,000	\$175,000
Total Effect	13	\$268,000	\$884,000
Multpliers (SAM Type II)	2.60	1.66	1.79

Source: IMPLAN, 2013 data

Notes: Employment includes all full, part-time, and seasonal jobs in Idaho
Labor Income and Output expressed in 2014 \$.

Bureau of Homeland Security: In contrast, the Bureau of Homeland Security has an operations budget that averages nearly \$2.7 million. Of that, \$1.7 million is comprised of materials and nearly a million dollars is in local labor. The large spending on Other Equipment is mainly Specific Use equipment related to the disaster relief and recovery function of BHS. This is why Communications Costs and Professional Services are high as well. This study assumes all purchases are sourced locally, though the items may not be made inside Idaho.

Table 6-8. Idaho Bureau of Homeland Security O & M Expenditures

Expense Category	2012 - 2014 Average	% Labor	Local		Local Materials Cost
			Labor Cost	% Materials	
Communication Cost	\$281,375			100%	\$281,375
Emp Travel Costs	\$111,863			100%	\$111,863
Emp Development Costs	\$25,286	50%	\$12,643	50%	\$12,643
General Services	\$478,333	100%	\$478,333		
Professional Services	\$347,111	100%	\$347,111		
Repair & Maint Serv	\$93,718	50%	\$46,859	50%	\$46,859
Fuel & Lubricants	\$23,380			100%	\$23,380
Computer Supplies	\$201,357			100%	\$201,357
Rep & Maint Supplies	\$10,888			100%	\$10,888
Other Supplies	\$111,063			100%	\$111,063
Rentals & Oper Leases	\$24,682			100%	\$24,682
Computer Equipment	\$55,101			100%	\$55,101
Other Equipment	\$731,337			100%	\$731,337
Misc Expenditures	\$199,539	50%	\$99,770	50%	\$99,770
BHS Total O&M Expenditures	\$2,695,032		\$984,716		\$1,710,317

Notes:

General Services = General +Admin+Computer services

Other Supplies = Inst & Resident, Specific Use, and Admin supplies

Other Equipment = Motorized-Nonmotorized, Office, and Specific Use equipment

Misc Expenditures = Misc expenditures + Mfg & Merch costs + Insurance

Table 6-9. Total Economic Impacts of IMD Bureau of Homeland Security

Impact Type	Employment	Labor Income	Output
Direct Impacts	26	\$985,000	\$2,695,000
Indirect Impacts	8	\$270,000	\$1,044,000
Induced Impacts	9	\$286,000	\$1,037,000
Total Effect	43	\$1,541,000	\$4,776,000
Multpliers (SAM Type II)	1.65	1.56	1.77

Source: IMPLAN, 2013 data

Notes: Employment includes all full, part-time, and seasonal jobs in Idaho
Labor Income and Output expressed in 2014 \$.

Total economic impacts of BHS O&M expenditures are 43 jobs, \$1.54 million in labor income and \$4.78 million in economic output.

Public Safety Communications: Table 6-10 shows the O&M expenditures made by the Public Safety Communications program. Operating expenses total just over one million dollars. Again all the funds are spent within the Idaho economy though clearly many of the equipment items are manufactured in other states.

Table 6-10. Public Safety Communications O & M Expenditures

Expense Category	2012- 2014 Average	% Labor	Local Labor Cost	% Materials	Local Materials Cost
Communication Cost	\$29,686			100%	\$29,686
Emp Development Costs	\$4,402			100%	\$4,402
Emp Travel Costs	\$27,436	50%	\$13,718	50%	\$13,718
General Services	\$97,760	100%	\$97,760		
Professional Services	\$5,848	100%	\$5,848		
Repair & Maint Serv	\$69,985	50%	\$34,993	50%	\$34,993
Fuel & Lubricants	\$53,432			100%	\$53,432
Computer Supplies	\$5,303			100%	\$5,303
Rep & Maint Supplies	\$125,517			100%	\$125,517
Other Supplies	\$23,702			100%	\$23,702
Utility Charges	\$109,259			100%	\$109,259
Rentals & Oper Leases	\$70,458			100%	\$70,458
Bldg Improvements	\$38,611			100%	\$38,611
Computer Equipment	\$33,362			100%	\$33,362
Other Equipment	\$214,089			100%	\$214,089
Misc Expenditures	\$123,882	50%	\$61,941	50%	\$61,941
PSC Total	\$1,032,734		\$214,260		\$818,474

Notes:

General Services = General +Admin+Computer services

Other Supplies = Inst & Resident, Specific Use, and Admin supplies

Other Equipment = Motorized-Nonmotorized, Office, and Specific Use equipment

Misc Expenditures = Misc expenditures + Mfg & Merch costs + Insurance

Total economic impacts of the Public Safety Communications O&M expenditures amount to 15 jobs, \$294,000 in labor income and \$1.72 million in economic output.

Table 6-11. Total Economic Impacts of IMD Public Safety Communications

Impact Type	Employment	Labor Income	Output
Direct Impacts	9	\$214,000	\$1,033,000
Indirect Impacts	3	\$62,000	\$351,000
Induced Impacts	<u>3</u>	<u>\$18,000</u>	<u>\$334,000</u>
Total Effect	15	\$294,000	\$1,718,000
Multpliers (SAM Type II)	1.67	1.37	1.66

Source: IMPLAN, 2013 data

Notes: Employment includes all full, part-time, and seasonal jobs in Idaho
Labor Income and Output expressed in 2014 \$.

Grant Programs

The Idaho Military Division also operates two grant programs from the Bureau of Homeland Security. These pass-through expenditures are shown in Table 6-12. The Bureau of Homeland Security grants to tribes, counties, and cities pays for regional disaster response teams, such as hazmat teams. The grants cover salary and benefits plus the equipment and supplies necessary for the job. On-going training is part of this job. An estimated 90% of equipment is sourced within Idaho.

The Emergency Communications grant funds come from the dollar attached to all monthly cell phone charges. These grants to local units of government fund the 911 emergency system within the state. It is estimated that three-quarters of the equipment and software purchased is sourced through an Idaho company.

The last item covers various grant programs that have irregular funding patterns and represent opportunities captured for the benefit of Idaho's emergency response system.

Table 6-12. Idaho Bureau of Homeland Security Grant Programs

Expense Category	3 Year Average	% Labor	Local Labor Cost	% Materials	Local Materials Cost
BHS Federal Grants	\$11,486,746				
Payroll (50%)	\$5,743,373	100%	\$5,743,373		
Equipment (30%)	\$3,446,024			90%	\$3,101,421
Supplies (10%)	\$1,148,675			100%	\$1,148,675
Training (10%)	\$1,148,675	100%	\$1,148,675		
E911 Emergency Communications Grants	\$2,211,641				
Services (33.3%)	\$736,477	100%	\$736,477		
Equipment (66.7%)	\$1,475,165			75%	\$1,106,374
Misc Payments to Local Units	<u>\$181,506</u>	50%	<u>\$90,753</u>	50%	<u>\$90,753</u>
Total BHS Grant Expenditures	\$13,879,893		\$7,719,277		\$5,447,222

Notes

Grant expenditures by local units of government are not kept by BHS,
so this table uses assumptions that are the best estimates by the grant officers.

Table 6-13 shows the total economic impacts of the IMD grant programs. A total of 308 jobs, \$9.9 million in labor income and \$22.6 million in economic output flow from the expenditures of the BHS grants.

Table 6-13. Total Economic Impacts of IMD BHS Grant Programs

Impact Type	Employment	Labor Income	Output
Direct Impacts	223	\$7,719,000	\$13,166,000
Indirect Impacts	14	\$354,000	\$1,683,000
Induced Impacts	<u>71</u>	<u>\$1,831,000</u>	<u>\$7,753,000</u>
Total Effect	308	\$9,904,000	\$22,602,000
Multpliers (SAM Type II)	1.38	1.28	1.72

Source: IMPLAN, 2013 data

Notes: Employment includes all full, part-time, and seasonal jobs in Idaho
Labor Income and Output expressed in 2014 \$.

Summary

The economic impacts of the Idaho Military Division are summarized at the beginning of this chapter.

Chapter 7: Construction impacts

Capital Costs

Capital costs are the other, and perhaps more important, type of cost for a defense activity. Capital costs are the one-time cost of constructing the facilities and acquiring assets. In the case of the Idaho Army National Guard, only the capital costs associated with construction of facilities at Gowen Field or the Orchard Combat Training Center can be identified. Projects of less than \$750,000 cost at Gowen or elsewhere in the state are compiled under Minor Construction in O&M expenditures. There are numerous cases of using this program to renovate National Guard facilities outside of Ada County. Nor were there any significant Air Guard construction projects identified.

Capital Cost of IDARNG and OCTC Facility Improvements

Gowen Field sits on property owned by the City of Boise, Airport Authority and used by the military through a permit lease agreement. The Orchard Combat Training Center is located on federal and state land. The federal land is administered by the Bureau of Land Management (BLM) with National Guard and Reserve use authorized by the Birds of Prey National Conservation Act at no cost to the National Guard. A Memorandum of Understanding with the BLM specifies conditions of use. The Idaho Army National Guard pays the Idaho Department of Lands an annual lease fee for the approximate 11 1/2 square miles (7360 acres) of state endowment land.

The Mobilization and Training Equipment Site (MATES) and the Ammunition Supply Point (ASP) are outside the OCTC boundary on state endowment ground. IDARNG paid a 25 year lease fee of \$98,012.80 in 2009 to the Idaho Department of Lands for the ASP site. The lease fee for the OCTC is \$5000 a year. The IDNG-Boise Airport agreement has a few nominal fees associated with it, but most costs are covered in exchange-for-services agreements, such as crash rescue and airfield maintenance.

Many of the Gowen Field buildings and facilities pre-date the timeframe of this study and are historical in nature. Other costs are shared by the Air National Guard or have other data issues. In contrast, many of the improvements to the Orchard Combat Training Center have occurred in the recent past. Table 16 displays the costs of various range and facility improvements since FY2008. The last six fiscal years have seen \$104.4 million in base improvements, and all of this spending has been local. The nominal average of these six years is \$17.4 million per year. To correct for inflation these nominal figures were adjusted by the Producer Price Index for new industrial buildings. The six year nominal average construction at IDARNG was \$16.5 million. Correcting for inflation, the real five year average for FY2007-2011 was \$17.4 million.

Given the regularity of construction projects being funded at IDARNG, and the improving future construction estimates, **the \$17.4 million real six-year average can be added to the operations impacts as a predictable part of IDARNG on-going impacts.**

Table 7-1. Idaho National Guard New Construction Projects

Construction Project	Total Project Cost	Total Project Cost (inflation-adjusted)
Railhead PH1	\$10,629,998	
Railhead PH2	\$7,001,683	
UAC Urban Assault Course	<u>\$1,848,172</u>	
2008 Sub- Total	\$19,479,853	\$21,432,000
RCOM - Range Center of Excellence Op	\$1,742,517	
LFSH - Live Fire Shoot House	\$1,893,520	
ORTC PH1 Design	\$1,308,172	
Range Power 2,3,5,6	\$762,510	
CIED - Counter Improvised Explosive De	<u>\$365,000</u>	
2009 Sub-Total	\$6,071,719	\$6,731,000
Bldg 720 - Fitness Center	\$747,217	
Range Power Cindercone 10-14	\$723,999	
CACTF - Combined Arms Collective Tra	<u>\$9,052,386</u>	
2010 Sub-Total	\$10,523,602	\$11,633,000
ORCTC PH1 Construction	\$13,795,767	
LFEB - Live Fire Exercise Breach	\$237,695	
Sqd Defense Range 17	\$752,966	
Grenade Launcher Rng 16	\$12,442	
Heavy Sniper Rng 18	\$778,316	
Engineer Qual Range 22	\$428,971	
Grenade & FA Direct Rng 28, 29A, 29B	\$173,313	
Range Power 14-18	\$267,000	
TUAS Ops Facility	<u>\$6,022,073</u>	
2011 Sub Total	\$22,468,543	\$24,306,000
FTI - Fixed Tactical Internet	<u>\$1,460,173</u>	
2012 Sub Total	\$1,460,173	
ORTC PH2	<u>\$38,962,000</u>	
2013 Sub Total	\$38,962,000	\$40,277,000
2008 - 2013 Average	\$16,494,315	\$17,396,000
Note: Corrected for inflation using Producer Price Index (PPI) for new industrial building construction		
2008-2013 Total	\$98,965,890	\$104,378,000

Total Economic Impacts of Average IDARNG Construction

The \$17.4 million in real (inflation-corrected), average construction can be fed into the IMPLAN model for the Idaho economy. The resulting direct, indirect, induced, and total impacts are shown in Table 7-2. The \$17.4 million in average construction results in direct impacts of 114 jobs. Because the expenditures are for types of construction for which most of the materials and labor are developed or sourced locally, this time the indirect impacts are of similar magnitude to induced impacts. This leads to indirect impacts of 50 jobs and induced impacts of 48 jobs for a total of 212 full, part-time, or seasonal jobs. Clearly, in the case of construction, most of these jobs will be temporary for the duration of the project. Similarly, a total of \$9.35 million is generated in labor income, and the \$17.4 million of economic output ripples into total impacts of \$29.2 million.

Table 7-2. Total Economic Impacts of Average IDARNG Construction

Impact Type	Employment	Labor Income	Output
Direct Impacts	114	\$5,636,000	\$17,396,000
Indirect Impacts	50	\$1,980,000	\$6,236,000
Induced Impacts	48	\$1,737,000	\$5,575,000
Total Effect	212	\$9,353,000	\$29,207,000
Multpliers (SAM Type II)	1.86	1.66	1.68

Source: Minnesota IMPLAN Group, Inc., 2013

Notes: Employment includes all full, part-time, and seasonal jobs in Idaho

Labor Income and Output expressed in 2014 \$.

Average construction project expenditures by IDARNG 2008 - 2013

Capital Cost of Vehicles and Aircraft

It is difficult to place an exact value on the military vehicles and aircraft used by IDARNG, because they are acquired at different times and many have special upgrade packages for arms and armor. Table 7-3 contains a partial list of equipment cost based on current replacement values. The costs are assessed at an estimated average value based on the proportion of equipment with modification packages. Where an average value could not be calculated, a mid-range vehicle value was selected.

One observation to make about the vehicle operations and maintenance costs reported in Chapters 3 and 4 is that they do not include the depreciation of the capital costs reported in Table 7-3. Depreciation expenses are based on the expected useful life of the item and a cost of capital or interest rate. Depreciation expenses are sometimes called equipment replacement charges.

Note that the entire Idaho fleet consists of 1,025 wheeled tactical vehicles, 193 tracked vehicles, and 38 aircraft. Tactical means that the vehicle is designed for military specifications. Often these vehicles are armored to some degree. If the remaining vehicles were valued, the entire fleet of Idaho National Guard vehicles would likely be worth over a billion dollars.

Finally, it should be noted that **all the capital costs of equipment are expended in the manufacture of these vehicles and aircraft outside the Idaho economy, and thus create no direct economic impact here.**

Table 7-3. Capital Cost – Tactical Vehicles in IDARNG Fleet

	IDARNG Average Cost	Number in IDARNG Fleet	Total Cost (\$MM)
WHEELED VEHICLES			
High Mobility Multi-purpose Wheeled Vehicle (HMMWV)	\$152,000	392	\$59,584,000
Mine Resistant Ambush Protected (MRAP)	\$680,000	6	\$4,080,000
2 1/2 Ton Trucks	\$176,000	96	\$16,896,000
5 Ton Trucks	\$200,000	137	\$27,400,000
Light Equipment Transport	\$166,000	10	\$1,660,000
Heavy Equipment Transporter (HET)	\$628,000	3	\$1,884,000
Fuel Trucks	\$384,000	40	\$15,360,000
Wreckers	\$491,000	26	\$12,766,000
Dump Trucks	\$200,000	29	\$5,800,000
ENG MISC	\$155,000	65	\$10,075,000
Forklifts	\$72,000	48	\$3,456,000
TRACKED VEHICLES			
M1-A1 Abrams Tank	\$2,900,000	29	\$84,100,000
M-113 Series Personnel Carriers	\$450,000	39	\$17,550,000
M-2/3 Bradley Fighting Vehicles	\$3,310,000	61	\$201,910,000
M88 Howitzers	\$1,435,000	16	\$22,960,000
AIRCRAFT			
AH-64 Apache	\$16,700,000	17	\$283,900,000
UH-60L Blackhawk	\$5,200,000	7	\$36,400,000
LUH-72A Light Utility Helicopter	\$5,394,000	2	\$10,788,000
Drone Aircraft	\$100,000	<u>11</u>	<u>\$1,100,000</u>
(Millions 2014 \$)		791	\$817,669,000

Note: Updated to 2014 prices and inventory

Prices vary among inventory based on specifications and upgrades.

Where average not available, IDARNG average based on mid-range price.

Total vehicle fleet in Idaho is 1,248. 1,025 wheeled vehicles, 193 tracked vehicles and 38 aircraft.

Chapter 8: Other National Guard Impacts

This study has focused on the economic impacts of the Idaho National Guard, which can be both quantified and monetized. There are other positive impacts of the National Guard's presence. Some impacts can be quantified but not in terms of money, while other impacts can only be described qualitatively. Still, all impacts should be included in a comprehensive study, and that is the purpose of this chapter.

Disaster and Emergency Assistance. One of the most widely observed benefits of the National Guard is their deployment to assist in managing disasters and emergency situations. Deployment typically requires a disaster declaration by the Governor of Idaho or President of the United States in their roles as chief executive officer of the State or nation. There have been 23 Presidential disaster declarations for Idaho in the state's history. However, disaster declarations by the Federal Emergency Management Administration (FEMA) have been much more common.

Deployment for natural disasters is the most common domestic use of the Guard. A recent example was the deployment of members of the Idaho Air Guard to help manage both air and highway traffic in a region of wildfires in the Clearwater River Basin. A major deployment of the Idaho National Guard occurred in 1976 with the failure of the Teton Dam and the downstream flood damages that resulted. The eruption of Mt St. Helens in 1980 and the Challis earthquake of 1983 similarly required Guard assistance. Wildfires and flooding are likely the two most common precipitating events. Not only do soldiers lend assistance, but National Guard equipment may help with firefighting, moving dirt and mud, hauling debris, traffic safety, and assistance to disaster victims.

The National Guard can also be deployed to keep the peace in times of public disturbances. Over a century ago, the Idaho National Guard was to be called to restore order in the Silver Valley due to a labor dispute with the silver mines by Governor Steunenberg. However, the Idaho National Guard was still in the Philippines following the Spanish-American War, so the U.S. Army was called.

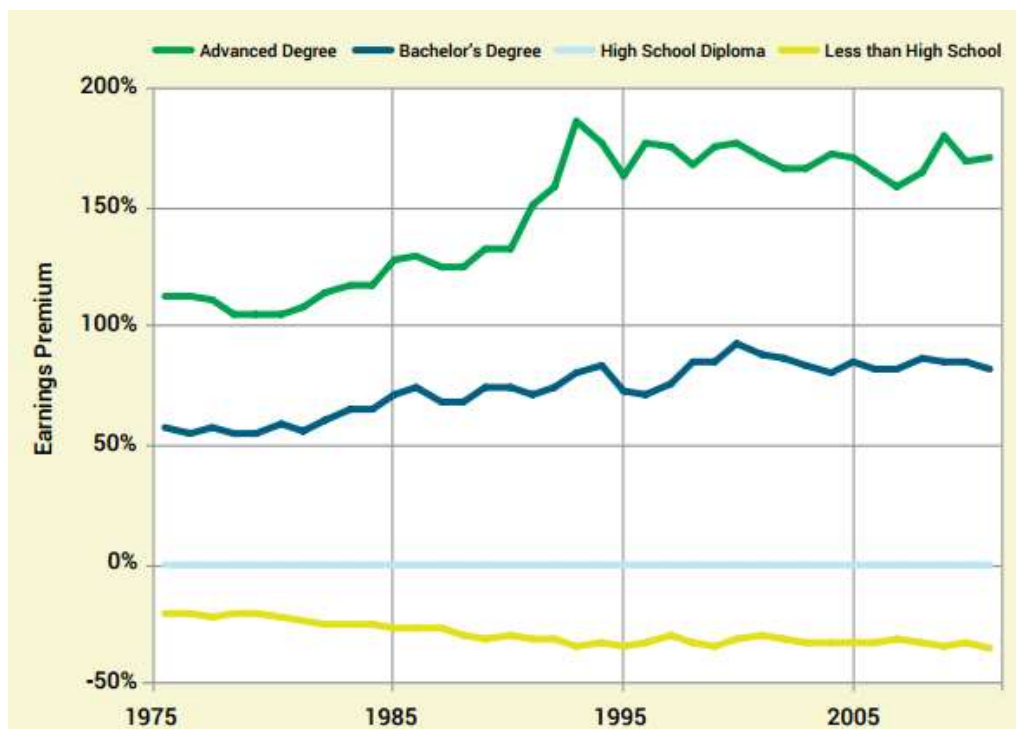
Education Benefits. National Guard members qualify for education benefits that allow the completion of professional and technical certifications and any college degree. There are three programs currently available.

- The GI Bill offers education benefits that vary with time served, location and duration of postings overseas, and other variables. Benefits include paying a percentage of tuition, the cost of books, and a Basic Allowance for housing (BAH) that varies with location. Since 9/11, these benefits are even transferable to the children of Guard members during their years of service, and can also be used to pay down existing school debt.

- The Federal Tuition Assistance program offers up to \$4,500 per year to Guard members while in service. Recipients must be enrolled in a degree program. In the last two years, an average of \$704,000 has been awarded to Idaho Guard members and an average of 32 degrees have been awarded.
- A new program started in July 2015 is the State Education Assistance Program (SEAP). An amount of \$103,688 has been appropriated for FY2016 for this program, which supplements the Federal Tuition Assistance Program.

A bachelor's degree has been shown to allow the average graduate to earn over seventy percent more than a person with a high school diploma (Census Bureau, 2013), as Figure 9-1 demonstrates.

Figure 8-1. Mean Earnings of US Workers 18 Years and Over by Educational Attainment, 1975-2011



Note: Earnings are shown as a premium relative to mean earnings of high school graduates
 Source: US Census Bureau, 2013; Lewin, Paul and Willem Braack, Economic Returns to Education in Idaho, Rural Opportunities Consortium of Idaho, February 2015.

An additional point to be made here is that education does not simply benefit the individual by enlarging their personal knowledge base and allowing them to earn larger salaries. Education also benefits the community and the economy by increasing the workforce skill sets available to employers. This makes Idaho businesses more profitable and innovative. Educated citizens also contribute their skills to community organizations.

Health Care Benefits. The health care policy debate has made clear the importance of having health care insurance. Nineteen per cent of Idahoans aged 19-64 went uninsured for health care in 2013 according to the Census. Service in the Idaho National Guard not only covers Guard members, but makes insurance available to family members as well. The cost of health insurance is considerably less than for a comparable policy from the Idaho Health Insurance Exchange.

In-Bound Transportation Expenditures. The Orchard Combat Training Center attracts out-of-state Guard units, who conduct their annual trainings in Idaho. The Boise airport receives thousands of soldiers who arrive via commercial air travel. For instance, the OCTC currently trains about three out-of-state combat brigades per year. Each combat brigade may have over 3,000 personnel, assuming an 80% attendance rate. While local spending on food, lodging, and entertainment is already detailed in Chapter 11, there is additional benefit in supporting the Boise airport and its associated businesses.

Community Volunteer Benefits. National Guard members are pre-disposed toward involvement in community affairs. Nearly all Guard members serve out of a patriotic feeling of obligation toward the country they live within. Their employment is a form of public service, so it is only natural that they will be active in community organizations and projects.

Moreover, the training and education they receive as Guard members increases the value of their volunteer efforts. Not only do they have specific technical skills in things like engineering, computer and technology use, or mechanical repair, but they also have extensive skills in organizing, project management, and strategic planning. These leadership skills can increase the probability of successful completion of community projects.

One specific volunteer program operated by the Idaho National Guard is the Idaho Youth Challenge. In this program, School drop-outs between 16 and 18 years old are given 22 weeks of intensive training that develops life skills and leads to the completion of a GED. Two classes are trained each year. In a recent year, 84 youth who might otherwise be in the corrections system, graduated from the Idaho Youth Challenge. Forty Guard employees spend time on this program.

Contributions to National Security. Last, but certainly not least of the non-quantifiable benefits, is the contribution the Idaho National Guard makes to the security of the United States. The Guard provides a quick response presence to any challenge within our borders. Table 9-1 shows the history of overseas deployments of Idaho units in the last fifty years. Idaho Guard members have been deployed six times since 2000. The OCTC also provides a valuable high desert site for preparation before deployment by Guard units from across the country.

Table 8-1. Deployments of the Idaho Army National Guard

<u>Year</u>	<u>Unit</u>	<u>Conflict</u>	<u>Location</u>
1968-69	116 th Combat Engineer BN	The Vietnam Conflict	Vietnam
1990-91	148 th Public Affairs Detachment	Desert Shield/Desert Storm	Kuwait/Iraq
1997-98	938 th Engineer Detachment	Operation Joint Guard	Tazar, Hungary
2002-031-183d	Aviation Battalion (Attack)	Stabilization Force 12	Bosnia-Herzegovina
2003-04	938 th Engineer Detachment	Operation Iraqi Freedom	Mosul, Iraq
2004-06	116 th CBCT*	Operation Iraqi Freedom III	Kirkuk, Iraq
2005-2006	1-183d Aviation Battalion (Attack)	Global War On Terror	Afghanistan
2010-11	116 th CBCT*	Operation New Dawn	Iraq
2012-13	Company A, 1-168 GSAB^	Global War On Terror	Afghanistan

* 116th Cavalry Brigade Combat Team

^Company A, 1-168 General Support Aviation Battalion

Source: Capt. Robert Taylor, Idaho National Guard, October 14, 2015

Chapter 9: Total National Guard and National Security Impacts on Idaho

Chapter Summary

The total quantifiable economic impacts of national security footprint in Idaho can now be aggregated from the analysis of each individual unit. The tables in this chapter summarize the impacts of the Idaho Army National Guard both within Ada County and the rest of Idaho, the Idaho Air Guard, the Idaho Military Division, including the Bureau of Homeland Security, and the average construction impacts of improvements to the Orchard Combat Training Center.

Personnel Summary

The table below summarizes the total direct employment by the Idaho National Guard and related national security apparatus. In FY2014 there were 1,201 civilian employees and 4,054 military employees, holding full, part-time, or seasonal jobs for the National Guard in Idaho, for a total of 5,255 employees.

Note that only a handful of soldiers were deployed in FY2014. In FY2011 there were 275 M-Day Mob and 30 FTMA soldiers deployed overseas from Gowen Field and the OCTC alone. Their full-time combat wages increased payroll by nearly \$20 million.

Table 9-1. Total Employment & Payroll Impacts of the Idaho National Guard

Type	Number	Total Wages, Allowances & Benefits
State Technician	314	\$20,671,000
Federal Technician	795	\$65,352,000
Federal Contract Employees	83	\$4,659,000
Non-Appropriated Fund Employees (NAFE)	9	\$321,000
Civilian Sub-Total	1,201	
Active Duty Special Work (ADSW) and Active Guard and Reserve (AGR)	631	\$51,001,000
Substance Abuse (ADOS)	4	\$292,000
Total Full Time Mobilization Augmentee (FTMA)	0	\$0
Mobilized Traditional Soldier (M-Day Mob)	8	\$1,232,000
Traditional Soldier Not Mobilized (M-Day) and Traditional Soldier Active Duty for Training (ADT)	3,411	\$39,589,000
Military Sub-Total	4,054	
TOTAL EMPLOYMENT	5,255	\$183,116,000

A second observation is that 65% of total employees are traditional National Guard soldiers. They hold part-time positions with the Guard, typically working 63 days per year.

The size of National Guard employment will come as a surprise to many because the employees are measured inside a number of separate programs. Rarely are the four civilian employee types and up to six military employee categories summed up in this way to obtain total national security employment within a state. The National Guard's story has not been accurately told precisely due to the way employees are accounted in separate, stovepipe programs. No matter if the source of the payroll is state or federal funds, no matter if the job is civilian or military, and no matter if the person is a direct employee or a contractor, each of these 5,255 people are working toward the national security mission within Idaho.

Summary of Direct Impacts

Table 9-2 totals the direct economic impacts of the Idaho National Guard by program. The Army National Guard was split between those stationed in Ada County at Gowen Field or the OCTC and those stationed in the rest of the state, so as to allow comparisons with the 2012 study. The impacts of average IDARNG construction projects are listed separately. Note these are projects within Ada County, with most projects in the rest of Idaho budgeted within O&M expenditures.

The Idaho Military Division is broken into five different programs, including grants which are expended primarily by local government.

In all, expenditures by the Idaho National Guard and the national security apparatus amount to nearly \$319 million. About 21% of those expenditures were for equipment and materials made outside Idaho, which have no effect on the Idaho economy. The direct impacts of the National Guard within Idaho amount to nearly \$251 million. Two-thirds of total expenditures, or 85% of direct impacts are for labor.

Table 9-2. Total Direct Economic Impacts of the Idaho National Guard

Category	Total Expenditures	Labor	Materials	Total Direct Impact
IDARNG - Ada County	\$156,871,000	\$92,367,000	\$10,903,000	\$103,270,000
IDARNG - Rest-of-Idaho	\$29,090,000	\$25,686,000	\$1,125,000	\$26,811,000
IDARNG Ave Construction	\$17,396,000	\$5,636,000	\$11,760,000	\$17,396,000
Idaho Air Guard	\$90,484,000	\$73,362,000	\$5,749,000	\$79,142,000
IMD Personnel Salary & Benefits	\$6,642,000	\$6,642,000		\$6,642,000
Military Mgt Operations & Maintenance	\$495,000	\$161,000	\$334,000	\$495,000
Bureau of Homeland Security O & M	\$2,695,000	\$985,000	\$1,710,000	\$2,695,000
Public Safety Communications O & M	\$1,033,000	\$214,000	\$819,000	\$1,033,000
Grant Programs	<u>\$13,880,000</u>	<u>\$7,719,000</u>	<u>\$5,447,000</u>	<u>\$13,166,000</u>
TOTAL	\$318,586,000	\$212,772,000	\$37,847,000	\$250,650,000

Summary of Total Economic Impacts

The direct impacts can then be introduced into the 2013 IMPLAN model of Idaho's economy, corrected to 2014 dollars, in order to obtain the indirect and induced impacts. The activities of the 5,632 employees of the National Guard in Idaho lead to a total of 10,742 jobs within Idaho. These employees receive total compensation in wages and benefits of \$347.8 million per year. They generate economic activity totaling \$484.5 million.

Table 9-3. Total Economic Impacts of the Idaho National Guard

Impact Type	Employment	Labor Income	Output
Direct Impacts	5,632	\$212,771,000	\$250,650,000
Indirect Impacts	2,040	\$55,418,000	\$106,848,000
Induced Impacts	3,070	\$79,578,000	<u>\$127,032,000</u>
Total Effect	10,742	\$347,767,000	\$484,530,000
Multippliers (SAM Type II)	1.91	1.63	1.93
% of Idaho Economy	1.18%	1.09%	0.32%

Source: IMPLAN, 2013 data

Notes: Employment includes all full, part-time, and seasonal jobs in Idaho
Labor Income and Output expressed in 2014 \$.

The total impacts can be separated by program. Table 9-4 shows the employment, labor income, and economic output generated by the Idaho Army National Guard, the Idaho Air Guard, and the Idaho Military Division. More detail is described in Chapters 3, 4, 5, 6, and 7 of this report.

Table 9-4. Total Economic Impacts of the Idaho National Guard by Program

Program	Total Impacts on Employment	Total Impacts on Labor Income	Total Impacts on Economic Output
ID Army National Guard	7,394	\$189,118,000	\$285,920,000
Idaho Air Guard	2,801	\$136,027,000	\$155,354,000
ID Military Division	<u>547</u>	<u>\$22,622,000</u>	<u>\$43,256,000</u>
TOTAL IMPACTS	10,742	\$347,767,000	\$484,530,000

Source: IMPLAN, 2013 data

Notes: Program impacts include personnel and Operations and Management direct impacts
Employment includes all full, part-time, and seasonal jobs in Idaho
Labor Income and Output expressed in 2014 \$.

Comparisons to the Idaho Economy

One question that arises in considering the economic impacts of an organization is what these large numbers really mean. Table 9-3 includes a line offering a comparison to the economic equivalent at the state level. For instance, the total employment impacts of the Idaho National Guard are 10,742 jobs, which is 1.18 percent of the total employment of the Idaho economy in 2013, or 911,428 full, part-time, and seasonal jobs. Another way to say this is that in the absence of the Idaho National Guard, there would be over one percent fewer jobs in Idaho. Similarly, the \$347.8 million in labor income derived from those jobs is 1.09% of all labor income in Idaho. Labor income consists of wages, benefits, and the proprietors' income generated by the self-employed.

In terms of economic output, the \$484.5 million in economic activity generated by the activities of the Idaho national security apparatus amounts to 0.32% of the Idaho gross domestic product. The reason that this percentage is smaller than those for employment and labor income is that the output of the Idaho National Guard are public services that are not re-sold into the economy. If the National Guard produced cars or computer chips that were sold to consumers or other businesses, then the percentage of economic output would be higher.

Table 9-3 also has a line with the economic multipliers associated with the Idaho National Guard. These multipliers can be calculated by dividing the total economic impacts by the direct impacts. The employment multiplier is 1.91. This means that for each job created directly by the Idaho National Guard, another 0.91 job is created somewhere else in the Idaho economy. The output multiplier is a very similar 1.93, but the labor income multiplier is lower at 1.63. The reason is that many of the higher paying jobs generated by the National Guard are in the defense industry that manufactures military equipment. Idaho has very few defense industry companies.

As a matter of economic education, it is worth noting that each of these multipliers falls within the typical range of 1.75 to 2.25. Claims of a dollar rippling four to seven times through the economy are common enough, but simply not true.

Finally, it is worthwhile to compare the Idaho National Guard to other major employers in Idaho. Table 9-5 shows the top employers in the Idaho economy from both the public and private sector for FY2014, the same time period as this study. The 5,255 employees calculated in Table 9-1 mean that **the Idaho National Guard would rank fourth among Idaho employers**, behind St Lukes, Wal-Mart, and Micron Technology, but ahead of BYU-Idaho, the University of Idaho, and Boise State University.

Table 9-5. Top Employers in Idaho

RANK	PRIMARY NAME	EMPLOYMENT RANGE*	INDUSTRY
1	ST LUKES HEALTH SYSTEMS	11,700 - 11,799	HEALTH CARE
2	WAL-MART	6,800 - 6,899	RETAIL TRADE
3	MICRON TECHNOLOGY	5,700 - 5,799	MANUFACTURING
4	BYU - IDAHO	4,600 - 4,699	EDUCATION - PRIVATE
5	UNIVERSITY OF IDAHO	4,600 - 4,699	STATE GOVERNMENT - EDUCATION
6	BOISE STATE UNIVERSITY	4,600 - 4,699	STATE GOVERNMENT - EDUCATION
7	MERIDIAN JOINT SCHOOL DISTRICT #2	4,300 - 4,99	LOCAL GOVERNMENT - EDUCATION
8	INDEPENDENT SCHOOL DISTRICT BOISE CITY #1	3,800 - 3,899	LOCAL GOVERNMENT - EDUCATION
9	IDAHO STATE UNIVERSITY	3,400 - 3,499	STATE GOVERNMENT - EDUCATION
10	BATTELLE ENERGY ALLIANCE LLC	3,400 - 3,499	PROFESSIONAL & TECHNICAL SERVICES
11	ST ALPHONSUS REGIONAL MEDICAL CENTER	3,400 - 3,499	HEALTH CARE
12	J R SIMPLOT CO	3,200 - 3,299	MANUFACTURING
13	ALBERTSONS INC	3,000 - 3,099	RETAIL TRADE
14	IDAHO DEPARTMENT OF HEALTH & WELFARE	2,800 - 2,899	STATE GOVERNMENT - ADMINISTRATION
15	US FOREST SERVICE	2,400 - 2,499	FEDERAL GOVERNMENT
16	US POSTAL SERVICE	2,400 - 2,499	FEDERAL GOVERNMENT
17	FRED MEYER STORES INC	2,200 - 2,299	RETAIL TRADE
18	KOOTENAI MEDICAL CENTER	2,200 - 2,299	HEALTH CARE
19	HEWLETT-PACKARD CO	2,000 - 2,099	MANUFACTURING
20	IDAHO POWER CO	2,000 - 2,099	UTILITIES
21	WELLS FARGO BANK NA	2,000 - 2,099	FINANCE & INSURANCE

* Based on FY2014 average employment (July 2013 - June 2014)

SOURCE: Quarterly Report of Employment & Wages: July 2013 - June 2014

Idaho Department of Labor, Communications & Research

Fiscal Impacts to the State of Idaho

A rule of thumb is that a dollar of labor income will generate five cents of tax revenue to the State of Idaho. This revenue may come as sales tax, income tax, gasoline tax, liquor tax, or many other state taxes. If this 5% rule is applied to the total labor income generated by the Idaho National Guard of \$348 million, then \$17.4 million in tax revenues of any kind accrue to the coffers of the State of Idaho. For comparison, a total of \$6,480,400 of Idaho General Account funding supports the Idaho Military Division and the Idaho National Guard. Because the vast majority of the Idaho National Guard comes from federal funds, state government receives far more than it costs in tax revenues.

Chapter 10: The Impact of Additional Trainings at OCTC

Chapter Summary

Here the impacts of adding an additional training at the Orchard Combat Training Center are analyzed. In Table 10-1 the total economic impacts within Idaho of a single annual training are summarized. They range from nearly \$1.0 million and 7.8 additional jobs for a Heavy Combat Brigade to \$76,000 and 0.6 job for a Marine Tank Company.

It is important to remember that these impacts will occur every year, if the capacity of the OCTC is increased by some project improvement and there exists sufficient demand by Guard units to use the Orchard Combat Training Center. The right-hand column in Table 10-1 shows the present value of the economic output impacts of 20 years of annual trainings. One can assume employment impacts would remain at the annual level but extend for 20 years.

Table 10-1. Summary of Total Economic Impacts of Annual Training by Unit

Unit	Employment	Labor Income	Output	Present Value of 20 Years of Trainings
Heavy Combat Brigade	7.8	\$414,000	\$998,000	\$14,850,000
Combined Arms Battalion	3.3	\$176,000	\$426,000	\$6,340,000
Armored Recon Regiment	1.9	\$101,000	\$245,000	\$3,640,000
Artillery Battalion	1.7	\$91,000	\$223,000	\$3,320,000
Attack Aviation Battalion	7.6	\$406,000	\$982,000	\$14,610,000
Medium Lift Company	1.7	\$90,000	\$217,000	\$3,230,000
Marine Tank Company	0.6	\$32,000	\$76,000	\$1,130,000

Notes:

- 1) Total direct, indirect, and induced economic impacts of annual training at 80% attendance.
- 2) One-time temporary impacts
- 3) Present value of 20 years of annual trainings beginning after a one year project construction period, discounted at 3%.

Table 10-2 provides a summary description of the composition of the units analyzed for the cost of annual training at IDARNG's Orchard Combat Training Center. These units were judged to be the most likely to participate in trainings at OCTC. Average training attendance was estimated to be eighty percent, with equipment complement per Army reference manual. The number of soldiers participating in the training varies from 56 personnel in a Medium Lift Company to 3,007 in a Heavy Brigade Combat Team.

Table 10-2. Summary of Annual Training Attendance by Type of Unit

	# Soldiers	Track Vehicles	Wheeled Vehicles	Aircraft
Heavy Brigade Combat Team				
	3,759	527	833	
80% Average Attendance	3,007	243	669	
Combined Arms Battalion	622	91	53	
Forward Support Company,	214	99	74	
Total	836	190	197	
80% Average Attendance	669	94	114	
Armored Reconnaissance Regiment	383	53	64	
Forward Support Company,				
Reconnaissance Squadron	135	5	48	
Total	518	58	185	
80% Average Attendance	414	55	95	
Artillery Battalion	331	39	69	
Forward Support Company,				
Artillery Battalion	137	4	51	
Total	468	43	188	
80% Average Attendance	374	42	120	
Attack Aviation Battalion (AH-64)	400	0	87	16-24
80% Average Attendance	320	0	69	16
Medium Lift Company (UH-60)	70	0	8	8
80% Average Attendance	56	0	4	8
Marine Tank Company	120	9	10	0

Introduction

The next task is to estimate the economic impacts of additional activity at the Orchard Combat Training Center and Gowen Field sites. These are called *marginal* impacts because the analysis and only looks at the additional economic transactions that would occur with each new use of the base. The purpose is to facilitate the analysis of future improvements to the base that may allow expanded activities to occur.

Since the facility is already serving the training needs of members of the Idaho Army National Guard stationed in the Treasure Valley and beyond, the marginal activities analyzed here are the annual trainings of units coming in from outside the region. The most common unit to conduct annual training is the Heavy Brigade Combat Team. Smaller units will be analyzed later. Based on field interviews and the past experience, units on average muster 80% attendance at any given training event.

Heavy Combat Brigade

Table 10-3 shows the average annual training costs and local direct economic impacts for a Heavy Brigade Combat Team operating with 80% attendance. This is the largest single unit that trains at the OTA. The vehicle O&M costs are taken from Chapter 3. Recall that the fuel used is part of a national military contract and only local delivery costs are a local impact. Similarly, the vast majority of maintenance costs are for parts manufactured outside the region or depot-level repairs conducted elsewhere. Direct local impacts are only \$118,000 of \$3.3 million total costs for tracked vehicles and \$94,000 of \$2.7 million total costs for wheeled vehicles. Remember that depreciation of the capital cost of the vehicles is not considered in this analysis.

An estimated 3,007 officers and soldiers comprise a heavy brigade combat team at 80% strength. Table 10-3 assumes these personnel are housed in billets or barracks for five days at the beginning and end of their training, and the entire unit spends ten days bivouacked at the Orchard Combat Training Center. Costs of meals and lodging are set by the army and are the costs billed to the visiting unit of \$13.57 per soldier per day. However, \$7.33 of that is an MRE for lunch that was manufactured outside Idaho. Two hundred of the unit's officers are assumed to spend three evenings off the base where they spend on average \$50 per night on food, drinks, entertainment, and shopping for personal needs or souvenirs.

In total, the cost of an annual training for a Heavy Brigade Combat Team is estimated to be \$6.7 million, of which \$506,000 may be considered direct local economic impacts to the local economy. Of course, the largest cost is the cost of personnel wages during the training period. This cost is not measured here because the soldiers are visiting and their wages are mostly spent in their resident economy, with the exception of personal spending during leave time off base.

In similar fashion, no added jobs are assumed by IDARNG to provide training services; those services are assumed to be performed by existing Idaho personnel. Should the amount of added training by outside units exceed the capacity of existing Idaho employees, then number of

authorized full-time employees might eventually be increased, and this would increase the local impact.

Table 10-3. Annual Training Costs & Local Impacts – Heavy Brigade Combat Team
@ 80% Attendance

	#	Cost/mile	# Miles/ Annual Training	Cost Per Vehicle/ Annual Training	Total Cost/ Annual Training	Local Impact Per Mile	Total Local Impacts
Tracked Vehicles							
	243						
Personnel and Equipment Carriers	76	\$8.85	175	\$1,549	\$117,705	\$0.68	\$9,033
Artillery and Support Tracks	26	\$68.35	82	\$5,605	\$145,722	\$2.89	\$6,151
Bradley series	86	\$141.98	150	\$21,297	\$1,831,525	\$3.60	\$46,480
Tank Retrievers	10	\$331.88	35	\$11,616	\$116,157	\$5.04	\$1,763
M1 series tanks	45	\$272.55	90	\$24,530	<u>\$1,103,829</u>	\$13.56	<u>\$54,914</u>
Total Cost Tracked Vehicles					\$3,314,938		\$118,341
Wheeled Vehicles							
	669						
Armored Security Vehicle	6	\$0.00	195	\$0	\$0	\$0.00	\$0
High Mobility Multipurpose Wheeled Vehicle (HMMVV) Series	368	\$7.34	850	\$6,236	\$2,294,690	\$0.26	\$80,363
Medium Tactical Vehicles (MTV) Series	132	\$2.74	390	\$1,069	\$141,055	\$0.06	\$3,315
Medium Equipment Transport (MET) 20T	2	\$1.34	120	\$161	\$321	\$0.07	\$17
Heavy Equipment Transport (HET)	2	\$10.28	300	\$3,083	\$6,166	\$0.91	\$548
Heavy Expanded Mobile Tactical Truck (HEMTT) series	159	\$3.39	420	\$1,424	<u>\$226,428</u>	\$0.15	<u>\$10,098</u>
Total Cost Wheeled Vehicles					\$2,668,661		\$94,342
Soldiers							
	3007						
Billeted	150	\$6.00	5	\$30	\$4,500		\$4,500
Barracks	2857	\$2.17	5	\$11	\$31,200		\$31,200
Bivouacked	3007		10	\$0	\$0		
Mess Hall Cost	3007	\$13.57	15	\$204	\$612,075		\$225,164
Dining Facility		\$170.00	15		\$2,550		\$2,550
Entertainment Spending	200	\$50.00	3	\$150	<u>\$30,000</u>		<u>\$30,000</u>
Total Cost Soldiers					\$680,325		\$293,414
TOTAL COST ANNUAL TRAINING					\$6,663,924		\$506,097

Notes:

- 1) Local Impact assumes 8 lunches of non-local MREs costing \$7.33 per lunch.
- 2) Entertainment assumes 3 leaves to town for dinner, entertainment, & shopping.
- 3) Billeted, Barracks & Bivouac assumes 2-3 days at the beginning and end of AT in garrison or traveling and 10 days in field bivouac conditions.

The next table shows the total economic impacts that are generated by the local direct impacts calculated in Table 10-3. The direct economic output impacts of \$506,000 are associated with labor income direct impacts of \$259,000 and direct employment impacts of 3.8 jobs. These two impact estimates are low relative to output because much of the labor is assumed to be provided either by existing Idaho National Guard employees or by members of the visiting training brigade. There is a small amount of contract labor delivering fuel, parts needed for repairs, food supplies, and the like.

The total economic impacts to Idaho of an additional Heavy Brigade Combat Team conducting its annual training at the Orchard Combat Training Center are \$998,000 in economic output, \$414,000 in labor income, and 7.8 jobs.

Table 10-4. Total Economic Impacts, Heavy Brigade Combat Team Annual Training

Impact Type	Employment	Labor Income	Output
Direct Impacts	3.8	\$259,000	\$506,000
Indirect Impacts	1.9	\$78,000	\$247,000
Induced Impacts	2.1	\$77,000	\$245,000
Total Impacts	7.8	\$414,000	\$998,000
Multipliers (SAM Type I)	2.03	1.60	1.97

Source: Minnesota IMPLAN Group, Inc., 2013

Notes:

- 1) Brigade assumed at 80% attendance or 3,007 soldiers, coming from another state.
See Table 8-3 for details of direct impact components.
- 2) Employment includes all full, part-time, and seasonal jobs in 3-county region.
- 3) All dollar estimates in 2014 \$.

Next analyzed is a Combined Arms Battalion of 669 personnel. Table 10-5 summarizes the total costs of the training (without equipment depreciation or personnel wages) and the total local spending, or direct impacts, of the training exercise. Most of the total cost of \$1.9 million comes from the use of 94 tracked vehicles with a total cost of \$1.55 million. Yet only 4%, or \$59,000 is estimated to be spent locally. Together with the local costs of 114 wheeled vehicles and personnel support, the Combined Arms Battalion has a direct impact of \$216,000 during its annual training.

Table 10-6. Total Economic Impacts, Combined Arms Battalion Annual Training

Impact Type	Employment	Labor Income	Output
Direct Impacts	1.6	\$110,000	\$216,000
Indirect Impacts	0.8	\$33,000	\$105,000
Induced Impacts	0.9	\$33,000	\$105,000
Total Impacts	3.3	\$176,000	\$426,000
Multipliers (SAM Type II)	2.03	1.60	1.97

Source: Minnesota IMPLAN Group, Inc., 2013

Notes:

- 1) Battalion assumed at 80% attendance or 669 soldiers, coming from another state.
See Table 11-5 for details of direct impact components.
- 2) Employment includes all full, part-time, and seasonal jobs.
- 3) All dollar estimates in 2014 \$.

The third unit to be analyzed is an Armored Reconnaissance Regiment of 55 tracked vehicles, 95 wheeled vehicles and 414 soldiers. This unit generates a total cost of annual training of \$896,000, of which \$124,000 is local spending (Table 10-7).

Total Economic Impacts shown in Table 10-8 amount to \$245,000 in total output, \$101,000 in labor income, and 1.9 additional jobs.

Table 10-7. Annual Training Costs & Local Impacts – Armored Recon Regiment

@ 80% Attendance

Annual Training (AT) Costs and Local Impacts - Armored Reconnaissance Regiment @ 80% Attendance

	Number	Cost/mile	Annual		Cost Per		Local Impact Per Mile	Total Local Impacts
			# Miles	# Miles/ AT	Vehicle/ AT	Total Cost/ AT		
Tracked Vehicles	55							
Personnel and Equipment Carriers	25	\$8.85	220	185	\$1,638	\$40,947	\$0.68	\$3,141
Bradley series	26	\$141.98	175	150	\$21,297	\$553,717	\$3.60	\$14,052
Tank Retrievers	4	\$331.88	40	35	\$11,616	\$46,463	\$5.04	\$705
Total Cost Tracked Vehicles						\$641,126		\$17,898
Wheeled Vehicles	95							
High Mobility Multipurpose Wheeled Vehicle (HMMVV) Series	54	\$1.11	1,320	950	\$1,054	\$56,907	\$0.10	\$4,939
Medium Tactical Vehicles (MTV) Series	21	\$2.74	480	390	\$1,069	\$22,441	\$0.06	\$527
Heavy Expanded Mobile Tactical Truck (HEMTT) series	20	\$3.39	580	450	\$1,526	\$30,516	\$0.15	\$1,361
Total Cost Wheeled Vehicles						\$109,863		\$6,827
	Number	Cost/Day	# Days	Total Cost Per Soldier		Annual Training		Total Local Impacts
Soldiers	414							
Billeted	50	\$6.00	5	\$30		\$1,500		\$1,500
Barracks	365	\$2.17	5	\$11		\$4,160		\$4,160
Bivouacked	414	\$0.00	10	\$0		\$0		\$0
Mess Hall Cost	414	\$13.57	15	\$204		\$84,270		\$38,750
Dining Facility		\$170	15			\$2,550		\$2,550
Entertainment Spending	350	\$50.00	3	\$150		\$52,500		\$52,500
Total Cost Soldiers						\$144,980		\$99,460
TOTAL COST ANNUAL TRAINING						\$895,969		\$124,186

Notes:

- 1) Local Impact assumes 8 lunches of non-local MREs costing \$7.33 per lunch.
- 2) Entertainment assumes 3 leaves to town for dinner, entertainment, & shopping.
- 3) Billeted, Barracks & Bivouac assumes 2-3 days at the beginning and end of AT in garrison or traveling, and 10 days in field bivouac conditions.

Table 10-8. Total Economic Impacts, Armored Recon Regiment Annual Training

Impact Type	Employment	Labor Income	Output
Direct Impacts	0.9	\$63,000	\$124,000
Indirect Impacts	0.5	\$19,000	\$61,000
Induced Impacts	0.5	\$19,000	\$60,000
Total Impacts	1.9	\$101,000	\$245,000
Multipliers (SAM Type II)	2.03	1.60	1.97

Source: Minnesota IMPLAN Group, Inc., 2013

Notes:

- 1) Regiment assumed at 80% attendance or 414 soldiers.
See Table 11-7 for details of direct impact components.
- 2) Employment includes all full, part-time, and seasonal jobs.
- 3) All dollar estimates in 2014 \$.

The next unit is an Artillery Battalion described in Table 10-9. At 80% attendance, it brings slightly fewer soldiers at 384 than the Armored Reconnaissance Regiment, and its economic impacts are very similar. Its total cost of annual training is much lower at \$473,000 due to fewer tracked vehicles, but its local spending is \$113,000.

The local spending multiplies into \$223,000 of total economic output, \$91,000 in increased labor income, and an additional 1.7 jobs in the region, as shown in Table 10-10.

Table 10-9. Annual Training Costs & Local Impacts – Artillery Battalion

@ 80% Attendance								
	#	Cost/mile	Annual # Miles	# Miles/ AT	Cost Per Vehicle/ AT	Total Cost/ AT	Local Impact Per Mile	Total Local Impacts
Tracked Vehicles	42							
Personnel and Equipment Carriers	10	\$8.85	220	180	\$1,594	\$15,936	\$0.68	\$1,223
Artillery and Support Trucks	32	\$68.35	112	82	\$5,604	<u>\$179,342</u>	\$2.89	<u>\$7,571</u>
Total Cost Tracked Vehicles						\$195,278		\$8,793
Wheeled Vehicles	120							
High Mobility Multipurpose Wheeled Vehicle (HMMVV) Series	67	\$1.11	1,320	950	\$1,054	\$70,606	\$0.10	\$6,128
Medium Tactical Vehicles (MTV) Series	23	\$2.74	480	390	\$1,069	\$24,578	\$0.06	\$578
Heavy Expanded Mobile Tactical Truck (HEMTT) series	30	\$3.39	580	450	\$1,526	<u>\$45,774</u>	\$0.15	\$2,041
Total Cost Wheeled Vehicles						\$140,958		\$8,747
	#	Cost/Day	# Days	Total Cost Per Soldier	Total Cost/ Annual Training	Total Local Impacts		
Soldiers	374							
Billeted	50	\$6.00	5	\$30	\$1,500	\$1,500		
Barracks	324	\$2.80	5	\$14	\$3,640	\$3,640		
Bivouacked	374	\$0.00	10	\$0	\$0	\$0		
Mess Hall Cost	374	\$13.57	15	\$204	\$76,128	\$35,006		
Dining Facility		\$170	15		\$2,550	\$2,550		
Entertainment Spending	350	\$50.00	3	\$150	<u>\$52,500</u>	<u>\$52,500</u>		
Total Cost Soldiers					\$136,318	\$95,196		
TOTAL COST ANNUAL TRAINING					\$472,554	\$112,737		

Notes:

- 1) Local Impact assumes 8 lunches of non-local MREs costing \$7.33 per lunch.
- 2) Entertainment assumes 3 leaves to town for dinner, entertainment, & shopping.
- 3) Billeted, Barracks & Bivouac assumes 2-3 days at the beginning and end of AT in garrison or traveling and 10 days in field bivouac conditions.

Table 10-10. Total Economic Impacts, Artillery Battalion Annual Training

Impact Type	Employment	Labor Income	Output
Direct Impacts	0.8	\$57,000	\$113,000
Indirect Impacts	0.4	\$17,000	\$55,000
Induced Impacts	0.5	\$17,000	\$55,000
Total Impacts	1.7	\$91,000	\$223,000
Multipliers (SAM Type II)	2.03	1.60	1.97

Source: Minnesota IMPLAN Group, Inc., 2013

Notes: 1) Battalion assumed at 80% attendance or 374 soldiers, coming from another state. See Table 11-9 for details of direct impact components

2) Employment includes all full, part-time, and seasonal jobs

3) All dollar estimates in 2014 \$.

Table 10-11. Annual Training Costs & Local Impacts – Attack Aviation Battalion

@ 80% Attendance

Annual Training (AT) Costs and Local Impacts - Attack Aviation Battalion @ 80% Attendance

	Number	Cost/hour	Annual # Hours	# Hours/ AT	Cost Per Aircraft/ AT	Total Cost/ AT	Local Impact Per Hour	Total Local Impacts
AH-64 Apache Helicopters	16	\$16,489	153	35	\$577,122	\$9,233,951	\$677.98	\$379,668
	Number	Cost/mile	Annual # Miles	# Miles/ AT	Cost Per Vehicle/ AT	Total Cost/ AT	Local Impact Per Mile	Total Local Impacts
Wheeled Vehicles	67							
High Mobility Multipurpose Wheeled Vehicle (HMMVV) Series	32	\$1.11	850	520	\$577	\$18,459	\$0.10	\$1,602
Medium Tactical Vehicles (MTV) Series	21	\$2.74	425	300	\$823	\$17,274	\$0.06	\$405
Heavy Expanded Mobile Tactical Truck (HEMTT) series	14	\$3.39	580	450	\$1,526	<u>\$21,361</u>	\$0.15	<u>\$953</u>
Total Cost Wheeled Vehicles						\$57,093		\$2,960
	Number	Cost/Day	# Days	Total Cost Per Soldier	Total Cost/ Annual Training	Total Local Impacts		
Soldiers	320							
Billeted	65	\$6.00	13	\$78	\$5,148	\$5,148		
Barracks	230	\$2.17	13	\$28	\$6,760	\$6,760		
Bivouacked	25	\$0.00	10	\$0	\$0	\$0		
Mess Hall Cost	320	\$13.57	13	\$176	\$56,451	\$25,958		
Dining Facility		\$170.00	13		\$2,210	\$2,210		
Entertainment Spending	300	\$25.00	10	\$250	<u>\$75,000</u>	<u>\$75,000</u>		
Total Cost Soldiers					\$145,569	\$115,076		
TOTAL COST ANNUAL TRAINING					\$9,436,613	\$497,704		

Notes:

- 1) Local Impact assumes 8 lunches of non-local MREs costing \$7.33 per lunch.
- 2) Entertainment assumes 10 leaves to town for occasional dinner, entertainment, & shopping.
- 3) Billeted, Barracks & Bivouac assumes one day at the beginning and end of AT traveling and 13 days in garrison with only fuel and ammunitions support personnel remaining in field bivouac conditions for 10 days

The fifth unit analyzed is an Attack Aviation Battalion with 16 Apache helicopters, 67 wheeled vehicles, and 320 personnel. Due to the extremely high cost of operating the aircraft, the annual training has total costs of \$9.44 million, of which an estimated \$498,000 are local expenditures. These direct impacts generate a total of \$982,000 in economic output, \$406,000 of labor income, and 7.6 additional jobs in the regional economy (Table 10-12).

Table 10-12. Total Economic Impacts, Attack Aviation Battalion Annual Training

Impact Type	Employment	Labor Income	Output
Direct Impacts	3.7	\$254,000	\$498,000
Indirect Impacts	1.8	\$77,000	\$243,000
Induced Impacts	2.1	\$75,000	\$241,000
Total Impacts	7.6	\$406,000	\$982,000
Multipliers (SAM Type II)	2.03	1.60	1.97

Source: Minnesota IMPLAN Group, Inc., 2013

Notes: 1) Battalion assumed at 80% attendance or 320 soldiers, coming from another state. See Table 11-11 for details of direct impact components
 2) Employment includes all full, part-time, and seasonal jobs
 3) All dollar estimates in 2014 \$.

Table 10-13. Annual Training Costs & Local Impacts – Medium Lift Company

								@ 80% Attendance	
	Number	Cost/hour	Annual # Hours	# Hours/ AT	Cost Per Aircraft/ AT	Total Cost/ AT	Local Impact Per Hour	Total Local Impacts	
UH-60 Blackhawk Helicopters	8	\$5,746	193	32	\$183,884	\$1,471,073	\$342.69	\$87,728	
	Number	Cost/mile	Annual # Miles	# Miles/ AT	Cost Per Vehicle/ AT	Total Cost/ AT	Local Impact Per Mile	Total Local Impacts	
Wheeled Vehicles	4								
High Mobility Multipurpose Wheeled Vehicle (HMMWV) Series	2	\$1.11	800	400	\$444	\$887	\$0.10	\$77	
Medium Tactical Vehicles (MTV) Series	2	\$2.74	480	320	\$877	<u>\$1,755</u>	\$0.06	<u>\$41</u>	
Total Cost Wheeled Vehicles						\$2,642		\$118	
	Number	Cost/Day	# Days	Total Cost Per Soldier	Total Cost/ Annual Training	Total Local Impacts			
Soldiers	56								
Billeted	18	\$6.00	13	\$108	\$1,404	\$1,404			
Barracks	38	\$2.17	13	\$82	\$1,352	\$1,352			
Bivouacked	0	\$0.00		\$0	\$0	\$0			
Mess Hall Cost	56	\$13.57	13	\$176	\$9,879	\$4,543			
Dining Facility		\$170.00	13		\$2,210	\$2,210			
Entertainment Spending	50	\$25.00	10	\$250	<u>\$12,500</u>	<u>\$12,500</u>			
Total Cost Soldiers					\$27,345	\$22,009			
TOTAL COST ANNUAL TRAINING					\$1,501,060	\$109,855			

Notes:

- 1) Local Impact assumes 8 lunches of non-local MREs costing \$7.33 per lunch.
- 2) Entertainment assumes 10 leaves to town for occasional dinner, entertainment, & shopping.
- 3) Billeted, Barracks & Bivouac assumes one day at the beginning and end of AT traveling and 13 days in garrison.

Table 10-14. Total Economic Impacts, Medium Lift Company Annual Training

Impact Type	Employment	Labor Income	Output
Direct Impacts	0.8	\$56,000	\$110,000
Indirect Impacts	0.4	\$17,000	\$54,000
Induced Impacts	0.5	\$17,000	\$53,000
Total Impacts	1.7	\$90,000	\$217,000
Multipliers (SAM Type II)	2.03	1.61	1.97

Source: Minnesota IMPLAN Group, Inc., 2013

Notes: 1) Battalion assumed at 80% attendance or 56 soldiers, coming from another state. See Table 11-13 for details of direct impact components

2) Employment includes all full, part-time, and seasonal jobs

3) All dollar estimates in 2014 \$.

A Medium Lift Company consists of 8 Blackhawk helicopters, 4 wheeled vehicles, and 56 soldiers (Table 10-13). Its annual training costs a total of \$1.5 million, with \$110,000 in local expenditures. A full 98% of the total costs are associated with the aircraft.

Table 10-14 shows the unit generates total economic impacts of \$217,000 in economic output, \$90,000 in labor income, and 1.7 additional jobs.

Table 10-15. Annual Training Costs & Local Impacts – Marine Tank Company

@ 80% Attendance

	Number	Cost/mile	Annual # Miles	# Miles/ AT	Cost Per Vehicle/ AT	Total Cost/ AT	Local Impact Per Mile	Total Local Impacts
Tracked Vehicles	9							
Tank Retrievers	1	\$331.88	70	40	\$13,275	\$13,275	\$5.04	\$201
M1 series tanks	8	\$272.55	210	140	\$38,157	<u>\$305,257</u>	\$13.56	<u>\$15,186</u>
Total Cost Tracked Vehicles						\$318,532		\$15,388
Wheeled Vehicles	10							
Heavy	2							
Light	8							
High Mobility Multipurpose Wheeled Vehicle (HMMVV) Series	4	\$1.11	1,320	850	\$943	\$3,772	\$0.10	\$327
Medium Tactical Vehicles (MTV) Series	4	\$2.74	480	240	\$658	\$2,630	\$0.06	\$62
Heavy Expanded Mobile Tactical Truck (HEMTT) series	2	\$3.39	580	380	\$1,288	<u>\$2,577</u>	\$0.15	<u>\$115</u>
Total Cost Wheeled Vehicles						\$8,979		\$504
						Total Cost/ Annual Training		Total Local Impacts
Soldiers	120							
Billeted	8	\$6.00	4	\$24		\$192		\$192
Barracks	112	\$2.17	4	\$9		\$1,040		\$1,040
Bivouacked	120	\$0.00	11	\$0		\$0		\$0
Mess Hall Cost	120	\$13.57	15	\$204		\$24,426		\$11,232
Dining Facility		\$170.00	15			\$2,550		\$2,550
Entertainment Spending	75	\$50.00	2	\$100		<u>\$7,500</u>		<u>\$7,500</u>
Total Cost Soldiers						\$35,708		\$22,514
TOTAL COST ANNUAL TRAINING						\$363,218		\$38,406

Notes:

- 1) Local Impact assumes 8 lunches of non-local MREs costing \$7.33 per lunch.
- 2) Entertainment assumes 2 leaves to town for dinner, entertainment, & shopping.
- 3) Billeted, Barracks & Bivouac assumes 2 days at the beginning and end of AT in garrison or traveling and 11 days in field bivouac conditions.

The seventh and last unit analyzed was a Marine Tank Company. It consists of 8 M1 tanks, a tank retriever, 10 wheeled vehicles, and 120 personnel as shown in Table 10-15. Total costs for the annual training are \$363,000, of which \$38,000 are estimated to be local expenditures. Again, most of the total cost is associated with operating the tanks.

The annual training exercise generates a total of \$76,000 in economic output, \$32,000 in labor income, and 0.6 jobs as shown in Table 10-16.

Table 10-16. Total Economic Impacts, Marine Tank Company Annual Training

Impact Type	Employment	Labor Income	Output
Direct Impacts	0.3	\$20,000	\$38,000
Indirect Impacts	0.1	\$6,000	\$19,000
Induced Impacts	0.2	\$6,000	\$19,000
Total Impacts	0.6	\$32,000	\$76,000
Multipliers (SAM Type II)	2.03	1.60	1.97

Source: Minnesota IMPLAN Group, Inc., 2013

Notes: 1) Battalion assumed at 80% attendance or 120 soldiers, coming from another state. See Table 11-15 for details of direct impact components
 2) Employment includes all full, part-time, and seasonal jobs
 3) All dollar estimates in 2014 \$.

Author's Note

This is the first time in fifteen years of consulting that I have found it useful to include a personal note in a technical report. However, in this case it may be useful to the reader's interpretation of the economic analysis.

I am a product of the Vietnam era. While in high school I saw graduates coming home to my small town in coffins. I felt a patriotic urge to participate in my generation's war, but I had grizzled veterans of WWII tell me to take a pass, that this wasn't my war to fight. Meanwhile, young men my age were drafted, given basic training and perhaps Advanced Infantry Training, and then sent off to fight a jungle war against guerillas they could not identify. I was part of the Draft Lottery of 1972, and it was only through the luck of my birthday drawing number 316 that I avoided the war. My brother was drafted in 1969 and only avoided Vietnam because our mother made us take typing class in high school and he could type forty words a minute.

With this life experience, please imagine how shocked I was to tour the Orchard Combat Training Center. Here are 20 ranges shooting into a common landing area, and 22 maneuver areas for practicing group exercises. Soldiers can practice everything from shooting rocket grenades to blowing an opening in a wall with plastic explosives. They can practice entering apartment buildings in a shoot house, with Middle Eastern music blaring and pop-up targets that may be a terrorist or a kid with a soccer ball. Afterwards their performance is evaluated using videotape in an adjacent classroom. There is even a fifteen mile long practice road with IEDs which blow talcum powder on the vehicles when hit. On Range 1, tanks, personnel carriers, and helicopters attack targets simultaneously, and practice their communications. It warmed my heart to learn that today U.S. soldiers receive the best training possible in a terrain similar to what they will encounter. Not only do they have a good chance to survive, our soldiers have a high likelihood of prevailing in any conflict. Sometimes hard work and preparation are a kindness. This citizen is glad we learned from our mistakes in Vietnam.

The second point I would like to make here is about the organizational culture I encountered at the Idaho National Guard. I met many senior officers, program managers, and armory officers in the course of gathering information for this study. I was pleased by how everyone I met was professional, positive, and pleasant to interact with. All seemed to sincerely like their work and to understand their role within a larger organization. All were eager to help me. As someone who has worked with dozens of government organizations at all levels across Idaho in my work with the Idaho Rural Partnership, I can attest that it is rare to find an organization of the quality of the Idaho National Guard. It reflects highly on every member of the Guard, from General Saylor to the ordinary soldier. I simply want the reader to know this about the Guard.

Lastly, my thanks to all who contributed to this study, and there were many. Charlie Baun deserves a special thanks for his vision in getting this study done.