

Economic Impact Of Arizona's Principal Military Operations

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Prepared by

The Maguire Company

In collaboration with

E·S·I




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ARIZONA DEPARTMENT OF COMMERCE

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CHAPTER ONE
INTRODUCTION, BACKGROUND AND STUDY METHODOLOGY

Introduction

This study was commissioned by the State of Arizona to update the 2002 Economic Impact of Arizona's Principal Military Operations study and to document the economic importance of the military operations within Arizona. Prior to the 2002 Study, no such analysis had been completed on such a comprehensive and methodologically consistent basis.

As the 2002 Study demonstrated, one of the largest and yet frequently overlooked employers in Arizona is the United States Department of Defense. The presence of military personnel and their supporting activities pre-date statehood but is frequently ignored in economic development discussions. For years, the "Five C's" were used to describe the basic industries of Arizona – Copper, Cotton, Citrus, Cattle, and Climate. These industries were identified as the core of Arizona's economy. Nowhere in this list was there any recognition of the thousands of Arizona jobs tied directly and indirectly to the many military operations within the State.

The presence and economic contribution of the military operations in Arizona may have been historically under-recognized due to the general isolation of the operations from typical commerce, the physical separation, for security reasons, of many of the facilities, or the methods typically used to collect and report economic and employment statistics. Whatever the reasons for the historical oversight, the military operations within Arizona represent a substantial and valuable industry in the State that should be recognized and listed among the State's most important sources of economic activity.

Since the release of the 2002 Study, the economic and fiscal benefits of the Arizona key military operations have been frequently cited in discussions of the state's economic development and vitality. Recent slowdowns in the construction industry and the consequent fiscal impacts for state and local governments highlight the benefits of a non-cyclical economic driver like these military operations.

Among the reasons for this study and the 2002 effort, cited by the sponsors, are the continuing frequency of proposed state legislation involving issues relating to the location and activities of various military operations in the State, the continuing development of land adjacent to and near military facilities, and the continuing possibility of base closures by the Department of Defense. For these and other reasons, this effort to update the 2002 Study results was undertaken.

Background

While the 2005 round of the Base Realignment and Closing Commission (BRAC) largely spared Arizona's facilities and operations, it is expected that another round of BRAC reviews will occur in the years ahead.

The consequences of the previous BRAC-ordered closures have been the subject of substantial controversy and debate. Some have argued the benefits of the efficiencies that have resulted from the Commission prompted closings, while others have raised concerns regarding the loss of essential military capabilities, especially unique, irreplaceable locations or facilities.

At the same time that federal actions may result in the reduction or closing of military facilities within Arizona, local decisions and activities also endanger the future of some military operations. In most cases, Arizona's principal military operations historically developed at facilities either in remote locations or at the periphery of development. This physical separation permitted the operations to exist largely unaffected by the surrounding population growth and development. However, in the last few decades Arizona's sustained growth and development have, in some cases, brought development closer to the formal boundaries of some bases and into the adjacent, off-base areas that are crucial to the safe and prudent execution of military activities from those facilities.

Several pieces of state legislation have been introduced and debated in recent legislative sessions dealing with the issues of physical encroachment and the continuation of critical, off-base areas in land uses that are compatible with the ongoing military activities.

In addition, the closure and redevelopment of Williams Air Force Base in eastern Maricopa County has prompted discussions concerning the economic development challenges and opportunities that might be associated with the closing of other military facilities within the State.

Study Methodology

To fully measure the impact of the principal military operations within Arizona, the Study Team had to establish a study methodology. Since the purpose of this effort was in large part to update the 2002 Study, the methodology of that effort was a starting point for the Study Team's determination. Prior to 2002, no study had examined the combined economic effect of all of Arizona's principal military operations on the State's economy, so a new methodology had to be developed for that effort. It was critically important that the approach used would ensure a comprehensive, yet conservative, estimate of the operations' impact, based on information compiled using uniform and consistent techniques. In addition, the Study Team sought to develop a reproducible methodology assuring that subsequent studies could build upon the information and knowledge gained. Based on that prior foundation, the Study Team determined to replicate the 2002 Study methodology with only minor adjustments as described below.

Based on the experience gained through the 2002 Study effort and, most importantly, the availability of a number of key personnel at the various military installations that had participated in the 2002 Study, the financial data collected for a number of the installations is significantly improved from the prior study. Consequently, not all of the changes in the reported impacts are entirely attributable to changes in the scope of operation; some changes, in some cases significant amounts, are the result of better data collection and reporting. The Study Team is grateful to all of the key personnel at the various military installations who spent hundreds of hours collecting, validating, and crosschecking financial data.

In examining Arizona's principal military operations as an industry, it was essential that the information gathered and analyzed for each military operation be compiled using uniform and consistent techniques. In this way, both the inputs for the economic analysis as well as the outputs would be reasonably comparable among the various military operations. It must be recognized that there are substantial differences in the missions and activities of the various military operations within Arizona, even though there are numerous unifying similarities. Great care was taken to recognize and balance the differences among the military operations while maintaining the desired consistency. It is important to note that prior studies, as well as future studies, undertaken with respect to a single facility or operation may employ equally valid, but different, methodologies for estimating the economic impact of those facilities or operations. However, for the purposes of this effort, uniformity and consistency were paramount.

Another continuing concern of the Study Team was ensuring that the economic inputs used in the analysis, while comprehensive, were non-duplicative. Many opportunities existed for double counting or the inclusion of redundant data. The inclusion of such information would overstate the actual economic impact of the principal military operations and as such would violate one of the study's guiding principals, that is, the production of a conservative, yet realistic, estimate.

Use of IMPLAN

The Study Team, as in the 2002 Study effort, felt it was important to rely upon an independent input-output model, not subject to any influence from within the State, to estimate indirect and induced impacts. It was determined that the use of the IMPLAN Pro economic impact model software was most appropriate. IMPLAN stands for Impact Analysis for Planning. IMPLAN Pro software was created and is distributed by the Minnesota IMPLAN Group (MIG) as a comprehensive econometric tool for analyzing economic impacts within specific regions. The IMPLAN econometric model uses actual input and output information for each county within the United States to develop a tailor-made model for each individual study region. Study regions typically include single counties, multi-county regions, one or more states, or the entire national economy. Study regions can also be based on zip codes, using a mixture of county and zip code level information.

As a general rule, the larger the study area examined, the greater the impacts, because of the increased amount of economic activity occurring within the larger region. Occasionally, larger geographic areas can have reduced impacts as a result of unique characteristics within the geographic region, such as average productivity of workers or the location/absence of certain important industries.

Definitions

The IMPLAN econometric model operates by estimating the ***indirect*** historically and ***induced*** impacts generated by the direct economic activity. ***Direct*** economic impacts are those attributable to the initial economic activity; for example, an operation with ten full-time employees creates ten *direct* jobs. ***Indirect*** economic impacts are those economic activities undertaken by vendors and suppliers within the supply chain of the direct activity as a result of the initial economic activity. For example, suppliers of goods, materials, and services used in the direct activities produce *indirect* economic impacts. ***Induced*** economic impacts result from the spending of wages paid to employees in local industries involved in direct and indirect activities. These wages, which are analogous to household spending, support additional local activities, such as the purchase of goods and services within the region. In turn, that portion of spending that accrues to local businesses and employees is once again re-circulated within the local economy, producing additional economic activity.

The econometric model measures the amount of economic activity in each round of spending until all of the spending within the local region has been exhausted. In each iteration, a certain portion of spending is attributed to economic activities (purchases) outside of a local (study) region. Once money is spent outside the local region, it is not included in subsequent iterations. Thus, each iteration recycles an ever-declining amount of economic activity. The extent to which economic activity recycles within the local region is defined for each specific region (in this study, counties and the state) based upon the input and output relationships among industries and their suppliers in the region. This information is derived from Bureau of Economic Analysis data.

Determination of Operations and Activities to be Included

Another of the challenges the Study Team faced was determining which military facilities and operations to include within the study. The Study Team examined a wide range of activities for possible inclusion within the study. Ultimately, the Study Team developed a uniform series of standards to determine whether a particular activity, facility, or operation should be included. In short, a two-test standard was developed and utilized.

The first test concerned the mobility or susceptibility to potential closure or relocation of an activity, facility, or operation. If the continuation of an operation depends solely on a *federal government decision*, it was included in the analysis. For example, an operation that could be reasonably relocated to some other geographic location by a decision of the Department of Defense would be included.

The second test measured the degree to which the activity, facility, or operation was subject to *community influence* concerning its activities or operations. In other words, does the operation inherently impact its neighbors? Some of the frequently encountered examples of community influences or external pressures on various military activities, facilities and operations include geographic encroachment, zoning and regulatory constraints, or neighborhood noise and safety concerns.

Utilizing this two-test standard, the Study Team identified the principal military operations within the state to be included within the study. These operations include the principal military facilities within the state: Davis-Monthan Air Force Base, Fort Huachuca, Luke Air Force Base, the Yuma Marine Corps Air Station, and the Army Yuma Proving Ground. In addition, the activities of the Arizona Army National Guard and the Arizona Air National Guard were included. These are the same operations included in the 2002 Study.

Determination of Operations and Activities to be Excluded

As mentioned earlier, equally important and difficult was the determination of which activities to exclude. Using the two-test standard described above, the Study Team, as in 2002, eliminated from consideration military contractors, such as, the Boeing helicopter facilities in Maricopa

County, the Raytheon facilities in Pima County and a wide variety of other military-related contractors within the state of Arizona that were not directly linked to the location of one of the principal military operations in the state. The businesses excluded from this study are important contributors to Arizona's economy; however, their location in Arizona is largely attributable to other factors including labor force characteristics, lower costs-of-doing-business in Arizona, quality of life considerations, and the other attractive characteristics of Arizona and its economy.

It is also important to note that a number of positive developments have occurred on the site of the former Williams Air Force Base in eastern Maricopa County. Many of these activities are related to military operations and the defense industry and provide important economic stimuli within the State's economy. However, it was the Study Team's determination that, while valuable, these activities were not appropriate for inclusion within this study.

While all of these activities are important economic components of the State's overall economy, they were not within the subject of this study. A broader, more far-reaching examination of the impact of military spending (e.g. all Department of Defense spending) both for military operations as well as for defense-related contracting could be undertaken and would yield overall impacts in excess of those estimated by this report. However, the purpose of this effort was to examine a more narrowly defined group of economic activities.

Linked Military Retirees

Beyond the economic activity (personnel and spending) of the military operations themselves, Arizona's economy receives substantial stimulus from the spending of military retirees. Prior studies and analysis have recognized a relationship between the location and accessibility of full service military installations and the residential locational choices of military retirees. Access to facilities including health care and commissaries on military installations are among a number of factors influencing the geographic residential locational decisions of military retirees. However, care must be taken not to overestimate the impact of military installations on the locational decisions of otherwise mobile military retirees, especially in states like Arizona. Arizona is one of a number of states that benefits from the general in-migration of mobile retirees, both military

and non-military retirees. The State's climate, cost of living, and other quality of life considerations attract individuals.

Balancing the effect of the general attractiveness of Arizona to mobile retirees with the desirability of proximity to an established military installation for mobile military retirees was the subject of substantial consideration by the Study Team. Ultimately, a two-criterion standard was established for estimating the portion of military retirees and their spending that were directly *linked* to the State's military installations and were therefore appropriate to include within the study. In general, the 2002 Study generally assumed that *25 percent* of the military retirees living within a *50-mile radius* of one of the principal military installations would be included within the study. For these purposes, only the Davis-Monthan AFB, Fort Huachuca, Luke AFB, Yuma MCAS, and Yuma Army Proving Ground were considered to be principal military installations due to the availability of a wide range of services. In addition, certain identified military retirees linked to National Guard operations were also considered. Due to changes in the delivery of some services to military retirees, the Study Team considered reducing its criterion for military retirees linked to the installations to 20 percent. But, in the absence of any reliable quantitative analytical support, the methodology was kept consistent with the 2002 Study approach for comparison purposes. More detailed analysis of the service areas was also undertaken in this study effort.

Thus, more specifically, 25 percent of retirement income received by military retirees residing within a postal zip code area generally within a 50-mile radius of one of the principal military installations was included in the study. This amount was an estimate of the retirement income spending attributable to military retirees who would not be residents of Arizona, if the military installations were not located within the state. In some instances this general standard was adjusted to reflect geographic travel barriers as well as to avoid duplication for areas within 50 miles of more than one facility. The 50-mile standard was used to represent a one-hour travel time, which is a frequently used standard for proximity in economic and transportation studies.

Determination of Financial Inputs

Having determined the scope of the study, the Study Team began the development of a uniform, standardized list of financial inputs. In general, the Study Team sought to collect *standardized* information from all of the principal military operations within the State concerning their compensation for personnel and other direct spending activities for fiscal year 2005. Specifically, payroll information for a variety of different categories of personnel were identified, solicited, and collected from the principal military operations. Payroll information provides a general measure of disposable household income available for expenditure and use within the regional economy. However, a wide variety of adjustments must be and were made to the payroll information prior to its input into the IMPLAN econometric model. A more thorough discussion of the modifications made to the basic financial information is presented in Appendix Three.

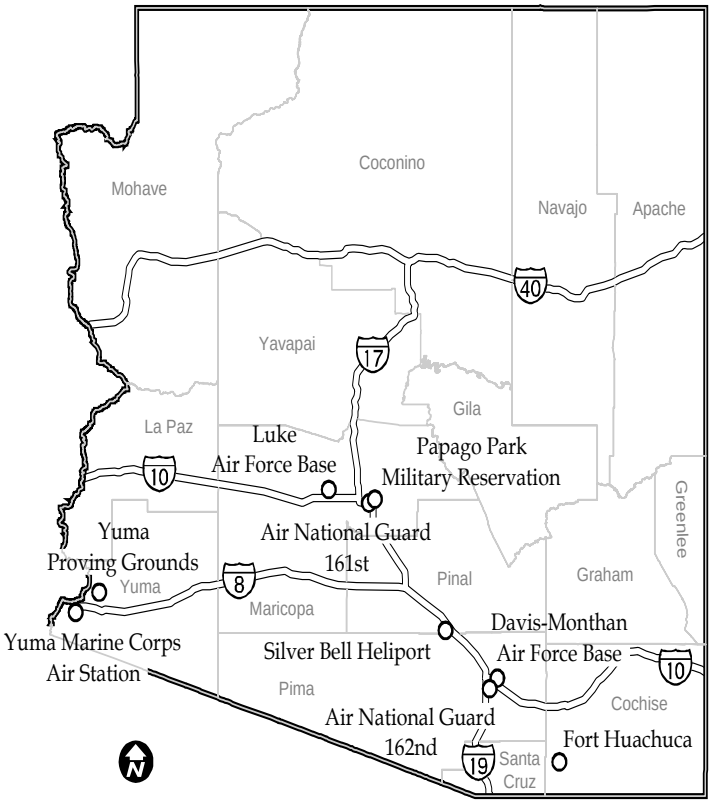
In addition to payroll information, the Study Team sought and received consistent information from the various military operations on their contracts and purchasing expenditures. In assembling this information, extensive discussions were held among representatives of the various military operations within the State to insure general uniformity and consistency between facilities and operations. In addition, great care was taken by the Study Team to avoid double counting or duplication of information within the contracting and purchasing categories as well as in the personnel and payroll information.

Having determined its study methodology, the Study Team contacted both the operational commanders as well as the financial officers of each of the identified principal military operations within the State. A series of procedural discussions were undertaken with representatives of each of the operations and standardized definitions were developed for the identification and collection of financial information. This financial information, which served as the initial source of inputs for the IMPLAN econometric model, is summarized at the end of this section. *As mentioned above, due to the experience gained through the 2002 Study effort and, most importantly, the availability of a number of key personnel at the various military installations that had participated in the 2002 Study effort, the financial data collected for a number of the installations is significantly improved from the prior study. Consequently, not all*

of the changes in the reported impacts are entirely attributable to changes in the scope of operations, some changes, in some case significant amounts, are the result of better data collection and reporting.

The IMPLAN econometric analysis was completed for each of the individual military operations on a countywide basis. In addition, inputs from all of the military operations included within the study were aggregated and the analysis was undertaken on a statewide basis. The principal focus of this study is the statewide impact of the various military facilities and operations within Arizona. Detailed information concerning individual facilities and their countywide impacts are summarized in the appendices to this study.

CHAPTER TWO
DESCRIPTIONS OF ARIZONA'S PRINCIPAL MILITARY OPERATIONS



There are five major military installations in Arizona, – ***Army Intelligence Center and Fort Huachuca, Davis-Monthan Air Force Base, Luke Air Force Base, Marine Corp Air Station – Yuma***, and ***Yuma Army Proving Grounds –*** and four principal National Guard operations – ***Air National Guard's 161st Air Refueling Wing, Air National Guard's 162nd Fighter Wing, Army National Guard,*** and the ***Western Army National Guard Aviation Training Site.***

Army Intelligence Center and Fort Huachuca

Fort Huachuca is located in Cochise County in southeastern Arizona, on the western slope of the San Pedro River Valley. The primary missions at Fort Huachuca are Military Intelligence (MI) training, Army network management, communications-electronics testing and training, and unmanned aerial systems training. These missions are conducted by the US Army Intelligence Center, Network Enterprise Technology Command, U.S. Army Information Systems Engineering Command, the Joint Interoperability Test Command, U.S. Army Electronic Proving Ground, the Unmanned Aerial Systems Training Battalion of the US Army Aviation Center, and the 11th Signal Brigade. Numerous additional tenant/partner organizations and their missions are located on the fort as well.

The Military Intelligence training mission encompasses training, organizing, and equipping MI professionals to support the nation's war fighting requirements throughout the operational continuum. The Intelligence Center offers over 80 courses ranging from Noncommissioned Officer's Courses to the Officer's Advanced Course. During this year approximately 8,500 students will be trained and instructed at Fort Huachuca.

The US Army Garrison at Fort Huachuca has command and control of functions that include operations, maintenance, and security of Fort Huachuca as well as responsibility for all stationing, quality of life (morale, welfare, recreation, child care and development), and casualty assistance support.

Many of the active duty military and their family members live on post. Housing construction projects are currently on-going and upon completion will include the demolition of approximately 1,800 units and rebuilding of approximately 1,000 family housing units. These projects have been underway since 2000, with completion anticipated in 2008.

Fort Huachuca has scheduling and operational control of Special Use Airspace including: Department of Defense Unmanned Aerial Vehicle Training with three restricted areas (R-2303A, R-2303B, and R-2303C) and a Controlling Firing Area, which is used by range control for pistol and small arms training. Artillery tank and mortar-fire activities are not currently being conducted. The restricted airspace areas are activated for approximately 12 hours per weekday for remotely operated aircraft testing, training, and activities, which are monitored and deconflicted by Libby Army Airfield Air Traffic Control Radar. When not in use by the military, the airspace reverts to control by Albuquerque Central.

Main airspace users currently include the UASTB for training on the Hunter Unmanned Aerial System (UAS), Shadow Tactical Unmanned Aerial System, and Predator/Warrior class of air vehicles, along with other occasional testing used by the Electronic Proving Ground.

Other users of Special Use Airspace and Libby Airfield include the U.S. Army Special Electronic Mission Aircraft Training School, the Advanced Airlift Tactics Training School

operated for the Department of Defense by Missouri Air Guard, the Joint Task Force Six (JTF-6), the 162nd Fighter Wing for their F-16s, the 355th Air Wing for their A-10s, the Forest Service for their air tankers, and the U.S. Customs/Border Patrol.

There are nine live fire ranges and other training facilities including Rappel Cliffs, Rappel Tower, Leadership Reaction Course, Rope Bridge facility, Aircraft loading mock-up, Obstacle Course, Confidence Course, Mask Confidence Chamber, Assault Landing Strip, three Airborne Drop Zones, two Land Navigation Courses, Grenade Assault Course (non-firing), and Expert Field Medical Badge Training Facility.

Mission related concerns about the Fort Huachuca's Special Use Airspace have increased since 2000, as a result of increasing local development under the airspace and the increased operational tempo of the global war on terror. These concerns are predominately noise-related.

Davis-Monthan Air Force Base – 355th Fighter Wing

The mission of the 355th Fighter Wing is to provide combat ready A/OA-10 aircraft to theater commanders worldwide and to conduct initial qualification and reoccurring training for all A/OA-10 pilots.

Flying units at the base consist of three A/OA-10 squadrons assigned to the 355 FW and two tenant units, the 55th Electronic Control Group (ECG), operating EC-130 aircraft, and the 563rd Rescue Group (RQG), operating HC-130 aircraft and HH-60 helicopters. The three A/OA-10 squadrons consist of two Flying Training Unit squadrons and one Operational Squadron. The two EC-130 units, 41st and 43rd ECS, of the 55 ECG represent unique capabilities as the US Air Force's entire Compass Call Fleet. The two flying units of the 563rd (RQG) are the 79th Rescue Squadron (RQS) operating HC-130 aircraft and the 55th RQS operating HH-60 helicopters.

The 354th Fighter Squadron "Bulldogs", an operational O/A-10 unit, provides worldwide day and night combat capability in Close Air Support, Air Strike Control, Combat Search and Rescue, Air Interdiction, and Battalion Air Liaison Officers.

The 357th Fighter Squadron "Dragons" and 358th Fighter Squadron "Lobos" train approximately 140 A/OA-10 fighter pilots under three separate syllabi per year. Training includes Initial Qualification Training, Requalification Training, Central Instructor School Training, and the Air Force's first Night Vision Goggle Training at a Fighter Training Unit.

The 41st Electronic Combat Squadron "Scorpions" and 43rd Electronic Command Squadron "Bats" provide worldwide day and night offensive Information Warfare capability. These capabilities include: Acquiring, Directional Finding, Analyzing and targeting three Signals, preventing targeting of friendly signals, and linguists and analysts enabling real-time specific targeting.

The 79th RQS provides rapidly deployable combat search and rescue (CSAR) forces to theater combatant commands worldwide. It operates and tactically employs the HC-130 "Combat King" aircraft. The squadron conducts helicopter air refueling, airdrop of pararescue personnel and/or equipment, and trans-load operations on austere airfields for combat personnel recovery in denied territory, using covert low-level operations during the day or at night using night vision devices.

The 55th RQS provides rapidly deployable combat search and rescue (CSAR) forces to theater combatant commands worldwide. It operates and tactically employs the HH-60 "Pavehawk" helicopter. The squadron transports and provides close air support to pararescue personnel in covert rescue operations in any terrain.

The 607th Air Control Squadron "Snakes" Field Training Unit provides both Weapons Director and Surveillance Technician Initial qualification training for 126 students per year. The unit is located at Luke Air Force Base and completes 16,000 sorties and 38,000 hours annually. It is the Air Combat Command's largest Flying Hour Program. The 78 A/OA-10, 13 EC-130 H Compass Call, and seven EC-130 E ABCCC aircraft are assigned to the 355th Wing.

The 309th Aerospace Maintenance and Regeneration Group (309th AMARG) also operates from Davis-Monthan AFB. The 309 AMARG began in 1946 storing WWII bombers and cargo

planes. The Group has since grown into a modern, high-tech industrial facility providing a broad range of aircraft and aerospace vehicle support services to the U.S. government and foreign allies. Services include aircraft and aerospace vehicle storage, parts reclamation, restoration to flight capability, limited aircraft-overhaul services (depot level maintenance), and aircraft disposal.

Davis-Monthan AFB is located in the City of Tucson, Arizona.

Luke Air Force Base – 56th Fighter Wing

Located west of Phoenix, Luke Air Force Base is home to the 56th Fighter Wing, the largest fighter wing in the world with 185 aircraft, 27 squadrons, four tenant units, nearly 7,000 military and civilian personnel, and stewardship of the 1.7 million acre Barry M. Goldwater Range (Goldwater Range). Luke is the only active-duty Air Force F-16 training wing.

The mission of the 56th Fighter Wing is to train the world's greatest F-16 pilots and maintainers while deploying mission ready warfighters. Since 1941, Luke has graduated more than 55,400 pilots, and since 1994, has trained pilots to fly the F-16 Fighting Falcon with more than 15,600 pilot graduates and 7,990 F-16 crew chiefs. F-16 combat pilots and maintainers who currently support the global war on terrorism in Afghanistan and Iraq were trained at Luke.

In fiscal year 2007, Luke produced 402 pilots for the Combat Air Forces, and 471 crew chiefs, graduated 90 intelligence specialists, flew 36,067 sorties totaling more than 46,840 flying hours, deployed 435 Airmen around the world, and volunteered 100,000 hours in the community.

Of strategic importance to Luke's training of fighter pilots for the Combat Air Forces is the Goldwater Range managed by the 56th Fighter Wing Range Management Office. The Goldwater Range is absolutely essential for the effective combat training of this country's military air forces. Approximately 45,000 operations are flown annually on the Goldwater Range.

The 56th Fighter Wing has scheduling and operational control of Special Use Airspace for four Military Operating Areas (MOAs) including Gladden and Bagdad MOAs located northwest of Luke Air Force Base, Sells MOA located east of Tucson and contiguous to the Goldwater Range (the Goldwater Range), and Sunny MOA located northeast of Flagstaff. Special Use Airspace scheduling and operation control also exists for eight low-level Military Training Routes, which start to the east, south, and north of Luke Air Force Base all terminating on the Goldwater Range and three Air to Air Refueling Anchors.

The eastern portion of the Goldwater Range consists of Restricted Areas R-2301E, R-2304, and R-2305. The Goldwater Range consists of eight sub-ranges, four manned air to ground weapons delivery ranges, three tactical air-to-ground weapons delivery ranges, and one air to air training range. The 56th Fighter Wing flies approximately 50% of the missions scheduled on the Goldwater Range.

The 355th Wing at Davis-Monthan Air Force Base, 162nd Fighter Wing at Tucson International Airport, Air Force Air National Guard "Snowbird Operations" at Davis-Monthan Air Force Base, and the Western Army Aviation Training Site at Pinal Airport are designated "Regular Users."

The US Navy, US Marine Corps, and the Air Force Reserve units also utilize the Goldwater Range for training.

Luke Air Force Base – Air Force Reserve – 944th Fighter Wing

The 944th Fighter Wing was activated at Luke Air Force Base on July 1, 1987. The mission of the 944th Fighter Wing is to train and deploy assigned reservists, providing combat-ready warriors in support of any Department of Defense mission. The wing has 13 subordinate units to consisting of two groups, six squadrons, and five flights.

The 944th Fighter Wing supports Luke's active duty 56th Fighter Wing's mission by providing reserve F-16 pilots in the 301st Fighter Squadron through the associate pilot program, which was

activated March 3, 2000. More than 60 reserve pilots administratively work for the 944th Fighter Wing, but they fly active-duty 56th Fighter Wing aircraft that are maintained by 56th FW maintenance personnel to train active-duty student pilots. Beyond that, the wing staff and support sections deploy throughout the world to support the global war on terror as well as humanitarian missions around the world.

The 944th enjoys a rich heritage. It was the first Reserve F-16 Fighter unit to participate in Provide Comfort II and to carry the AIM 120A (AMRAAM) missile. The wing was also given the opportunity to participate in "Coronet Harbor", a NATO sponsored exercise involving units from stateside bases, plus a number of countries within the NATO alliance such as Belgium, France, Germany, Italy, Portugal, and the United Kingdom. The exercise enabled the 944th to train in virtually every possible mission the F-16 can perform. It was also the first US Air Force Reserve or Air National Guard unit to conduct air combat training with the MiG 29.

944th Fighter Wing honors include five Air Force Outstanding Unit Citations; five Air Combat Command Flight Safety Awards, 13 first place awards during Gunsmoke fighter competitions, three Maintenance Effectiveness Awards; Daedalian Award for Best Aircraft Maintenance, Air Force Chief of Safety Outstanding Achievement Award for Ground Safety, and several other command level awards.

The 944th is located at Luke Air Force Base in Glendale, Arizona, approximately 27 miles west of downtown Phoenix.

Marine Corp Air Station - Yuma

The mission of the Marine Corp Air Station (MCAS) Yuma is to provide aviation ranges, support facilities, and services that enable the US Marine Corps and other military forces to enhance their mission capability and combat readiness.

This premier aviation training facility has over 2.8 million acres of aerial training ranges supporting 80% of all Marine Corps aviation training.

Approximately 250,000 operations annually make MCAS Yuma the busiest airfield in the Marine Corps and the fifth busiest in the Navy. It also is the only Joint Use Facility in the Marine Corps.

Tenant Units at MCAS Yuma include Marine Aircraft Group-13, an AV-8B Aircraft Group (14 AV-8B aircraft per squadron) including VMA-211 (Marine Attack Squadron), VMA-214, VMA-311, VMA-513, and MALS-13 (Aviation Logistics Squadron; provides intermediate maintenance support for the AV-8B squadrons).

Additional Tenant Units include the Marine Aviation Weapons and Tactics Squadron-1 (MAWTS-1) and Marine Fighter Training Squadron (VMFT-401) (10 F-5 aircraft). MAWTS-1 coordinates and supervises the development and presentation of formal courses, both academic and flight, for all aviation units in the Marine Corps. They conduct a semi-annual Weapons and Tactics Instructor course for U.S. and allied military forces and a Desert Talon course for Marine units set to deploy to Iraq. VMFT-401 is a reserve squadron flying the F-5 Tiger II. It is the only reserve aggressor squadron in the Marine Corps. The remaining units include Marine Wing Support Squadron-371, Combat Service Support Detachment-16, Marine Air Control Squadron-1, and Headquarters & Headquarters Squadron (2 UC-12 operational support aircraft and four UH/HH-1N Search and Rescue helicopters). Yuma International Airport also shares the MCAS Yuma facility and is the only Marine Corps shared use facility.

MCAS Yuma has scheduling and operational control of the special use airspace including five Military Operating Areas (MOAs) – Abel MOA, Turtle MOA, Dome MOA, Quail MOA, Kane East / West / South MOA, four Low Level Military Training Routes – VR 1266, VR 1267, VR 1267A, VR 1268, and one Air Traffic Control Assigned Airspace – Imperial.

The Western portion of the Goldwater Range R2301W consists of the R2301W range and includes the Urban Target Complex (Yodaville), Cactus West Airspace (Inert Bombing target), and Tactical Aircrew Combat Training System/Electronic Warfare Range.

The Chocolate Mountain Aerial Gunnery Range (R2507 North and South) is used for live Air to Ground ordnance training.

Additional restricted and target areas, include R2306/07/08/09, Targets 101, 103 (R2510), Target 68, Inkey Barley (R2512), Target 95, Kitty Baggage (R2512).

There are three military Drop Zones including Bullhead drop zone (R2510), Camelot drop zone (R2510), and Superstition drop zone (R2510).

MCAS Yuma is located in Yuma, Arizona and occupies approximately five square miles in southwest Yuma just about midway between San Diego, California and Phoenix, Arizona.

Army Yuma Proving Ground

The mission of the US Army Yuma Proving Ground (YPG) is engineering, testing, developing, and supporting developers in the development of military equipment. YPG's focus is on the planning, execution, and reporting of development and production testing of artillery, direct fire, automotive, aviation systems, mines and countermines, Unexploded Ordnance, air delivery, and soldier equipment. It functions in diverse world-wide operating environments (desert, tropic, and cold regions) through application of experience throughout a system's life-cycle.

The Yuma Proving Ground is a multi-purpose proving ground that performs engineering, test, and support services for material developers, the Army Center of Excellence for Natural Environment Testing, the Department of Defense Major Range and the Test Facility Base.

YPG also supports developmental and operational test execution, joint test and training ranges, installation management, support, and services as well as production and acceptance tests.

The YPG has priority use of ten special-use Restricted Airspace areas including R-2306 A, B, C, D and E; R-2307; R-2308 A, B, and C; and R-2311. Airspace use is scheduled by YPG, with Air Traffic Control functions performed by the Marine Corps Air Station, Yuma.

The YPG is comprised of over 838,000 acres of withdrawn public land with almost unlimited airspace over the proving ground. The YPG Range complex is comprised of the Cibola Range, Laguna Area, Command Support Area, and KOFA Range. Cibola Range is designed and instrumented to test Army Aviation systems providing 360 degree firing capabilities, 11 separate drop zones, day and night HAHO and HALO, full air delivery rigging capabilities/DDESB certification, C-5/C-17 capable runways, and C-17 capable assault landing strip.

The KOFA Range is the Army's premier long-range artillery range with direct and indirect fire-approximately 8 X 47 miles, over 300 firing positions, mine and countermine test facilities, ammunition loading plants, and maintenance facilities.

In addition to testing, YPG conducts numerous cross services training operations. It is home to the Military Freefall School, the Special Operations Terminal Air Control Course School, and the U.S. Air Force's military working dog courses. It is the winter training site for the U.S. Army Golden Knights. YPG also supports the Marine Corps in its Weapons Tactics Instructor courses and Desert Talon exercises.

YPG is located in Yuma County, Arizona, approximately 25 miles north of the City of Yuma. It is situated in Southwest Arizona's Sonoran Desert in one of the hottest and driest deserts in the United States. The YPG area closely matches the terrain and weather conditions of the Persian Gulf region.

161st Air Refueling Wing "Copperheads" – Arizona Air National Guard - Phoenix Sky Harbor International Airport (IAP)

In fulfilling its dual role as an "Operational Reserve" KC-135R Stratotanker unit of the United States Air Force (USAF) and the State of Arizona's Title 32 National Guard, the mission of the 161st Air Refueling Wing (ARW) is to provide trained combat forces to the USAF in support of the global war on terror (GWOT) and, under the command of the Governor of Arizona, work as a team to care for, serve and defend the citizens of local communities and the state.

The vision of the wing revolves around the key word **FIRST**, which stands for Flexibility, Integrity, Readiness, Strength, and Teamwork.

Flying the KC-135R Stratotanker out of Sky Harbor IAP, the 161st ARW is a key enabler in providing the best Fighter Pilots in the world, by providing air refueling support for Luke Air Force Base and Tucson Air National Guard F-16 training mission.

Additionally, the 161st ARW supports air refueling requirements of many other military flying units located throughout the southwest, including Davis-Monthan Air Force Base and MCAS Yuma.

The 161st ARW provides combat ready aircrew, maintainers, and mission support personnel for USAF Aerospace Expeditionary Force (AEF) missions including Noble Eagle, Operation Enduring Freedom, and Operation Iraqi Freedom.

The 161st ARW is equipped with 8 KC-135R Stratotanker aircraft equipped with the latest avionics upgrade Pacer Craig modification and the quieter/cleaner burning CFM-56 turbo fan jet engines. The unit flies approximately 2800 hours, 1,000 sorties, in flight refuels 2,000 receiver airplanes, and offloads 8,000,000 pounds of fuel annually.

The 161st ARW is centrally located in the heart of the best airspace in the country and is a user of all air refueling tracks and anchors throughout Arizona and the southwest, to include: Barry Goldwater Range, AR 3H, AR 310, AR 658, AR 613, AR 647, AR 639, and AR 649 air refueling tracks.

The 161st ARW operates out of the Phoenix Air National Guard Base, which is located on the Sky Harbor International Airport complex. The base occupies 275,000 square feet of new facilities, infrastructure, pavement, and aircraft ramp.

Arizona Air National Guard – 162nd Fighter Wing - Tucson International Airport

The 162nd Fighter Wing (FW) is the Air National Guard's premier F-16 fighter pilot training unit and the largest Air National Guard fighter wing in the country.

Since its activation in 1956, the 162nd Fighter Wing has fulfilled a federal and state mission. The dual mission, a provision of the US Constitution, results in each Guardsman holding membership in the National Guard of Arizona and in the National Guard of the United States. Specifically, the wing serves the United States and allied nations by providing the finest fighter training programs in the world while partnering with the U.S. Air Force in the global war on terror and Air Sovereignty Alert.

The wing's federal mission is to maintain well-trained, well-equipped units available for prompt mobilization during war and to provide assistance during national emergencies (such as natural disasters or civil disturbances). Currently, the 162nd deploys its members as part of the Air and Space Expeditionary Force to provide combat forces in support of Operations Enduring Freedom and Iraqi Freedom.

When 162nd Fighter Wing Guardsmen are not mobilized or under federal control, they report to the governor of Arizona and are led by the adjutant general of the state. Under state law, the wing provides protection of life and property and preserves peace, order, and public safety. These missions are accomplished through emergency relief support during natural disasters such as floods, earthquakes and forest fires; search and rescue operations; support to civil defense authorities; maintenance of vital public services; and counterdrug operations.

The 162nd is the "face of the USAF to the world", providing the best-trained coalition war-fighting partners for the United States Air Force. The wing has trained pilots from 23 of 24 countries that fly the F-16 today while developing strategic partnerships and building strong international relationships based on performance, friendship, and trust. From Davis-Monthan Air Force Base, the wing operates a 24/7 alert detachment to provide a rapid reaction force ensuring air sovereignty over the Southwest. Operation Snowbird is also located at Davis-

Monthan; this 162nd detachment provides support for visiting flying units from around the world looking to train in the optimal weather conditions and ample ranges of Southern Arizona.

The wing manages a fleet of more than 70 F-16 C/D/E/F Fighting Falcons. There are three flying squadrons and numerous maintenance squadrons and flights assigned to the wing. Under the 162nd Operations Group are the 152nd, 195th, and 148th Fighter Squadrons. Supporting these units are the Mission Support Group, the Maintenance Group, the Medical Group and Headquarters Squadron.

The 162nd has more than 37 years experience in fighter training, and more than 17 years experience in international military training. The wing graduated more than 6,800 fighter pilots since 1970. Instructor pilots average more than 3,000 fighter hours. Aircraft maintainers average 18 years of experience in fighter aircraft.

The 162nd resides on 92 acres next to the Tucson International Airport. The wing shares use of the runway, security, and fire control with the airport.

Arizona Army National Guard

The mission of the Arizona Army National Guard (AZ ARNG) is to recruit, train, retain, sustain, and deploy the AZ ARNG forces. The mission of our forces is to remain capable of supporting the National and States' missions for the protection of life, preservation of peace, maintenance of order, and public safety.

The AZ ARNG is an organization of soldiers who are all dedicated to serving, protecting and defending the Nation, the state of Arizona, and the diverse communities within our state. As of August 21, 2007, the AZ ARNG has 1,455 soldiers currently deployed worldwide. These soldiers represent roughly 27% of the current AZ ARNG force structure and are assigned to various units. These units include, but are not limited to, 222nd Transportation Company, 258th RAOC, 259th SECFOR, 640th AVM, 1-285th Aviation Battalion, and 158th Infantry Battalion. To date, 4,461 soldiers from the AZ ARNG have deployed to either Operation Enduring Freedom or Operation Iraqi Freedom.

The AZ ARNG also currently supports the United States Customs and Border Patrol with soldiers to gain operational control of the border. Since July 2006, the AZ ARNG has provided over 15,719 Guard members to support missions along the international border with Mexico. The Guard also continues to support the Arizona Division of Emergency Management in its efforts to sustain disaster preparedness capabilities across the state.

The AZ ARNG has some of the finest helicopter gunnery ranges in the world. In Marana, located at the Silverbell Army Heliport, the Western Army Aviation Training Site (WAATS) serves the Guard as a flight training facility. It provides regional simulation support and individual qualification courses in the AH-64A for U.S. and Allied pilots and crewmembers. Additionally, the WAATS trains the 15P Flight Operations Coordinator and the full menu of OH-58 A/C pilot and mechanic courses. Since 1986, the WAATS has trained more than 11,796 total students for all three components of the United States Army and allied countries in Europe and Asia. Since September 11, 2001, the WAATS has trained 4,299 soldiers in support of the global war on terror.

The AZ ARNG has three major goals. The first goal is providing available units, trained and ready to serve the nation and state for both defense and emergency missions. Second is to provide a good quality of life for our serving Guard members. Third, is to continue to build on our existing force structure so that the AZ ARNG is capable of providing additional forces when needed for both national and state missions.

The AZ ARNG has 14 individual communities located throughout Arizona with over 200 facilities and over 58,000 acres of both federal and state training areas. These areas include, but are not limited to, Florence, Marana, Tucson, Yuma, Bellemont, Kingman, and several in the metro Phoenix area.

Western Army National Guard Aviation Training Site (WAATS) — Silver Bell Army Heliport Pinal Airpark

The Western Army Aviation Training Site (WAATS) is a Field Operating Activity (FOA) for NGB managed by the Arizona Army National Guard. It provides aviator, enlisted and specialty courses for the Army, while supporting regional simulation in the AH-64A, UH-60A, and AVCATT for US and allied pilots. Additionally, the following countries have been trained, or are currently being trained by the WAATS: Singapore, Bahrain, Turkey, Israel, Jordan, Greece, Saudi Arabia, and United Arab Emirates. In 2003 the WAATS became the sole trainer of the AH-64A helicopter in the United States Army, supporting the needs of Army Aviation in transformation and providing pre-mobilization training support in the global war on terror. Changes in ARNG Aviation Force structure have generated requirements for enlisted training during the period of modernization for OIF and OEF missions. The WAATS plays a vital role in meeting these requirements. Courses taught at the WAATS meet all TRADOC accreditation requirements, yet are tailored to meet the needs of the traditional guardsman. The WAATS provides training for the 15 Career Management Field (Aviation Maintenance) and 15P (Flight Operations) ensuring soldiers have the professional education required to assume new and additional duties in aviation. Today and in the future, the WAATS will continue to be a vital provider for simulation training to AH-64A units in the United States Army. The WAATS received a 2nd Combat Mission Simulator (CMS) in 2004, a Cockpit Weapons Emergency Procedure Training (CWEPT) device in 2005, and a Blackhawk Flight Simulator (ABHFS) in 2006. Some of the Army's premiere training areas, ranges and facilities are located near the WAATS. Quick access to over 7,200 square miles of training space and the Goldwater Range provides for low level tactical training and realistic helicopter gunnery operations. Finally, the abundant sunshine allows for over 360 days of flying weather a year.

- Number of Courses Taught: 19 Aviator, 11 Enlisted, 8 NCOES, 5 Specialty.
- Since 1986 the WAATS has trained more than 11,796 total students.
- The WAATS facilities include: 3 hangars (Enlisted Training Facility, 80,000 sq. ft. AH-64 hangar and AASF#2), parking for 66 permanently assigned aircraft, 7,200sq miles of low level tactical training area, firehouse, 120 dorm rooms, dining facility, 15 multi

media classrooms, and a Troop Medical Clinic. Silverbell AHP is home station to Peace Vanguard.

- 2006: The WAATS received two new state of the art simulators: a UH-60 Blackhawk Simulator and an Aviation Combined Arms Tactical Trainer (AVCATT).
- Exercise Crimson Eagle scheduled for FY 07-08 in support of U.K. deployment for OEF.

WAATS is a training facility located at Silverbell Army Heliport in Marana, AZ.

CHAPTER THREE
EMPLOYMENT AND SPENDING BY ARIZONA'S PRINCIPAL MILITARY OPERATIONS

Employment

The starting point for the economic analysis of the principal military operations in Arizona was the number, type, and characteristics of employees at each operation. Personnel headcounts and payroll spending were collected, reviewed, and standardized for each operation. Personnel at the different operations were accumulated into several broad categories. These categories included: active duty, permanent party military personnel; reserve personnel; rotational personnel, students (attending training, but normally based elsewhere); and civilian employees (both Department of Defense and other). Not all operations had headcounts attributable to each general category. The standardized headcount information for each of the principal military operations by category is displayed in the preceding table. (Additional information concerning the input received from each operation is available in Appendix Three.) These personnel figures have not been converted to full-time equivalent personnel.

Table 3-1
SUMMARY OF BASIC PERSONNEL STATISTICS
Arizona's Principal Military Operations
(Personnel Headcounts)

Active Duty Permanent Party	Reserves	Rotational	Students (Military)	Civilians	TOTAL
19,402	7,471	1,198	3,292	14,205	45,568

In total, almost 45,500 individuals were routinely employed on a full-time or part-time basis in fiscal year 2005.

Military Retirees

In addition to those individuals employed at the principal military operations throughout the state, a substantial number of military retirees receive regular payments for retirement benefits. These retirement benefit payments are closely equivalent to regular payroll in terms of their utilization by the recipients and their effect on the economy. The Study Team determined that some portion of the military retirement benefits paid to military retirees in Arizona should be included in the analysis. The proper treatment of these benefit payments was carefully considered and an appropriately conservative methodology was developed. The prime methodological issue confronting the Study Team was which retirees to identify as inexorably *linked* to the military operations being analyzed. In summary, one-quarter of the military retirees living within approximately a one hour travel radius of the key military facilities were included in the study as representing those individuals who were so strongly *linked* to a military installation (and the services available there) that they would not reside in Arizona if the facility were not located here and who would relocate if it were closed. The one-hour travel radius was measured by including those postal zip code areas that were at least partially within a fifty-mile radius of the facility. In some instances, the zip codes included were adjusted to reflect geographic and travel barriers. In other instances, allocations between facilities were required due to overlapping regions. A more detailed discussion of the methodology and treatment of military retirees is presented in Chapter One and Appendix Two. The table above displays the total number of military retirees, who

Table 3-2
SUMMARY OF MILITARY RETIREE STATISTICS
Arizona's Principal Military Operations

	Military Retirees Within 50-Miles	Linked Retirees (25 percent)
Davis-Monthan AFB	11,328	2,832
Fort Huachuca	4,544	1,136
Luke AFB	26,476	6,619
Yuma Marine Corp Air Station	2,024	506
Yuma Proving Ground	48	12
Air National Guard 161st	0	0
Air National Guard 162nd	908	227
TOTAL	45,328	**11,332**

Data Source: Department of Defense, Office of the Actuary

generally are those within zip code areas that are, at least partially, within fifty miles of a major facility. It also illustrates those that are *linked* to an installation, who are generally the one-quarter included in this analysis. Only military operations located at installations that offer services (medical and commissary services) to retirees were allocated military retirees.

It should be noted that the Study Team considered other methods of allocating and incorporating the economic impact of military retirees. In fact, some previously completed analyses conducted by others have employed alternative approaches while others have simply estimated the total impacts excluding any military retiree benefits or included all military retiree benefits. After significant consideration, the Study Team determined that it was most comfortable with the methodology selected. However, the Study Team recognized that other, more complex techniques could be used.

In total, roughly 11,000 military retirees were included in the economic and fiscal impact analysis. Additionally one quarter of the military retiree benefits paid within the fifty-mile zip code radius were included totaling just over $245 million.

Military Retiree Tourism

In addition to the military retirees, who are full-time residents of Arizona, a substantial number of out-of-state military retirees travel to Arizona. This travel occurs particularly in the winter tourism season due to the location of the various full service military installations in the warm winter climates of central and southern Arizona. The influx of these winter visitors is reflected in higher utilization levels at the various service centers located on principal military installations. Where such information is available, medical, legal services and commissary operations reported significantly higher utilization rates in the winter months. However, due to the limited availability of such data and in recognition of a likely, at least partial, offset due to travel by Arizona military retirees during summer months, no specific amounts were included in the analysis. Consequently, the total economic and fiscal impact of military retirees may be understated in this study.

Payroll & Retirement Benefit Information

Payroll and retirement benefit payments were included in the analysis for the employees of the principal military operations and the linked retirees determined as described in the preceding section. These payroll and benefit payment amounts represent gross spendable income for recipient households and directly contribute to the level of economic activity in their region and the state. The following table illustrates the payroll and retirement benefit payments information included in the analysis.

Table 3-3
SUMMARY OF PAYROLL AND RETIREMENT BENEFITS
Arizona's Major Military Operations
($ millions)

Active Duty Permanent Party	Reserves	Rotational	Students (Military)	Civilians	Linked Retirees	ARIZONA TOTAL
$938.4	$107.3	$13.9	$71.2	$748.4	$245.3	$2,124.7

In total, over $2.1 billion in annual payroll and retirement benefits are directly added to the Arizona economy by the principal military operations in the state.

Contract and Other Spending

While payroll and retirement benefit payments represent an important source of economic input, other spending by the military operations in Arizona is an equally important source of economic stimulus to the state's economy. Furthermore, this spending results in additional, subsequent activity in the economy as suppliers of goods and services to the military operations pay their employees and in turn purchase goods and services to meet their production needs. A substantial portion of the contract and other spending of the military operations occurs within the local region and the state; however; not all goods and services are available regionally or statewide. As purchases occur outside the region or the state, the re-circulation of that spending is lost to the regional or statewide economy. It is also important to note that a wider array of goods and services are available in the larger metropolitan regions of Maricopa and Pima counties and to a

lesser extent Yuma County, and therefore a greater proportion of spending is retained and re-circulated in these areas relative to the non-urbanized regions of the state. Similarly, a greater proportion of spending is often captured in the statewide economy than in any single region, or for that matter in the sum of the regional activities.

Table 3-4
SUMMARY OF SPENDING STATISTICS
Arizona's Major Military Operations
($ millions)

Contracts and direct spending: maintenance and operations	$674.8
Construction & Buildings maintenance and repair	$269.9
Spending for Supplies	$973.1
Utilities	$40.5
Education Payments	$16.6
Health Services	$324.2
Commissary & Exchange Sales	$332.0
TOTAL	**$2,631.1**

CHAPTER FOUR
ECONOMIC IMPACTS OF ARIZONA'S PRINCIPAL MILITARY OPERATIONS

As described more completely in Chapter One and Appendix One, the Study Team used the IMPLAN Pro economic impact model software to estimate the economic impact of the principal military operations in Arizona. The IMPLAN econometric model uses actual input and output information in a tailor-made model designed for each individual study region, in this case the state of Arizona and the individual counties in Arizona that contain one or more of the military operations included within the analysis.

The IMPLAN econometric model operates by estimating the ***indirect*** and ***induced*** impacts generated by the direct economic activity. ***Direct*** economic impacts, are those attributable to the initial economic activity; for example, an operation with ten full-time employees creates ten *direct* jobs. ***Indirect*** economic impacts are those economic activities undertaken by vendors and suppliers within the supply chain of the direct activity as a result of the initial economic activity. For example, suppliers of goods, materials, and services used in the direct activities produce *indirect* economic impacts. ***Induced*** economic impacts result from the spending of wages paid to employees in local industries involved in direct and indirect activities. These wages, which are analogous to household spending, support additional local activities, such as the purchase of goods and services within the region. In turn, that portion of spending that accrues to local businesses and employees is once again re-circulated within the local economy, producing additional activity in the economy. The econometric model measures the amount of economic activity in each round of spending until all of the spending within the local region has been exhausted. In each iteration, a certain portion of spending is attributed to economic activities (purchases) outside of a local (study) region. Once money is spent outside the local region, it is not included in subsequent iterations. Thus, each iteration recycles an ever-declining amount of economic activity. The extent to which economic activity recycles within the local region is defined for each specific region (in this study, counties and the state) based upon the input and output relationships among industries and their suppliers in the region, which are derived from Bureau of Economic Analysis data.

The Study Team selected the IMPLAN model due to its frequent use in economic impact analysis within Arizona in conjunction with its development independent of local influences.

The inputs to the IMPLAN software were derived from the direct spending of basic payroll, retirement benefits, contract spending, and other spending information collected from the military operations as described more completely in the preceding chapter. Modifications were made to the basic information received to facilitate the proper formatting of the information for the model specifications and to ensure completeness, while avoiding duplications or overstatement. A more complete discussion of the modifications undertaken to convert the basic financial information received from the military operations into the IMPLAN model input is included in Appendix Three – Econometric Model Inputs.

In summary, payroll information was adjusted and categorized into household income levels to facilitate recognition of the variation in spending patterns of households with different income levels. Retirement benefits received by "linked" military retirees were also adjusted and categorized into household income levels. In addition, all wage and income data was adjusted to reflect taxes paid and savings amounts that are not available for spending within the local economy.

Non-payroll spending by the military operations was classified into the IMPLAN industrial classifications for input into the software model. As discussed in Chapter One, only the portion of spending that occurs in the study region creates additional, local economic effects.

Special care was taken by the Study Team to avoid double counting of inputs as well as including inputs that are estimated as a part of overall economic activity by the IMPLAN software. For example, a portion of commissary sales activity is attributable to spending by employees of the principal military operations and linked military retirees. The model generates an economic impact equivalent to this amount as a derived portion of economic activity based on the household income of those employees and linked military retirees and therefore to include both amounts would result in an overstatement of economic activity.

In a similar fashion, output from the IMPLAN software was adjusted as appropriate. For example, employment figures produced by the model were converted to full time equivalent (FTE) employees.

The following table summarizes the economic impact of the principal military operations within Arizona. In total, these operations provide 45,568 direct jobs and produce $3.2 billion in direct economic output. Arizona's military industry, which includes the principal military operations as well as the businesses they support, is responsible for creating 96,328 jobs and $9.1 billion in economic output.

Table 4-1
SUMMARY OF STATEWIDE ECONOMIC IMPACTS
Arizona's Major Military Operations

	Employment	Output ($ Billions)
Direct Impacts	**45,568**	**$3.248**
Indirect Impacts	39,492	$4.412
Induced Impacts	11,269	$1.461
Total Non-Direct Impacts	50,760	$5.873
TOTAL IMPACT	**96,328**	**$9.121**

Arizona's military industry, including the principal military operations as well as the businesses they support, is responsible for creating or supporting over 96,000 jobs that are dispersed through a wide variety of industries. The largest number of total jobs is within the government sector, which is logical since the military operations are themselves government entities. In addition to the government sector employment, over 24,000 jobs are supported in the service sector, over 14,000 jobs in the retail trade sector, almost 3,000 in the construction sector, almost 1,000 in the manufacturing sector, and thousands more distributed throughout the economy.

Regional Economic Impact of Military Operations

In addition to the statewide impacts described above, the countywide impact of each of the individual military operation was separately examined. The specific economic impacts for each military operation are included in Appendix Five. As described in Chapter One, the statewide

economic impact of all the principal military operations generally exceeds the sum of the individual county impacts because the statewide economic impact calculation captures spending that occurs outside the county of each of the individual military operations, but still within the state of Arizona.

CHAPTER FIVE
STATE AND LOCAL TAX REVENUES DERIVED FROM ARIZONA'S PRINCIPAL MILITARY OPERATIONS

In addition to estimating the economic impact of Arizona's military industry, the Study Team estimated the amount of state and local government revenues paid by employees at the state's principal military operations, linked military retirees, and the individuals and businesses in Arizona supported by those operations. Special care was taken to recognize the special and unique characteristics of military personnel and their households.

In order to estimate the taxes paid by the military industry, individuals employed in the military industry (and their income) were allocated to five distinct categories. These categories were designed to separate these individuals according to their household and residential characteristics. In estimating income tax revenues, it was also critical for the Study Team to recognize and compensate for the ability of military personnel to select a state of residence, for tax purposes, other than their physical location. Not surprisingly, those eligible to make such discretionary choices tend to disproportionately select states with no state or local income taxes. A more complete discussion of the methodology used to estimate the fiscal impacts of the military industry, including the five categories of individuals, is contained in Appendix Three – Econometric Model Inputs.

Statewide Fiscal Contribution of Military Operations

The Study Team estimated payments of state and local sales taxes (technically they are transaction privilege taxes), state and local property taxes, and state income taxes. Revenues derived from state-imposed sales and income taxes were allocated to the state and local governments consistent with the existing statutory distribution formulae

Table 5-1
SUMMARY OF STATEWIDE FISCAL IMPACTS
Arizona's Military Industry
($ millions)

	Annual Local	Annual State	Annual Total
Sales Tax	$110.8	$118.1	$228.8
Property Tax	$85.6	$0.2	$85.9
Income Tax	$7.3	$79.4	$86.8
Total	**$203.7**	**$197.7**	**$401.4**

The preceding table summarizes the fiscal contributions of the military industry to the state of Arizona and local governments within the state. In total, the industry provides over $401 million to fund the operations of the state and local governments in Arizona. Of that amount, over $197 million flows to state government and over $203 million is received by local governments. The adjacent table also illustrates the fiscal contributions of the military industry within Arizona. The principal military operations and the individuals they employ ***directly*** pay over $140 million in taxes each year.

Table 5-2
STATEWIDE FISCAL IMPACTS
Arizona's Military Industry
($ millions)

	Annual Total
Direct Impacts	$140.2
Indirect & Induced Impacts	$261.26
Total	**$401.4**

Regional Fiscal Impacts

In addition to the statewide fiscal impacts, the fiscal impact of each individual military operation within its county of location was calculated and is included in Appendix Five. The specific fiscal impacts for each separate military operation were also calculated. Generally, the statewide fiscal impact of all the principal military operations generally exceeds the sum of the individual county impacts because the statewide impact calculation captures spending that occurs outside the county of each of the individual military operations, but still within the state of Arizona.

CHAPTER SIX
COMPARISONS TO THE MILITARY INDUSTRY IN ARIZONA

As the earlier chapters delineate, the principal military operations in Arizona and the businesses those operations support form a substantial and vibrant industry. Arizona's military industry creates thousands of jobs, billions of dollars of economic activity and hundreds of millions of dollars of state and local tax revenue.

Characteristics of Arizona's Military Industry

Some of the special characteristics of the economic activity supported by these military related activities are as important as the size and scope of the economic and fiscal impacts of the military industry in Arizona.

It is important to reiterate the discussion of organizations and economic activities *excluded* from this analysis. As discussed in Chapter One, the Study Team applied specific standards when evaluating whether a particular economic activity should be included in this analysis. The Study Team sought to consistently, but narrowly, define Arizona's military industry. A wide variety of military-related activities throughout Arizona were reviewed and ultimately many were excluded from this effort. These excluded businesses included many of the largest Department of Defense contractors in the state such as the Boeing Company and Raytheon Company, as well smaller endeavors located at the former Williams Air Force Base and elsewhere. The exclusion of these businesses and activities should not be interpreted as reflecting any diminishment of their importance or their positive contribution to the State's economy. Similarly, the Study Team utilized a conservative, but reasonable, methodology for determining which military retirees to consider"linked" to one of the principal military installations and the various services offered thereon.

Consequently, the impacts documented in this effort represent a conservative analysis of total military-related spending in Arizona. Even so, the economic and fiscal impacts determined through this study effort demonstrate the substantial and impressive impact that Arizona's military industry has on the state's economy. As the following sections illustrate, the size and

breadth of the employment and tax revenues produced by the military industry compare very favorably with a variety of other industries and major employers in the State.

The jobs created and supported by Arizona's military industry are an especially valuable part of Arizona's economy because they are largely unaffected by routine economic cycles. Federal defense spending is not subject to substantial fluctuations as a result of normal economic cycles. Unlike many other Arizona industries and businesses, military operations in the state do not contract substantially during economic slowdowns or recessions (nor do they increase dramatically during economic expansions). Similarly, the tax revenues generated in Arizona by the employees at the military operations and in the businesses supported by those operations remain relatively constant throughout all phases of the normal economic cycle. The stability of employment and tax revenues produced by the military industry adds substantially to their value as a component of Arizona's economy.

The State's military industry has provided a stable and reliable component of the economy as Arizona's economy has developed and diversified from the traditional "Five C's", with the development of more high tech employment, the expanded tourism industry, and other industrial shifts. As Arizona's economy continues to grow and diversify, the military industry will continue to be an important and positive contributor to the state's economic vitality. However, shifts in Department of Defense priorities and technological advances in military operations can result in base closures within the state along with the resultant loss of this stabilizing force in local economies. Arizona would do well to guard this economic asset and preserve its viability.

Comparison of Statewide Employment

In order to provide a reasonable framework to evaluate the magnitude of the military industry in Arizona, the Study Team compiled from several sources employment statistics for a variety of employers and industries within the state to illustrate the general, comparative magnitude of the military industry. Among the information reviewed were the findings of the *Cluster Mapping Project* of the Institute for Strategy and Competitiveness at the Harvard Business School and the survey of top employers completed and published by *The Business Journal*. The Institute for Strategy and Competitiveness describes a "cluster" as a "geographically proximate group of

interconnected companies and associated institutions in a particular field, including product producers, service providers, suppliers, universities, and trade associations." The Cluster Mapping Project separates industries into clusters. These clusters are divided between "'traded' and 'local' based on the degree of industry dispersion across geographic areas. Local industries are those present in most if not all geographic areas, are evenly distributed, and hence primarily sell locally. Traded industries are those that are concentrated in a subset of geographic areas and sell to other regions and nations. Among traded industries, clusters are identified using the correlation of industry employment across geographic areas. The principle is that industries normally located together are those that are linked by some external economies. These industries, then, constitute a cluster."

The *Business Journal* periodically conducts a survey of the largest employers throughout Arizona and publishes its findings. The most relevant complete survey was conducted in 2006.

The table on the following page illustrates the number of jobs created by Arizona's military industry both *directly* as well as *in total* (including indirect and induced impacts) in comparison to other major employers and industries.

As illustrated below, the military industry in Arizona *directly* provides 45,568 jobs and supports a total of 96,328 jobs statewide. The principal military operations in the state *directly* employ over 45,568 individuals, which is approximately equal to the number of jobs at the top two private sector employers in the State – Wal-Mart and Banner Health Services as measured by *The Business Journal* survey.

The total number of jobs supported by Arizona's military industry exceeds the number of jobs in the hospitality and tourism industry and the heavy construction industry as measured by the *Cluster Mapping Project* of the Institute for Strategy and Competitiveness at the Harvard Business School.

Table 6-1
COMPARISON OF MAJOR INDUSTRIES / EMPLOYERS IN ARIZONA

	Employment
Military Industry – TOTAL [1]	**96,328**
Traded Business Services	**74,626**
Traded Hospitality	**67,138**
State of Arizona [3]	**49,000**
Traded Heavy Construction	**48,261**
Military Industry – DIRECT [4]	**45,568**
Arizona's Largest Private Employers [5]	
Wal-Mart	**28,800**
Banner Health System	**16,400**
Wells Fargo & Co.	**11,800**
Fry's	**11,780**
Raytheon	**10,750**
Honeywell	**10,700**
Intel Corp.	**10,100**

Sources and Notes:
1– Includes Direct, Indirect and Induced employment
2 – Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School Copyright © 2007 President and Fellows of Harvard College
3 – Approximate, excludes Universities
4– Includes only Direct employment, based on full time equivalents
5 – *The Business Journal*, November 17, 2006 – Employer Survey

Comparison of State and Local Fiscal Impacts of Arizona's Military Industry

As discussed in the preceding chapter, the military industry in Arizona produces a substantial amount of state and local tax revenues. The revenues that result from the economic activity of Arizona's principal military operations and the businesses those operations support provide significant support to the State of Arizona, local governments throughout the state, and especially the local governments in their regions.

The military industry in Arizona annually contributes $203.7 million in local tax revenues to local governments throughout the state. In addition, it contributes $197.7 million to state government for a combined total of $401.4 million.

Conclusion

The several large military operations examined in this study and the businesses they support comprise Arizona's military industry. It is an industry that provides substantial, stable employment, draws on the same private, non-governmental vendors and suppliers, as many private commercial enterprises in the state, and serves as an important building block in the state's overall economy.

Historically the impact of these operations has often been overlooked in discussions and analyses of Arizona's economy. The economic and fiscal impacts of the Arizona's military industry calculated in this analysis and presented here are significant and represent a key component of the state's economy. Maintaining these operations and the jobs and economic output they support should be a priority of state and local government. In so doing, appropriate steps should be identified and undertaken to ensure the continued vitality and viability of this industry in Arizona and its strong, stable contribution to the state's economy.

CHAPTER SEVEN
COMPARISONS OF THE MILITARY INDUSTRY IN FY 2000 AND FY 2005

Many events affecting the military operations in Arizona have transpired between the original study period (FY 2000) and the current study period (FY 2005).

Direct employment at the principal military operations in Arizona increased only slightly more than 9% from FY 2000, the last study period, to FY 2005, the current study period. However, *overall* employment attributable to the direct employment and the businesses those operations support increased by more than 15%.

Table 7-1
Military Industry Employment
FY 2000 and FY 2005

	FY 2000	FY 2005
Direct Impacts	**41,647**	**45,568**
Indirect Impacts	18,191	39,492
Induced Impacts	23,668	11,269
Total Non-Direct Impacts	41,859	50,760
TOTAL IMPACT	**83,506**	**96,328**

During the same period, *total* economic output from Arizona's military industry increased by over 60%, while the *direct* output increased just less than 35%.

Table 7-2
Military Industry Economic Output
FY 2000 and FY 2005

	FY 2000 ($ Billions)	FY 2005 ($ Billions)
Direct Impacts	**$2.411**	**$3.248**
Indirect Impacts	$1.326	$4.412
Induced Impacts	$1.926	$1.461
Total Non-Direct Impacts	$3.252	$5.873
TOTAL IMPACT	**$5.664**	**$9.121**

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APPENDIX ONE
HOW IMPLAN WORKS

Model Background

The Study Team utilized IMPLAN Pro software to conduct the economic impact analysis of Arizona's principal military operations. IMPLAN Pro software was created by the Minnesota Implan Group (MIG) as a tool for impact analysis (IMPLAN stands for IMpact Analysis for PLANning). Analysis of economic impacts depends on inputs to the analyzed activities available in the analyzed region. The "multiplier" effect occurs as spending is recirculated throughout the economy within the study area. For example, when a factory creates 10 new jobs paying $20,000 per year the resultant $200,000 in income to those workers and the increased output of the factory manifests itself in new economic activity of three major types. The *direct* impact is the additional activity itself (i.e. 10 direct jobs). *Indirect* impacts consider the interactions among industries (backward buyer-supplier linkages) to quantify the additional activity in other industries caused by the increase in activity in the factory, such as raw materials and transportation and wholesaling of product inputs. Some of the new economic activity involved in direct and indirect impacts manifests itself as wages paid to employees in local industries; which are analogous with household[1] spending. This additional household spending represents the *induced* effect which supports local activity (both through services imparted directly, like a haircut at the local salon, as well as through the purchase of products which are manufactured and sold in the region). The portion of that spending which accrues to local businesses and employees is recirculated; again to an extent defined by the input-output relationships specific to the region (derived from Bureau of Economic Analysis data). The model reiterates until all of the spending is "leaked" outside of the regional economy.

The model uses actual input and output information for each county in the United States and is therefore tailor made for the study region. Study areas are generally single counties, multi-county regions, one or more states, or national.[2] Generally speaking impacts are greater the larger the study area chosen, since they are based on the amount of recirculation of spending which is done before the impact of each dollar is fully "leaked" out of the study area. Impacts *can* be equal or smaller for larger areas in special cases, since the average productivity of workers in each industry and other industries in its supply chain will vary by geographic region. This is also determined through the use of input-output data at the county level.

Study Areas

Military operations analyzed are listed in Chapter Two. For each military operation, the study area was defined as the county where the operation is located; except for the Silver Bell Army Heliport, which is located on the border of Pinal and Pima Counties and is more accurately economically linked with the communities of Pima County. Total impacts for the state of Arizona were arrived at by summing adjusted model *inputs* from the military operations and

[1] This analysis understates the actual economic impacts of the military activities studied since only military income is considered; as opposed to attempting to estimate the household income of non-military spouses and children.
[2] Regions can also be based on zip code, which use a mixture of county and zip code level data.

running the model with the state as the geographic definition of the study area rather than the individual counties where the operations are located.

Input Adjustments and Calculations

The original data provided by analyzed military operations appears in Appendix Three. A number of adjustments to this data were necessary for its use in the model.

Payroll and Household Income Adjustments

One classification of inputs used in this analysis is the payrolls of the military operations and the household incomes of the associated retirees (discussed further below). Payrolls were converted into average household income per classification of employee (i.e. DOD Civilians, Reserves, etc.). Average household incomes are important because households at different income levels spend differently; with (for example) households in the lowest income bracket spending a higher percentage of their income on food.[3] The model applies these different spending patterns to household spending.

Military retirees are themselves important to consider in understanding the economic impact of a military operation on the community in which it resides. *Some* retirees have chosen their residential location based on the desirability of being located in proximity to a military operation and the facilities it provides; ranging from the availability of commissary and/or an exchange to make retail purchases to on site medical facilities. Appendix Two details the methodology used to estimate the number of retired military households present in the sphere of influence of each military operation analyzed in this study.

Aggregate Income Adjustment

All wage and income data (for employees and retirees respectively) was adjusted downward by 20 percent to reflect funds dedicated to savings and taxes which are not available to be spent and recirculated in the local economy.

Industry and Commodity Impacts

The non-payroll activities of military operations were classified into the 509 IMPLAN industries and entered into the model.[4] The model applies regional accounts data to each industry impacted in order to determine the percentage of inputs purchased that are local. Only the local portion of expenditures creates additional economic impacts.

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[3] Using the salary of the military employee as a proxy for household income necessarily understates actual household income to the extent that spouses and / or children are employed.

[4] Fuel is one specific expenditure that was dealt with uniquely. There are two major IMPLAN industries associated with fuel (gasoline); "Automobile Dealers and Service Stations" and "Petroleum Refining." The latter is more appropriate with modifications. Under the assumption that actual petroleum refining does not take place in the study area, it was necessary to enter the data as a commodity purchased at a federal government margin.

Double Counting

Double counting is a substantive issue in economic impact analysis; which this study goes to great lengths to avoid. Since the model estimates all *backward* relationships inherent in spending and/or output (by households and in a particular industry respectively); the most accurate and reasonable estimation of impacts come from the economic impact model when household spending and final products are used as inputs and intermediary products[5] are excluded. This concept is relaxed somewhat in the case of the military "industry," due to the lack of a market price for its output (discussed further in the output adjustments section).

Utilities

Data concerning utilities expenditures was collected from the military operations; and makes up a significant proportion of all expenditures (typically 1 to 5 percent of all non-personnel expenditures). Utilities are (in this case and generally speaking) an intermediate good. To count the utilities expenditures of the military operations separately and in other activities as well (such as the utilities commodities purchases of on site households and contract activities) would be double counting. The Study Team calculated average industry utilities expenses using Bureau of Economic Analysis Input Output accounts data. The model output of direct expenditures by on site households was also subtracted from reported totals. These were subtracted from the utility expenditures provided by the military operations and the remainder was used as an input to the model.

Commissary

Similarly, analyzing commissary *total* sales would overstate the economic impacts of the activity since we have accounted for the spending (on and off site) of the base employees through the household impacts. The Study Team used the ratio of the total retirees which it was assumed would not relocate if their nearest military operation closed to the total number of persons (retirees and full time active duty personnel) shopping at the commissary. Thus commissary sales associated with the 75 percent of retirees that would not relocate are the only ones run separately through the IMPLAN model.

Output Adjustments

Full Time Equivalent Employment

Model employment outputs are not produced initially in terms of full time equivalent (FTE) employment. This conversion is made using national data[6] for major industries (two digit NAICS Codes) concerning average hours worked compared to *the* average work week of 40 hours per week; 52 weeks per year (2,080 hours). Model employment output in each of the 509 IMPLAN industries was multiplied by the conversion factor of the associated NAICS Code. In

[5] For example, the economic impact of a factory includes the value of intermediate products used to make its output, including the electricity purchased to run needed machinery and light the factory. Running the output or employment level of the factory **and** its expenditures on utilities would overstate the economic impacts.

[6] The State of Arizona's Department of Economic Security does not maintain data for all economic sectors; but for the sectors where data was available it is highly similar to national averages.

keeping with the methodology utilized in the 2002 report activities without an associated NAICS Code, such as governmental, were not adjusted).

Conversion to Full Time Equivalent (FTE) Employment, 2006

NAICS Code	NAICS Description	FTE Conversion Factor[1]
11	Agriculture, Forestry, Fishing and Hunting	1.14
21	Mining	1.14
22	Utilities	1.14
23	Construction	0.975
31-33	Manufacturing	1.0275
42	Wholesale Trade	0.95
44-45	Retail Trade	0.7625
48-49	Transportation and Warehousing	0.9225
51	Information	0.915
52	Finance and Insurance	0.895
53	Real Estate and Rental and Leasing	0.865
54	Professional & Technical Services	0.865
55	Management of Companies & Enterprises	0.865
56	Administrative & Waste Services	0.865
61	Educational Services	0.8125
62	Health Care & Social Assistance	0.8125
71	Arts, Entertainment & Recreation	0.6425
72	Accommodation & Food Services	0.6425
81	Other Services ex. Public Administration	0.7725

Note: 1. Average annual hours as a percentage of the average work year as defined by the Bureau of Labor Statistics (52 weeks times 40 hours per week; 2,080 hours annually)

Source: Bureau of Labor Statistics, Study Team

Household Impacts

When household expenditures (payrolls and retiree spending) are used as inputs to the IMPLAN economic model; they result in the three types of outputs associated with any impact (direct, indirect, and induced). Technically though, all of the impacts of this household spending are induced (by definition).

To account for this discrepancy, all household impacts were run through the model separately and aggregated together to be one component of the induced impacts shown in this report.

Direct Impacts

Procedurally, the model is most typically used by entering a level of employment in a certain industry as an input. That industry's production function (essentially the ratio of employment to

output associated with the industry in the study region) is used to calculate the output of the industry. In order to generate that output, a variety of inputs are needed. Thus the model "spends" in the associated categories that would be needed to create that output. Military activities are generally somewhat unique as applied to this modeling process, as they do not technically have a production function due to the difficulty in placing a market price on such things as national security.

The approach used to compensate for this issue was to obtain detailed spending information from the military activities and classify it in the appropriate IMPLAN industries to run through the model. The result of this process is "direct" outputs that are by the standard definition indirect (i.e. in support of the core industry studied). Thus in our process direct employment at the base was the sole direct effect, and other effects which were run through the model as direct were reclassified more appropriately as indirect effects.

APPENDIX TWO
"LINKED" RETIREE METHODOLOGY

Military retirees are themselves important to consider in understanding the economic impact of military operations on the communities in which they reside. *Some* retirees have chosen their residential location based on the desirability of being located in proximity to a military installation and the facilities and services it provides; ranging from the availability of commissary and/or an exchange to on-site medical facilities.

A statewide database was obtained from the Department of Defense Office of the Actuary detailing the number of retirees and payments to them by zip code. In order to ensure that retirees were allocated to only one military operation, the Study Team distributed the population using mapping software. Only military operations which provide services to retirees were included in the analysis, which included all except the Papago Park Military Reservation and Silver Bell Heliport. A fifty mile radius was drawn around each operation and all the retirees located in the zip codes in the ring were included. See the figure at the end of this appendix for details.

The 50 mile radii of Davis-Monthan and Fort Huachuca overlap. The overlapping zip codes were allocated to each installation based on assumed driving patterns based on transportation routes and geographic barriers. The YMCAS and YPG radii also overlapped. The allocation of retirees between these two military operations was more difficult due to their proximity. It was assumed that the YMCAS was drawing more retirees than YPG due to its proximity to the freeway and larger commissary. Therefore, all retirees in zip codes shared by the two military operations were attributed to YMCAS. YPG was allocated those zip codes which fell within its 50 mile radius, and not in the YMCAS radius.

The National Guard activities maintain their own retiree data. Their retiree counts were subtracted from the calculated total for the operation in the same market area (ANG 161's total was subtracted from Luke AFB and ANG 162's total was subtracted from Davis Monthan AFB.)

APPENDIX THREE
ECONOMETRIC MODEL INPUTS

In order to measure the economic and tax impacts of the military operations, some rather detailed information about their operations was necessary. This included payroll, spending on construction and various contracts and the like. Data was obtained through a fax / email questionnaire and face to face meetings with representatives of the military operations with numerous phone and email follow up conversations for clarification purposes. Each military operation provided a different level of detail concerning its contracts and spending patterns; which are detailed in the following tables. The basic information provided by each operation is summarized at the end of this appendix.

Necessary adjustments to the inputs for their use in the economic and fiscal impact models are discussed in the following sections.

Economic Model Inputs

The following adjustments were made to the basic information provided by each operation for use in the IMPLAN Pro Software. More information about the IMPLAN Pro software is contained in Appendix One.

- Percent of year reserves actively employed: 20.5%
  - Based on 75 days of service out of 365 in the year

- Percent of retirees moving upon closure: 25%
  - Figure used in the 2002 analysis which was from a University of Arizona study for Davis Monthan, January 1994

- Household income factor: 80%
  - Discounted to remove dollars not recirculating through the economy (e.g. taxes and savings)

- Commissary
  - Total sales multiplied by the ratio of 75% of retirees to the sum of active duty, plus retirees to avoid double counting sales to households accounted for in the model
  - Commissary sales were allocated across IMPLAN retail categories using the ratios from the Consumer Expenditure Survey

- Utilities
  - Total was discounted by the average percentage of intermediate purchases by all industries from each of the utilities categories.
  - Model derived utilities expenditures for households living on site were also subtracted from submitted totals.

- Percent of travel expenditures made in local county: 10%
    - Based on estimates from military operations

- Percent of IMPAC spending made in local county
    - Based on estimates provided by each military operation (varied by operation)

- Percent of IMPAC spending which went to taxes
    - Total spending discounted to not count taxes. This figure varied based on the sum of the state, county and average municipal rate in the county where the operation is located.

- Percent of Fort Huachuca student income spent locally: 14%
    - Based on data provided by Fort Huachuca
    - The majority of Fort Huachuca students do not have the opportunity to spend their income locally.

Fiscal Model Inputs

The model utilized here was developed by the Study Team to measure the tax implications of the presence of the analyzed military operations in the state. Tax impacts were calculated for each military operation on the county in which it resides[1] and the aggregate impact of the analyzed military operations was calculated on the state as a whole. The results of the county analysis and statewide analysis are not intended to be added, they are simply two different presentations of the same data, with only minor differences. For each member of the military operation, five populations were analyzed across three tax areas. In all cases special consideration was taken into account for the unique factors involved with military related households and activities.

Population Scenarios

Tax impacts were calculated based on five population scenarios. Taken into consideration for each scenario were total persons and their total income. The five scenarios analyzed were:

1. Persons employed at the military operation who live on site: All of these persons are full time military personnel. Students and rotational personnel assigned to Davis-Monthan AFB, Fort Huachuca, Luke AFB and Yuma Marine Corp Air Station were included in this category, for the other military operations they were included in the off site category. The majority of the data was provided by the military operation. On site military personnel payroll for Fort Huachuca and YMCAS were derived by the Study Team based on total payroll for all military personnel.
2. Persons employed at the military operation who live off site: This is a mixture of military and civilian personnel. Students and rotational personnel assigned to Yuma Proving Grounds and the National Guard were included in this category, for the other military operations they were included in the on site category. The majority of the data was provided by the military

[1] Although Silver Bell is physically located in Pinal County, this analysis uses Pima County to generate impacts due to the installation's proximity to the Pima County border.

operation. Off site military personnel payroll for Fort Huachuca and YMCAS were derived by the Study Team based on total payroll for all military personnel.

3. Military retirees in the surrounding community: This data represents those military retirees which live in proximity of the respective military operations, and are likely to use the services offered there. This model only measured the impact of 25 percent of these persons, assuming that this would be the percent which would move if the related military operation ended. This data was provided by the Department of Defense and the National Guard operations.
4. Indirect employment generated by direct activities of the military operation: This data represents the indirect employment generated in the supply chain caused by the direct activities of the military operation. This data is the output of the IMPLAN model. Appendix One contains more information on how the IMPLAN model generates employment and earnings data.
5. Induced employment generated by direct activities of the military operation: This data represents the induced employment generated by the spending of households directly related to the military operation as well as the household spending of jobs created in the supply chain. This data is the output of the IMPLAN model. Appendix One contains more information on how the IMPLAN model generates employment and earnings data.

County Tax Impacts

Three categories of tax impacts were measured: sales tax, property tax and state income tax. The county level impacts measured include the impact of the individual military operation on its county and local taxing jurisdictions as well as the state. The methodology and inputs are discussed here.

Sales Tax

The sales tax analysis is based on the off installation household spending of the five population scenarios discussed previously. While the commissary and exchange are retail activities, their sales are excluded from state and local sales taxes.

Income was used as the basis for calculating sales tax revenues, however not all income is spent for taxable activities. According to an analysis of household spending data from the 2005 Consumer Expenditure Survey for the West Region, 44.8 percent of the average household's budget is spent on generally taxable items (e.g. retail spending). Food purchased in stores for consumption at home accounts for 5.3 percent of a household's budget and is taxed in only some municipalities.

In addition to these adjustments for the level of taxable expenditures, the amount spent on taxable items was reduced further to reflect spending at the commissary and exchange. Different factors were used for employees living on an installation, employees living off an installation, and retirees. The indirect and induced populations were assumed to conduct all of their retail spending at non-military stores. Since there are more shopping alternatives available in metropolitan areas, Fort Huachuca, located in rural Cochise County, was assigned a lower rate for local purchases.

The sales tax rates for the various jurisdictions being analyzed were then applied to the adjusted incomes. The state tax rate of 5.6 percent was subdivided into three components: 1) amount retained by the state, 2) amount shared with counties, and 3) the amount shared with municipalities. Of the amount shared by counties, only that amount allocated to the county in which the military operation resides was analyzed[2]. Of the amount shared by cities, the total amount allocated to all of the municipalities in the respective county was used. Allocations are based on population.

In addition to state sales taxes, most counties and municipalities also collect sales taxes. The model applies the county tax rate to the adjusted income to derive the county impact. In order to account for the diverse set of tax rates of the municipalities in one county, two weighted average rates were calculated (weighted by population). One rate was for general purchases, which was applied to 44.8 percent of total income (retail purchases), and the other rate was for food purchased for home consumption which was applied to 5.3 percent of the total income.

Property Tax

The property tax analysis is based on the off installation home value of four of the five scenarios discussed previously. Those persons employed at an installation, and who live on an installation are not included in this analysis. While there is real property on site of the military operations, including residences, it is excluded from local property taxes.

The analysis begins by calculating the value of the homes for the four population groups. The total number of worker-households was calculated by reducing the total workers by a factor of 1.20, which represents the state average workers per household. In contrast to the worker-households, each retiree-household was assumed to contain only one retiree. The number of households was then reduced by the county average home ownership rate to account for only those people who own their home. These owner-occupied households were then multiplied by the median market value in the applicable county, as identified in the Census 2005 American Community Survey. Home values were then reduced by 17.5 percent to reflect the inherent under valuation of property by county assessors.

Six average rates[3] were calculated based on Arizona Department of Revenue data from department's *2005 Annual Report*. These rates were then applied to the assessed property values. Impacts shown are for both the primary and secondary tax assessments.

Income Tax

The income tax analysis is based on the household income of the five populations scenarios discussed previously.

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[2] Although Silver Bell is physically located in Pinal County, this analysis uses Pima County to generate impacts due to the installation's proximity to the Pima County border.

[3] Although the State of Arizona does not have a statewide property tax, certain high valuation school districts pay a supplemental tax into the State's general fund to pay for school related costs. Since the Arizona Department of Revenue lists this as "state" taxes, this report is consistent with their nomenclature. See Arizona Revised Statute 15-992 for details on this tax.

Military personnel are able to claim a state of legal residence for tax purposes that is different from the state in which they reside. Based on Department of Defense data, the ratio of the number of military personnel who claim Arizona as their state of legal residence to the number of military personnel stationed in Arizona is 0.815. This means that for every five persons stationed in the state four persons pay income taxes in the state. However, it is important to note that this ratio is based on aggregate data for the state; it therefore includes those persons paying taxes in Arizona who are stationed in the state as well as persons paying taxes in Arizona who are not stationed in the state. It was assumed that all rotational and student military personnel pay taxes out of state and all reserves pay taxes in state.

This analysis begins by calculating the average income tax payment per household in Arizona. Based on total tax collections by the Arizona Department of Revenue, the average annual tax collection per household is $1,052.

The average income tax payment of $1,052 was then multiplied by the number of households. The total number of worker-households was calculated by reducing the total workers by a factor of 1.20, which represents the state average of workers per household. In contrast to the worker-households, each retiree-household was assumed to contain only one retiree.

State Tax Impacts

Similar to the County Tax Impacts section, three categories of tax impacts were measured: sales tax, property tax and state income tax. This analysis measures the aggregate impact of the all military operations analyzed on the state. The methodology used is nearly identical to that discussed previously in the County Tax Impacts section. Differences between the two methodologies are discussed here.

Population Scenarios

- In the statewide analysis all of the population and income inputs are identical to the countywide analysis except for the Indirect and Induced inputs. The Indirect and Induced inputs in the statewide analysis are the result of running the aggregate direct inputs from all analyzed military operations through the IMPLAN model for Arizona.

Sales Tax

- State revenue sharing to counties and municipalities in the statewide analysis includes 100 percent of the shared revenues. In the individual military operation analysis presented previously, only the amount of revenues shared with the communities in the respective counties was presented in order to present the impacts to that county alone.

- Locally imposed county and municipal sales taxes were calculated for the aggregate of all analyzed military operations based on a weighted average county and municipal tax rate for all jurisdictions in the state (weighted by population) in order to simulate the average county and municipality in Arizona.

Table A3-1
Summary of Basic Personnel Statistics

Personnel Category	Davis-Monthan AFB	Fort Huachuca	Luke AFB	YMCAS	Yuma Proving Ground
Active Duty Permanent Party	6,794	3,428	5,377	2,980	109
Living On-base	2,150	1,766	1,125	544	95
Living Off-Base	4,644	1,662	4,252	2,436	14
Reserves	243	0	1,699	44	0
Living On-base	0	0	0	10	0
Living Off-Base	243	0	1,699	34	0
Rotational	255	0	194	749	0
Students (Military)	0	2,252	847	0	61
Civilians	3,227	3,857	2,164	1,294	1,682
DOD Civilians	2,134	2,901	1,248	728	708
Non-Military Employees	1,093	956	916	566	974
Linked Retirees	2,832	1,136	6,619	506	12

Personnel Category	Silver Bell Army Heliport	AZ ANG 161st (Sky Harbor)	AZ ANG 162nd (Tucson)	Army National Guard	Arizona Total
Active Duty Permanent Party	342	97	275	0	19,402
Living On-base	0	0	12	0	5,692
Living Off-Base	342	97	263	0	13,710
Reserves	345	619	593	3,928	7,471
Living On-base	0	0	0	0	10
Living Off-Base	345	619	593	3,928	7,461
Rotational	0	0	0	0	1,198
Students (Military)	0	0	132	0	3,292
Civilians	167	241	946	627	14,205
DOD Civilians	89	241	746	627	9,422
Non-Military Employees	78	0	200	0	4,783
Linked Retirees	0	0	227	0	11,332

Table A3-2
Summary of Basic Payroll Statistics

Personnel Category	Davis-Monthan AFB	Fort Huachuca	Luke AFB	YMCAS	Yuma Proving Ground
Active Duty Permanent Party	$337,198,382	$202,691,148	$251,143,511	$97,546,103	$8,624,909
Living On-base	$106,219,994	$98,847,633	$30,867,186	$17,807,074	$8,531,666
Living Off-Base	$230,978,388	$103,843,514	$220,276,325	$79,739,029	$93,243
Reserves	$3,462,425	$0	$17,107,058	$1,696,909	$0
Living On-base	$0	$0	$0	$503,212	$0
Living Off-Base	$3,462,425	$0	$17,107,058	$1,193,697	$0
Rotational	$2,079,780	$0	$4,667,590	$7,237,944	$0
Students (Military)	$0	$52,765,251	$12,846,262	$0	$2,148,799
Civilians	$117,411,243	$257,648,321	$92,134,891	$50,505,198	$106,878,191
DOD Civilians	$73,020,044	$250,718,461	$77,635,165	$31,265,273	$51,920,198
Non-Military Employees	$44,391,199	$6,929,860	$14,499,726	$19,239,925	$54,957,993
Linked Retirees	$65,603,564	$25,392,250	$139,071,482	$10,591,500	$198,500

Personnel Category	Silver Bell Army Heliport	AZ ANG 161st (Sky Harbor)	AZ ANG 162nd (Tucson)	Army National Guard	Arizona Total
Active Duty Permanent Party	$15,233,682	$6,843,984	$19,107,271	$0	$938,388,989
Living On-base	$0	$0	$705,132	$0	$262,978,685
Living Off-Base	$15,233,682	$6,843,984	$18,402,139	$0	$675,410,304
Reserves	$6,900,000	$16,640,610	$7,788,707	$53,719,815	$107,315,524
Living On-base	$0	$0	$0	$0	$503,212
Living Off-Base	$6,900,000	$16,640,610	$7,788,707	$53,719,815	$106,812,312
Rotational	$0	$0	$0	$0	$13,985,314
Students (Military)	$0	$0	$3,501,000	$0	$71,261,312
Civilians	$9,106,627	$19,121,708	$64,905,112	$30,693,800	$748,405,091
DOD Civilians	$5,596,627	$19,121,708	$53,923,477	$30,693,800	$593,894,753
Non-Military Employees	$3,510,000	$0	$10,981,635	$0	$154,510,338
Linked Retirees	$0	$0	$4,440,250	$0	$245,297,846

Table A3-3
Summary of Basic Direct Spending Statistics

Expenditure Category	Davis-Monthan AFB	Fort Huachuca	Luke AFB	YMCAS	Yuma Proving Ground
Contracts and direct spending: maintenance and operations	$4,429,981	$483,762,380	$17,690,712	$9,073,681	$95,232,742
Contracts: construction, and building maintenance/repair	$41,652,440	$127,197,139	$29,021,430	$49,134,815	$20,711,581
Spending for supplies	$120,995,942	$425,265,277	$316,023,232	$28,771,401	$26,607,353
Utilities	$11,148,994	$10,806,678	$7,842,579	$5,738,713	$2,388,617
Education Payments	$2,870,146	$8,717,429	$3,345,603	$1,103,473	$286,168
Health Services	$78,659,093	$23,622,600	$208,104,329	$13,731,605	$7,417
Commissary and Exchange Sales	$104,610,927	$89,535,977	$108,525,401	$26,669,751	$2,688,069

Expenditure Category	Silver Bell Army Heliport	AZ ANG 161st (Sky Harbor)	AZ ANG 162nd (Tucson)	Army National Guard	Arizona Total
Contracts and direct spending: maintenance and operations	$2,344,012	$649,824	$1,634,442	$59,968,129	$674,785,903
Contracts: construction, and building maintenance/repair	$271,933	$216,818	$1,723,388	$0	$269,929,544
Spending for supplies	$1,929,380	$16,600,241	$27,179,061	$9,700,000	$973,071,887
Utilities	$712,360	$733,354	$1,153,776	$0	$40,525,071
Education Payments	$0	$107,190	$142,684	$0	$16,572,693
Health Services	$0	$32,239	$0	$0	$324,157,283
Commissary and Exchange Sales	$0	$0	$0	$0	$332,030,125

Table A3-4
MILITARY BASE INPUTS

	Davis Monthan AFB	Fort Huachuca	Luke AFB	Yuma Marine Corp Air Station	Yuma Proving Ground	WAATS / Silver Bell Army Heliport	AZ Air Nat'l Guard 161st (Sky Harbor)	AZ Air Nat'l Guard 162nd (Tucson)	Army National Guard	Total
SUMMARY OF PERSONNEL										
Active Duty Permanent Party	6,794	3,428	5,377	2,980	109	342	97	275	-	19,402
Living On-base	2,150	1,766	1,125	544	95	-	-	12	-	5,692
Living Off-Base	4,644	1,662	4,252	2,436	14	342	97	263	-	13,710
Reserves	243	-	1,699	44	-	345	619	593	3,928	7,471
Living On-base	-	-	-	10	-	-	-	-	-	10
Living Off-Base	243	-	1,699	34	-	345	619	593	3,928	7,461
Rotational	255	-	194	749	-	-	-	-	-	1,198
Students (Military)	-	2,252	847	-	61	-	-	132	-	3,292
Civilians	3,227	3,857	2,164	1,294	1,682	167	241	946	627	14,205
DOD Civilians	2,134	2,901	1,248	728	708	89	241	746	627	9,422
Non-Military Employees	1,093	956	916	566	974	78	-	200	-	4,783
Subtotal - Employees	**10,519**	**9,537**	**10,281**	**5,067**	**1,852**	**854**	**957**	**1,946**	**4,555**	**45,568**
Retirees	11,328	4,545	26,477	2,024	46	0	0	907	0	46,234
"Linked" Military Retirees	2,832	1,136	6,619	506	12	0	0	227	0	11,332
ANNUAL PAYROLL										
Active Duty Permanent Party	$ 337,198,382	$ 202,691,148	$ 251,143,511	$ 97,546,103	$ 8,624,909	$ 15,233,682	$ 6,843,984	$ 19,107,271	$ -	$ 938,388,989
Living On-base	$ 106,219,994	$ 98,847,633	$ 30,867,186	$ 17,807,074	$ 8,531,666	$ -	$ -	$ 705,132	$ -	$ 262,978,685
Living Off-Base	$ 230,978,388	$ 103,843,514	$ 220,276,325	$ 79,739,029	$ 93,243	$ 15,233,682	$ 6,843,984	$ 18,402,139	$ -	$ 675,410,304
Reserves	$ 3,462,425	$ -	$ 17,107,058	$ 1,696,909	$ -	$ 6,900,000	$ 16,640,610	$ 7,788,707	$ 53,719,815	$ 107,315,524
Living On-base	$ -	$ -	$ -	$ 503,212	$ -	$ -	$ -		$ -	$ 503,212
Living Off-Base	$ 3,462,425	$ -	$ 17,107,058	$ 1,193,697	$ -	$ 6,900,000	$ 16,640,610	$ 7,788,707	$ 53,719,815	$ 106,812,312
Rotational	$ 2,079,780	$ -	$ 4,667,590	$ 7,237,944	$ -	$ -	$ -		$ -	$ 13,985,314
Students (Military)	$ -	$ 52,765,251	$ 12,846,262	$ -	$ 2,148,799	$ -	$ -	$ 3,501,000	$ -	$ 71,261,312
Civilians	$ 117,411,243	$ 257,648,321	$ 92,134,891	$ 50,505,198	$ 106,878,191	$ 9,106,627	$ 19,121,708	$ 64,905,112	$ 30,693,800	$ 748,405,091
DOD Civilians	$ 73,020,044	$ 250,718,461	$ 77,635,165	$ 31,265,273	$ 51,920,198	$ 5,596,627	$ 19,121,708	$ 53,923,477	$ 30,693,800	$ 593,894,753
Non-Military Employees	$ 44,391,199	$ 6,929,860	$ 14,499,726	$ 19,239,925	$ 54,957,993	$ 3,510,000	$ -	$ 10,981,635	$ -	$ 154,510,338
Subtotal - Employees	**$ 460,151,830**	**$ 513,104,720**	**$ 377,899,312**	**$ 156,986,154**	**$ 117,651,899**	**$ 31,240,309**	**$ 42,606,302**	**$ 95,302,090**	**$ 84,413,615**	**$ 1,879,356,231**
Retirees	$ 262,414,254	$ 101,569,000	$ 556,285,926	$ 42,366,000	$ 794,000	$ -	$ -	$ 17,763,000	$ -	$ 981,192,180
"Linked" Military Retirees	$ 65,603,564	$ 25,392,250	$ 139,071,482	$ 10,591,500	$ 198,500	$ -	$ -	$ 4,440,250	$ -	$ 245,297,846
CONTRACTS (BUILDINGS, CONSTRUCTION, ETC.)										
Construction	$ 11,300,000	$ 25,000,000	$ 15,075,690	$ -	$ 2,226,504	$ 4,895	$ -	$ -	$ -	$ 53,607,089
Building Maintenance and Repair	$ 30,352,440	$ -	$ 11,125,634	$ -	$ 3,642,700	$ 7,038	$ 216,818	$ 1,723,388	$ -	$ 47,068,018
Garrison Support, Tucson-based contracts	$ -	$ 3,070,740	$ -	$ -	$ -	$ 250,000	$ -	$ -	$ -	$ 3,320,740
Garrison Support, Phoenix-based contracts	$ -	$ 4,156,844	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 4,156,844
Garrison Support, other AZ	$ -	$ 15,227,306	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 15,227,306
Garrison Support, Sierra Vista-based contracts	$ -	$ 39,742,249	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 39,742,249
Military Family Housing	$ -	$ 40,000,000	$ 2,820,106	$ -	$ -	$ -	$ -	$ -	$ -	$ 42,820,106
Public Works/ROICC	$ -	$ -	$ -	$ 48,660,003	$ -	$ -	$ -	$ -	$ -	$ 48,660,003
Battlelle (Environmental)	$ -	$ -	$ -	$ 420,585	$ -	$ -	$ -	$ -	$ -	$ 420,585
Comm CTS	$ -	$ -	$ -	$ 54,227	$ -	$ -	$ -	$ -	$ -	$ 54,227
Pyramid (Private Maintenance and Repair Contract)	$ -	$ -	$ -	$ -	$ 13,458,327	$ -	$ -	$ -	$ -	$ 13,458,327
Fiber-optics/Rewiring	$ -	$ -	$ -	$ -	$ 1,384,050	$ 10,000	$ -	$ -	$ -	$ 1,394,050
Total	**$ 41,652,440**	**$ 127,197,139**	**$ 29,021,430**	**$ 49,134,815**	**$ 20,711,581**	**$ 271,933**	**$ 216,818**	**$ 1,723,388**	**$ -**	**$ 269,929,544**

Table A3-4
MILITARY BASE INPUTS

	Davis Monthan AFB	Fort Huachuca	Luke AFB	Yuma Marine Corp Air Station	Yuma Proving Ground	WAATS / Silver Bell Army Heliport	AZ Air Nat'l Guard 161st (Sky Harbor)	AZ Air Nat'l Guard 162nd (Tucson)	Army National Guard	Total
CONTRACTS (MILITARY OPERATIONS, TENANTS, ETC.)										
Custodial (Grounds,Custodial, DiningHall)	$ 2,206,322	$ -	$ 3,784,359	$ -	$ 545,730	$ 355,567	$ 590,257	$ -	$ 16,500,000	$ 23,982,235
Land and Building Rental (Annual Outgrant)	$ 663,782	$ -	$ 33,047	$ -	$ -	$ 259,869	$ -	$ 425,000	$ 5,982,416	$ 7,364,114
Environmental	$ 1,077,600	$ 3,300,000	$ 1,849,379	$ 420,585	$ 2,677,651	$ -	$ 32,800	$ 6,607	$ -	$ 9,364,622
GSA Vehicle Rental	$ 482,277	$ -	$ 186,109	$ -	$ 3,927,800	$ 83,184	$ 26,767	$ 146,953	$ -	$ 4,853,090
Aerostat	$ -	$ 1,796,013	$ -	$ -	$ -	$ 62,400	$ -	$ -	$ -	$ 1,858,413
Digital Training Supprt	$ -	$ 6,385,000	$ -	$ -	$ -	$ 252,000	$ -	$ -	$ -	$ 6,637,000
RCERT-CONUS	$ -	$ 4,816,342	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 4,816,342
HQ ISEC	$ -	$ 157,100,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 157,100,000
USAOTC	$ -	$ 4,785,035	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 4,785,035
Department of Interior	$ -	$ 3,554,808	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,554,808
Medical	$ -	$ 4,066,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 4,066,000
HQ NETCOM contracts	$ -	$ 97,000,482	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 97,000,482
HQ USAIC contracts	$ -	$ 110,573,700	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 110,573,700
LAAF Weather Squadron	$ -	$ 285,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 285,000
JITC Computer Science	$ -	$ 90,100,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 90,100,000
Commissary Shelf Stocking Contract	$ -	$ -	$ 1,669,740	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,669,740
Range Support Contract	$ -	$ -	$ 10,168,078	$ -	$ 54,724,572	$ -	$ -	$ 1,055,882	$ -	$ 65,948,532
Boeing Aerospace	$ -	$ -	$ -	$ 1,500,000	$ -	$ 27,278	$ -	$ -	$ -	$ 1,527,278
Blackstone	$ -	$ -	$ -	$ 1,059,802	$ -	$ -	$ -	$ -	$ -	$ 1,059,802
NMCI	$ -	$ -	$ -	$ 1,200,000	$ -	$ -	$ -	$ -	$ -	$ 1,200,000
Cost Per Copy	$ -	$ -	$ -	$ 298,677	$ -	$ -	$ -	$ -	$ -	$ 298,677
Maytag	$ -	$ -	$ -	$ 949,677	$ -	$ -	$ -	$ -	$ -	$ 949,677
Moves/HHG	$ -	$ -	$ -	$ 836,055	$ -	$ -	$ -	$ -	$ -	$ 836,055
Freight	$ -	$ -	$ -	$ 2,808,885	$ -	$ -	$ -	$ -	$ -	$ 2,808,885
General Dynamics	$ -	$ -	$ -	$ -	$ 1,298,910	$ -	$ -	$ -	$ -	$ 1,298,910
Range Support Safety	$ -	$ -	$ -	$ -	$ 2,488,483	$ -	$ -	$ -	$ -	$ 2,488,483
Sea-Air Contract - Aviation Support	$ -	$ -	$ -	$ -	$ 2,553,857	$ -	$ -	$ -	$ -	$ 2,553,857
Telemedicine	$ -	$ -	$ -	$ -	$ 350,000	$ -	$ -	$ -	$ -	$ 350,000
Mission Test Support	$ -	$ -	$ -	$ -	$ 20,318,268	$ -	$ -	$ -	$ -	$ 20,318,268
ORI	$ -	$ -	$ -	$ -	$ 2,117,465	$ -	$ -	$ -	$ -	$ 2,117,465
TSSI (LOCATED IN VIRGINIA)	$ -	$ -	$ -	$ -	$ 711,269	$ -	$ -	$ -	$ -	$ 711,269
OSP Lines	$ -	$ -	$ -	$ -	$ 3,518,737	$ -	$ -	$ -	$ -	$ 3,518,737
Systems, Studies and Simulation INC.	$ -	$ -	$ -	$ -	$ -	$ 698,703	$ -	$ -	$ -	$ 698,703
Lear Siegler Services CORP.	$ -	$ -	$ -	$ -	$ -	$ 180,857	$ -	$ -	$ -	$ 180,857
Computer Sciences CORP.	$ -	$ -	$ -	$ -	$ -	$ 424,154	$ -	$ -	$ -	$ 424,154
Peace Vanguard	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 7,000,000	$ 7,000,000
2065 Appropriation - Operation & Maint.	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 30,485,713	$ 30,485,713
Total	**$ 4,429,981**	**$ 483,762,380**	**$ 17,690,712**	**$ 9,073,681**	**$ 95,232,742**	**$ 2,344,012**	**$ 649,824**	**$ 1,634,442**	**$ 59,968,129**	**$ 674,785,903**

Table A3-4
MILITARY BASE INPUTS

	Davis Monthan AFB	Fort Huachuca	Luke AFB	Yuma Marine Corp Air Station	Yuma Proving Ground	WAATS / Silver Bell Army Heliport	AZ Air Nat'l Guard 161st (Sky Harbor)	AZ Air Nat'l Guard 162nd (Tucson)	Army National Guard	Total
PURCHASES										
Government Purchase Card (GPC)	$ 19,639,272	$ 410,859,948	$ 9,993,043	$ 2,503,029	$ 3,707,006	$ 384,000	$ 429,781	$ 2,126,521	$ 2,700,000	$ 452,342,600
Ground Fuel	$ 513,662	$ -	$ 435,904	$ 491,214	$ 198,968	$ 1,400	$ 68,229	$ 220,956	$ -	$ 1,930,333
Aviation Fuel (AVPOL)	$ 29,952,505	$ -	$ 62,968,758	$ 16,036,095	$ 1,127,117	$ -	$ 8,866,952	$ 17,885,029	$ -	$ 136,836,456
Food (Dining Facility)	$ 1,968,858	$ -	$ 972,442	$ -	$ 342,771	$ 259,312	$ 47,145	$ 85,300	$ -	$ 3,675,828
Computers/IT Equipment	$ 990,091	$ -	$ 1,429,005	$ -	$ 35,228	$ 188,000	$ 141,844	$ 666,672	$ -	$ 3,450,840
Travel	$ 1,822,571	$ -	$ 7,291,898	$ 1,199,057	$ 2,670,140	$ 700,000	$ 1,749,812	$ 2,296,662	$ -	$ 17,730,140
Equipment	$ 5,985,741	$ -	$ 3,997,238	$ -	$ 8,276,336	$ 396,668	$ 321,612	$ 819,835	$ -	$ 19,797,430
Contract Services	$ 31,484,505	$ -	$ 24,007,357	$ -	$ -	$ -	$ 349,067	$ 2,087,705	$ 7,000,000	$ 64,928,634
General Supplies	$ 2,969,387	$ -	$ 51,894,701	$ -	$ 5,982,123	$ -	$ 4,625,799	$ 967,881	$ -	$ 66,439,891
Commissary	$ 235,600	$ 2,235,329	$ 285,000	$ 1,067,292	$ -	$ -	$ -	$ -	$ -	$ 3,823,221
Local Vendor Supplies (AAFES)	$ 2,685,647	$ -	$ 2,650,000	N/A	$ -	$ -	$ -	$ -	$ -	$ 5,335,647
Purchase Branch (MWR)	$ 1,492,698	$ -	$ 4,050,598	$ 336,242	$ -	$ -	$ -	$ 22,500	$ -	$ 5,902,038
Billeting Fund	$ 282,250	$ -	$ 227,159	$ 110,465	$ -	$ -	$ -	$ -	$ -	$ 619,874
Postage Expense	$ 210,293	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 210,293
AMARC (Tenant unit)	$ 19,982,447	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 19,982,447
563 RQG (Tenant)	$ 126,599	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 126,599
12AF (Tenant)	$ 653,818	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 653,818
Household goods claims paid	$ -	$ 440,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 440,000
Army Emergency Relief	$ -	$ 340,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 340,000
TDY Military Lodging in local town	$ -	$ 11,390,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 11,390,000
Non-fly AVPOL	$ -	$ -	$ 912,660	$ -	$ -	$ -	$ -	$ -	$ -	$ 912,660
Government Credit Card (GPC) CPFH	$ -	$ -	$ 2,399,993	$ -	$ -	$ -	$ -	$ -	$ -	$ 2,399,993
Supplies - Reparables - CPFH and non-fly (out of state)	$ -	$ -	$ 142,507,476	$ -	$ -	$ -	$ -	$ -	$ -	$ 142,507,476
British Aerospace Operations	$ -	$ -	$ -	$ 250,000	$ -	$ -	$ -	$ -	$ -	$ 250,000
Boeing Aerospace	$ -	$ -	$ -	$ 10,000	$ -	$ -	$ -	$ -	$ -	$ 10,000
Link Simulation and Training	$ -	$ -	$ -	$ 3,300	$ -	$ -	$ -	$ -	$ -	$ 3,300
MAYTAG	$ -	$ -	$ -	$ 65,870	$ -	$ -	$ -	$ -	$ -	$ 65,870
MCCS	$ -	$ -	$ -	$ 3,074,572	$ -	$ -	$ -	$ -	$ -	$ 3,074,572
MCCS Concessionaires	$ -	$ -	$ -	$ 2,550,000	$ -	$ -	$ -	$ -	$ -	$ 2,550,000
Navy Relief	$ -	$ -	$ -	$ 235,783	$ -	$ -	$ -	$ -	$ -	$ 235,783
Armed Forces Bank	$ -	$ -	$ -	$ 2,803	$ -	$ -	$ -	$ -	$ -	$ 2,803
J&E Associates (New Parent Support)	$ -	$ -	$ -	$ 2,300	$ -	$ -	$ -	$ -	$ -	$ 2,300
Navy Federal Credit Union	$ -	$ -	$ -	$ 583,379	$ -	$ -	$ -	$ -	$ -	$ 583,379
YTTR	$ -	$ -	$ -	$ 250,000	$ -	$ -	$ -	$ -	$ -	$ 250,000
Tactical vehicle repair parts	$ -	$ -	$ -	$ -	$ 1,438,195	$ -	$ -	$ -	$ -	$ 1,438,195
Electronic & comm repair parts	$ -	$ -	$ -	$ -	$ 2,439,056	$ -	$ -	$ -	$ -	$ 2,439,056
Other repair parts	$ -	$ -	$ -	$ -	$ 250,877	$ -	$ -	$ -	$ -	$ 250,877
Billeting for training units	$ -	$ -	$ -	$ -	$ 139,536	$ -	$ -	$ -	$ -	$ 139,536
Total	**$ 120,995,942**	**$ 425,265,277**	**$ 316,023,232**	**$ 28,771,401**	**$ 26,607,353**	**$ 1,929,380**	**$ 16,600,241**	**$ 27,179,061**	**$ 9,700,000**	**$ 973,071,887**
UTILITIES										
Electricity	$ 7,241,649	$ 7,480,301	$ 5,838,048	$ 3,506,451	$ 626,268	$ 596,630	$ 555,972	$ 889,709	$ -	$ 26,735,028
Natural Gas	$ 1,313,781	$ 2,321,564	$ 884,433	$ 609,685	$ -	$ 90,730	$ 63,569	$ 106,472	$ -	$ 5,390,234
Water	$ -	$ -	$ -	$ 57,057	$ 452,772	$ 12,000	$ 57,457	$ 34,230	$ -	$ 613,516
Sewage	$ 452,878	$ -	$ -	$ 468,195	$ 185,500	$ -	$ -	$ 12,921	$ -	$ 1,119,494
Telephone	$ 1,234,003	$ 230,000	$ 778,400	$ 484,278	$ 564,344	$ 5,000	$ 9,383	$ 73,814	$ -	$ 3,379,222
Trash	$ 393,468	$ 774,813	$ 288,281	$ -	$ -	$ -	$ 12,145	$ 33,322	$ -	$ 1,502,029
Cable Television	$ 60,526	$ -	$ 53,417	$ 613,047	$ 361,930	$ 5,000	$ -	$ -	$ -	$ 1,093,920
Mobile Telephone	$ 452,689	$ -	$ -	$ -	$ 197,803	$ 3,000	$ 34,828	$ 3,308	$ -	$ 691,628
Total	**$ 11,148,994**	**$ 10,806,678**	**$ 7,842,579**	**$ 5,738,713**	**$ 2,388,617**	**$ 712,360**	**$ 733,354**	**$ 1,153,776**	**$ -**	**$ 40,525,071**
EDUCATION ASSISTANCE										
State Tuition	$ -	$ 927,218	$ -	$ -	$ 32,400	$ -	$ -	$ 36,501	$ -	$ 996,119
Loan Re-payment	$ -	$ -	$ -	$ -	$ -	$ -	$ 107,190	$ 106,183	$ -	$ 213,373
Elementary (Impact Funds)	$ 575,852	$ 7,790,211	$ 1,011,159	$ 135,985	$ 22,395	$ -	$ -	$ -	$ -	$ 9,535,602
University	$ -	$ -	$ -	$ -	$ 14,558	$ -	$ -	$ -	$ -	$ 14,558
Other (Tuition Assistance)	$ 2,294,294	$ -	$ 2,334,444	$ 967,488	$ 216,815	$ -	$ -	$ -	$ -	$ 5,813,041
Total	**$ 2,870,146**	**$ 8,717,429**	**$ 3,345,603**	**$ 1,103,473**	**$ 286,168**	**$ -**	**$ 107,190**	**$ 142,684**	**$ -**	**$ 16,572,693**
MEDICAL										
CHAMPUS/TRICARE	$ 39,110,888	$ 14,919,600	$ 175,341,140	$ -	$ -	$ -	$ -	$ -	$ -	$ 229,371,628
Health	$ 38,649,459	$ 8,703,000	$ 32,213,328	$ 11,600,000	$ -	$ -	$ 32,239	$ -	$ -	$ 91,198,026
Dental	$ 898,746	$ -	$ 549,861	$ 2,131,605	$ -	$ -	$ -	$ -	$ -	$ 3,580,212
Medical Supplies	$ -	$ -	$ -	$ -	$ 7,417	$ -	$ -	$ -	$ -	$ 7,417
Total	**$ 78,659,093**	**$ 23,622,600**	**$ 208,104,329**	**$ 13,731,605**	**$ 7,417**	**$ -**	**$ 32,239**	**$ -**	**$ -**	**$ 324,157,283**

Table A3-4
MILITARY BASE INPUTS

	Davis Monthan AFB	Fort Huachuca	Luke AFB	Yuma Marine Corp Air Station	Yuma Proving Ground	WAATS / Silver Bell Army Heliport	AZ Air Nat'l Guard 161st (Sky Harbor)	AZ Air Nat'l Guard 162nd (Tucson)	Army National Guard	Total
COMMISSARY										
Exchange Sales	$ 50,167,644	$ 25,961,770	$ 51,307,344	$ 13,367,704	$ 224,262	$ -	$ -	$ -	$ -	$ 141,028,724
Commissary Sales	$ 45,626,155	$ 50,285,474	$ 47,401,323	$ 7,862,074	$ 1,091,807	$ -	$ -	$ -	$ -	$ 152,266,833
Other (Morale, Welfare & Recreation Non-Appropriation)	$ 8,817,128	$ 8,844,744	$ 9,816,734	$ 5,439,973	$ 1,372,000	$ -	$ -	$ -	$ -	$ 34,290,579
Army Lodging Revenues	$ -	$ 4,443,989	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 4,443,989
Total	**$ 104,610,927**	**$ 89,535,977**	**$ 108,525,401**	**$ 26,669,751**	**$ 2,688,069**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 332,030,125**
Total Salary and Expenses	$ 1,107,944,353	$ 1,783,581,200	$ 1,624,738,524	$ 333,575,593	$ 266,367,846	$ 36,497,994	$ 60,945,968	$ 144,898,441	$ 154,081,744	$ 5,512,631,663
SUMMARY BY CATEGORY, OTHER THAN PERSONNEL										
Contracts: construction, and building maintenance/repair	$ 41,652,440	$ 127,197,139	$ 29,021,430	$ 49,134,815	$ 20,711,581	$ 271,933	$ 216,818	$ 1,723,388	$ -	$ 269,929,544
Contracts and direct spending: military operations	$ 4,429,981	$ 483,762,380	$ 17,690,712	$ 9,073,681	$ 95,232,742	$ 2,344,012	$ 649,824	$ 1,634,442	$ 59,968,129	$ 674,785,903
Spending for supplies	$ 120,995,942	$ 425,265,277	$ 316,023,232	$ 28,771,401	$ 26,607,353	$ 1,929,380	$ 16,600,241	$ 27,179,061	$ 9,700,000	$ 973,071,887
Utilities	$ 11,148,994	$ 10,806,678	$ 7,842,579	$ 5,738,713	$ 2,388,617	$ 712,360	$ 733,354	$ 1,153,776	$ -	$ 40,525,071
Education Payments	$ 2,870,146	$ 8,717,429	$ 3,345,603	$ 1,103,473	$ 286,168	$ -	$ 107,190	$ 142,684	$ -	$ 16,572,693
Health Services	$ 78,659,093	$ 23,622,600	$ 208,104,329	$ 13,731,605	$ 7,417	$ -	$ 32,239	$ -	$ -	$ 324,157,283
Commissary and Exchange Sales	$ 104,610,927	$ 89,535,977	$ 108,525,401	$ 26,669,751	$ 2,688,069	$ -	$ -	$ -	$ -	$ 332,030,125
Total	**$ 364,367,523**	**$ 1,168,907,480**	**$ 690,553,286**	**$ 134,223,439**	**$ 147,921,947**	**$ 5,257,685**	**$ 18,339,666**	**$ 31,833,351**	**$ 69,668,129**	**$ 2,631,072,506**

APPENDIX FOUR
DETAILED STATEWIDE MODEL OUTPUT

The following tables illustrate the detailed output of the IMPLAN Pro software economic impact information for the statewide analysis. The tables summarize the employment by industry information by major industry category. Additional detailed information is available upon request.

Table A4-1
STATEWIDE FISCAL IMPACTS

	Direct			Indirect	Total
	Live on Base	Live off Base	Military Retirees	and Induced	
Employment / Retirees /1	9,999	35,569	45,327	46,146	137,041
Adjusted households /2	8,326	29,618	11,332	38,425	87,702
Earnings / Payments	$343,078,725	$1,536,277,506	$245,298,045	$4,825,091,380	$6,949,745,656
Sales tax					
Rates					
State	n/a	n/a	n/a	5.60%	
County Average	n/a	n/a	n/a	0.62%	
Municipal average for state (general)	n/a	n/a	n/a	1.96%	
Municipal average for state (food at home) /3	n/a	n/a	n/a	0.93%	
Sales taxes, worker households					
State sales taxes					
State share	$3,684,009	$23,362,649	$1,677,155	$89,331,455	$118,055,267
County share	$119,849	$1,143,785	$261,912	$19,615,249	$21,140,795
Municipal share	$7,526	$76,131	$182,744	$12,105,189	$12,371,590
County sales taxes	$417,805	$3,217,528	$378,895	$13,402,174	$17,416,402
Municipal sales taxes	$1,876,463	$11,755,212	$1,449,616	$44,746,450	$59,827,741
Total sales taxes	$6,105,651	$39,555,306	$3,950,322	$179,200,516	$228,811,795
Property tax					
Owner occupancy rate	0.0%	n/a	n/a	69.3%	
Home valuation					
Median home value	$0	n/a	n/a	$160,222	
Households					
Total home value	$0	$3,288,634,695	$1,258,207,784	$4,266,517,835	$8,813,360,315
Total assessed valuation	$0	$271,312,362	$103,802,142	$351,987,721	$727,102,226
Rates (Per $100 of assessed valuation)					
State /4	$0	n/a	n/a	$0	
Counties	$0	n/a	n/a	$3	
Cities & Towns	$0	n/a	n/a	$1	
School Districts	$0	n/a	n/a	$7	
Special Districts	$0	n/a	n/a	$1	
Community Colleges	$0	n/a	n/a	$1	
Total	$0	n/a	n/a	$12	
Property taxes, households					
State /4	$0	$80,344	$30,739	$104,235	$215,318
Counties	$0	$6,921,411	$2,648,082	$8,979,509	$18,549,002
Cities & Towns	$0	$2,513,018	$961,462	$3,260,269	$6,734,749
School Districts	$0	$17,888,868	$6,844,151	$23,208,164	$47,941,182
Special Districts	$0	$1,528,553	$584,813	$1,983,072	$4,096,438
Community Colleges	$0	$3,104,100	$1,187,606	$4,027,112	$8,318,818
Total	$0	$32,036,294	$12,256,854	$41,562,360	$85,855,508

State income tax					
Households paying state tax /4	8,326	29,618	11,332	38,425	87,702
Income taxes					
State share	$7,538,565	$26,816,602	$10,259,837	$34,790,581	$79,405,585
Municipal share	$226,181	$732,626	$753,265	$5,632,920	$7,344,991

Notes: 1. Students and rotational included for DM, FH, Luke, YMCAS in "Live on Base" category

2. Emp. categories adjusted for workers per household; retires reduced to reflect those who would move if the base closed

3. Weighted average sales tax rate for food at home only (weighted by population)

4. Reduced for military personnel reporting in another state

APPENDIX FIVE
REGIONAL IMPACT INFORMATION

The following tables illustrate the detailed output of the IMPLAN Pro software economic impact information for the individual military operations with their individual county, as more fully described in Appendix Three. The tables summarize the employment by industry information by major industry category. Additional detailed information is available upon request.

Table A5-1
Local Economic Impacts of Individual Deployments

	Davis-Monthan AFB	Fort Huachuca	Luke AFB	Yuma MCAS	Yuma Proving Ground	Silver Bell Army Heliport	AZ ANG 161st (Sky Harbor)	AZ ANG 162nd (Tucson)	Army National Guard
Direct									
Employment[1]	10,519	9,537	10,281	5,067	1,852	854	957	1,946	4,555
Output ($000's)	$795,224	$886,736	$653,077	$271,300	$203,323	$53,989	$73,631	$164,699	$145,882
Indirect									
Employment[1]	6,904	14,755	9,612	2,169	2,046	203	365	816	1,125
Output ($000's)	$749,960	$1,213,189	$1,183,776	$218,964	$201,760	$23,399	$45,386	$92,981	$122,865
Induced									
Employment[1]	1,756	2,629	2,481	367	328	45	84	185	274
Output ($000's)	205,948	$279,616	$333,753	$40,772	$36,543	$5,510	$11,646	$21,871	$37,151
Total non Direct[2]									
Employment[1]	8,660	17,384	12,093	2,536	2,374	248	449	1,001	1,400
Output ($000's)	$955,908	$1,492,806	$1,517,530	$259,736	$238,303	$28,909	$57,032	$114,852	$160,016
Grand Total[2]									
Employment[1]	**19,179**	**26,921**	**22,374**	**7,603**	**4,226**	**1,102**	**1,406**	**2,947**	**5,955**
Output ($000's)	**$1,751,132**	**$2,379,542**	**$2,170,607**	**$531,036**	**$441,626**	**$82,898**	**$130,664**	**$279,551**	**$305,898**

Note: 1. Employment adjusted to reflect full time equivalent (FTE) employment
Note: 2. Totals may not sum due to rounding
Source: IMPLAN, Bureau of Labor Statistics, ESI Corporation

Table A5-2
Economic Impacts by Major Industry
Statewide Economic Impacts

	Total	AGFF[2]	Mining	Construction	Manufacturing	TCPU[2]	Wholesale Trade	Retail Trade	FIRE[2]	Services	Other[3]
Direct											
Employment[1]	**45,568**										
Output ($000's)	**$3,247,861**										
Indirect											
Employment[1]	**39,492**	200	24	2,714	705	2,461	1,020	12,228	2,450	17,506	184
Output ($000's)	**$4,412,444**	20,194	5,352	263,934	177,926	460,715	177,854	986,198	472,625	1,566,928	280,717
Induced											
Employment[1]	**11,269**	114	8	87	287	733	408	1,875	1,146	6,509	101
Output ($000's)	**$1,460,657**	11,167	1,861	9,619	76,554	134,409	71,053	171,137	217,189	552,383	215,285
Total Non-Direct[4]											
Employment[1]	**50,760**	314	32	2,801	992	3,194	1,428	14,102	3,597	24,015	285
Output ($000's)	**$5,873,101**	$31,362	$7,213	$273,553	$254,480	$595,125	$248,906	$1,157,335	$689,814	$2,119,311	$496,003
Grand Total[4]											
Employment[1]	**96,328**	314	32	2,801	992	3,194	1,428	14,102	3,597	24,015	285
Output ($000's)	**$9,120,962**	$31,362	$7,213	$273,553	$254,480	$595,125	$248,906	$1,157,335	$689,814	$2,119,311	$496,003

Note: 1. Employment adjusted to reflect full time equivalent (FTE) employment
Note: 2. Abbreviations for major industries: AGFF-Agriculture, Forestry and Fishing; TCPU-Transportation, Communications, and Public Utilities; FIRE-Finance, Insurance, and Real Estate
Note: 3. Other includes "industries" which are part of the IMPLAN model and not associated with SIC Codes, such as owner occupied dwellings, inventory adjustments, and non-comparable imports.
Note: 4. Totals may not sum due to rounding
Source: IMPLAN, Bureau of Labor Statistics, ESI Corporation

Economic Impacts by Major Industry
Davis-Monthan Air Force Base

	Total	AGFF[2]	Mining	Construction	Manufacturing	TCPU[2]	Wholesale Trade	Retail Trade	FIRE[2]	Services	Other[3]
Direct											
Employment[1]	**10,519**										
Output ($000's)	**$795,224**										
Indirect											
Employment[1]	**6,904**	6	4	469	92	310	204	1,486	531	3,752	51
Output ($000's)	**$749,960**	472	963	45,318	20,218	55,589	26,871	120,168	89,238	318,234	72,889
Induced											
Employment[1]	**1,756**	2	1	12	25	99	54	295	168	1,082	19
Output ($000's)	**$205,948**	135	284	1,250	6,085	17,479	7,104	25,606	28,048	85,421	34,537
Total Non-Direct[4]											
Employment[1]	**8,660**	8	5	481	117	409	258	1,781	698	4,834	69
Output ($000's)	**$955,908**	$608	$1,247	$46,568	$26,303	$73,068	$33,975	$145,774	$117,285	$403,655	$107,426
Grand Total[4]											
Employment[1]	**19,179**	8	5	481	117	409	258	1,781	698	4,834	69
Output ($000's)	**$1,751,132**	$608	$1,247	$46,568	$26,303	$73,068	$33,975	$145,774	$117,285	$403,655	$107,426

Note: 1. Employment adjusted to reflect full time equivalent (FTE) employment
Note: 2. Abbreviations for major industries: AGFF-Agriculture, Forestry and Fishing; TCPU-Transportation, Communications, and Public Utilities; FIRE-Finance, Insurance, and Real Estate
Note: 3. Other includes "industries" which are part of the IMPLAN model and not associated with traditional SIC categories
Note: 4. Totals may not sum due to rounding
Source: IMPLAN, Bureau of Labor Statistics, ESI Corporation

Economic Impacts by Major Industry
Fort Huachuca

		Total	AGFF[2]	Mining	Construction	Manufacturing	TCPU[2]	Wholesale Trade	Retail Trade	FIRE[2]	Services	Other[3]
Direct												
	Employment[1]	**9,537**										
	Output ($000's)	**$886,736**										
Indirect												
	Employment[1]	**14,755**	62	0.2	932	46	867	94	7,231	313	5,142	68
	Output ($000's)	**$1,213,189**	4,163	84	64,318	7,610	150,441	8,709	473,533	58,210	371,998	74,123
Induced												
	Employment[1]	**2,629**	47	0.1	20	22	263	61	502	155	1,521	39
	Output ($000's)	**$279,616**	3,128	36	1,947	4,229	28,756	5,679	38,565	27,799	107,238	62,240
Total Non-Direct[4]												
	Employment[1]	**17,384**	109	0.3	952	68	1,129	155	7,734	468	6,663	106
	Output ($000's)	**$1,492,806**	$7,291	$120	$66,265	$11,839	$179,196	$14,388	$512,099	$86,009	$479,236	$136,363
Grand Total[4]												
	Employment[1]	**26,921**	109	0.3	952	68	1,129	155	7,734	468	6,663	106
	Output ($000's)	**$2,379,542**	$7,291	$120	$66,265	$11,839	$179,196	$14,388	$512,099	$86,009	$479,236	$136,363

Note: 1. Employment adjusted to reflect full time equivalent (FTE) employment
Note: 2. Abbreviations for major industries: AGFF-Agriculture, Forestry and Fishing; TCPU-Transportation, Communications, and Public Utilities; FIRE-Finance, Insurance, and Real Estate
Note: 3. Other includes "industries" which are part of the IMPLAN model and not associated with traditional SIC categories
Note: 4. Totals may not sum due to rounding
Source: IMPLAN, Bureau of Labor Statistics, ESI Corporation

Economic Impacts by Major Industry
Luke Air Force Base

		Total	AGFF[2]	Mining	Construction	Manufacturing	TCPU[2]	Wholesale Trade	Retail Trade	FIRE[2]	Services	Other[3]
Direct												
	Employment[1]	**10,281**										
	Output ($000's)	**$653,077**										
Indirect												
	Employment[1]	**9,612**	42	7	431	266	461	325	2,543	705	4,784	48
	Output ($000's)	**$1,183,776**	4,258	1,506	45,587	70,671	87,913	59,897	223,811	139,164	472,700	78,270
Induced												
	Employment[1]	**2,481**	16	2	20	65	150	87	418	259	1,443	20
	Output ($000's)	**$333,753**	1,630	398	2,277	18,364	28,417	16,157	39,205	50,550	127,161	49,594
Total Non-Direct[4]												
	Employment[1]	**12,093**	58	9	451	331	611	412	2,961	964	6,227	69
	Output ($000's)	**$1,517,530**	$5,888	$1,904	$47,863	$89,036	$116,331	$76,054	$263,016	$189,713	$599,861	$127,864
Grand Total[4]												
	Employment[1]	**22,374**	58	9	451	331	611	412	2,961	964	6,227	69
	Output ($000's)	**$2,170,607**	$5,888	$1,904	$47,863	$89,036	$116,331	$76,054	$263,016	$189,713	$599,861	$127,864

Note: 1. Employment adjusted to reflect full time equivalent (FTE) employment
Note: 2. Abbreviations for major industries: AGFF-Agriculture, Forestry and Fishing; TCPU-Transportation, Communications, and Public Utilities; FIRE-Finance, Insurance, and Real Estate
Note: 3. Other includes "industries" which are part of the IMPLAN model and not associated with traditional SIC categories
Note: 4. Totals may not sum due to rounding
Source: IMPLAN, Bureau of Labor Statistics, ESI Corporation

Economic Impacts by Major Industry
Yuma Marine Air Corps Station

		Total	AGFF[2]	Mining	Construction	Manufacturing	TCPU[2]	Wholesale Trade	Retail Trade	FIRE[2]	Services	Other[3]
Direct												
	Employment[1]	**5,067**										
	Output ($000's)	**$271,300**										
Indirect												
	Employment[1]	**2,169**	10	0.2	574	15	152	86	384	87	846	15
	Output ($000's)	**$218,964**	868	38	49,771	2,654	19,833	11,384	32,903	15,875	65,364	20,275
Induced												
	Employment[1]	**367**	3	-	3	3	31	16	65	24	217	5
	Output ($000's)	**$40,772**	289	6	299	730	3,555	2,116	5,478	4,090	16,223	7,986
Total Non-Direct[4]												
	Employment[1]	**2,536**	13	0.2	577	18	183	102	449	111	1,063	20
	Output ($000's)	**$259,736**	$1,157	$44	$50,070	$3,384	$23,388	$13,499	$38,381	$19,965	$81,587	$28,261
Grand Total[4]												
	Employment[1]	**7,603**	13	0.2	577	18	183	102	449	111	1,063	20
	Output ($000's)	**$531,036**	$1,157	$44	$50,070	$3,384	$23,388	$13,499	$38,381	$19,965	$81,587	$28,261

Note: 1. Employment adjusted to reflect full time equivalent (FTE) employment
Note: 2. Abbreviations for major industries: AGFF-Agriculture, Forestry and Fishing; TCPU-Transportation, Communications, and Public Utilities; FIRE-Finance, Insurance, and Real Estate
Note: 3. Other includes "industries" which are part of the IMPLAN model and not associated with traditional SIC categories
Note: 4. Totals may not sum due to rounding
Source: IMPLAN, Bureau of Labor Statistics, ESI Corporation

Economic Impacts by Major Industry
Yuma Proving Ground

	Total	AGFF[2]	Mining	Construction	Manufacturing	TCPU[2]	Wholesale Trade	Retail Trade	FIRE[2]	Services	Other[3]
Direct											
Employment[1]	**1,852**										
Output ($000's)	**$203,323**										
Indirect											
Employment[1]	**2,046**	6	-	837	22	115	44	450	64	499	10
Output ($000's)	**$201,760**	581	17	77,497	3,337	14,749	5,835	33,059	14,317	39,468	12,900
Induced											
Employment[1]	**328**	3	-	3	3	27	14	58	21	194	4
Output ($000's)	**$36,543**	259	5	268	654	3,186	1,896	4,910	3,666	14,540	7,157
Total Non-Direct[4]											
Employment[1]	**2,374**	9	-	840	24	142	59	508	84	694	14
Output ($000's)	**$238,303**	$840	$22	$77,765	$3,991	$17,935	$7,731	$37,969	$17,984	$54,008	$20,057
Grand Total[4]											
Employment[1]	**4,226**	9	-	840	24	142	59	508	84	694	14
Output ($000's)	**$441,626**	$840	$22	$77,765	$3,991	$17,935	$7,731	$37,969	$17,984	$54,008	$20,057

Note: 1. Employment adjusted to reflect full time equivalent (FTE) employment
Note: 2. Abbreviations for major industries: AGFF-Agriculture, Forestry and Fishing; TCPU-Transportation, Communications, and Public Utilities; FIRE-Finance, Insurance, and Real Estate
Note: 3. Other includes "industries" which are part of the IMPLAN model and not associated with traditional SIC categories
Note: 4. Totals may not sum due to rounding
Source: IMPLAN, Bureau of Labor Statistics, ESI Corporation

Economic Impacts by Major Industry
Silver Bell Army Heliport / WAATS

		Total	AGFF[2]	Mining	Construction	Manufacturing	TCPU[2]	Wholesale Trade	Retail Trade	FIRE[2]	Services	Other[3]
Direct												
	Employment[1]	**854**										
	Output ($000's)	**$53,989**										
Indirect												
	Employment[1]	**203**	-	0.2	3	2	11	6	40	21	118	2
	Output ($000's)	**$23,399**	14	44	237	656	2,399	851	3,263	3,536	9,457	2,942
Induced												
	Employment[1]	**45**	-	-	0.2	0.2	2	1	8	4	28	1
	Output ($000's)	**$5,510**	4	8	33	163	468	190	685	750	2,285	924
Total Non-Direct[4]												
	Employment[1]	**248**	-	0.2	3	2	13	8	48	25	147	2
	Output ($000's)	**$28,909**	$17	$52	$271	$819	$2,866	$1,041	$3,948	$4,287	$11,742	$3,866
Grand Total[4]												
	Employment[1]	**1,102**	-	0.2	3	2	13	8	48	25	147	2
	Output ($000's)	**$82,898**	$17	$52	$271	$819	$2,866	$1,041	$3,948	$4,287	$11,742	$3,866

Note: 1. Employment adjusted to reflect full time equivalent (FTE) employment
Note: 2. Abbreviations for major industries: AGFF-Agriculture, Forestry and Fishing; TCPU-Transportation, Communications, and Public Utilities; FIRE-Finance, Insurance, and Real Estate
Note: 3. Other includes "industries" which are part of the IMPLAN model and not associated with traditional SIC categories
Note: 4. Totals may not sum due to rounding
Source: IMPLAN, Bureau of Labor Statistics, ESI Corporation

Economic Impacts by Major Industry
Air National Guard 161st

		Total	AGFF[2]	Mining	Construction	Manufacturing	TCPU[2]	Wholesale Trade	Retail Trade	FIRE[2]	Services	Other[3]
Direct												
	Employment[1]	**957**										
	Output ($000's)	**$73,631**										
Indirect												
	Employment[1]	**365**	1	0.3	4	5	20	23	127	31	151	2
	Output ($000's)	**$45,386**	161	80	481	1,896	3,904	4,307	10,596	6,177	13,677	4,107
Induced												
	Employment[1]	**84**	0	-	1	1	5	3	14	9	50	1
	Output ($000's)	**$11,646**	57	14	79	641	992	564	1,368	1,764	4,437	1,731
Total Non-Direct[4]												
	Employment[1]	**449**	2	0.3	5	6	25	26	141	40	201	3
	Output ($000's)	**$57,032**	$218	$94	$561	$2,536	$4,896	$4,871	$11,965	$7,941	$18,114	$5,838
Grand Total[4]												
	Employment[1]	**1,406**	2	0.3	5	6	25	26	141	40	201	3
	Output ($000's)	**$130,664**	$218	$94	$561	$2,536	$4,896	$4,871	$11,965	$7,941	$18,114	$5,838

Note: 1. Employment adjusted to reflect full time equivalent (FTE) employment
Note: 2. Abbreviations for major industries: AGFF-Agriculture, Forestry and Fishing; TCPU-Transportation, Communications, and Public Utilities; FIRE-Finance, Insurance, and Real Estate
Note: 3. Other includes "industries" which are part of the IMPLAN model and not associated with traditional SIC categories
Note: 4. Totals may not sum due to rounding
Source: IMPLAN, Bureau of Labor Statistics, ESI Corporation

Economic Impacts by Major Industry
Air National Guard 162nd

		Total	AGFF[2]	Mining	Construction	Manufacturing	TCPU[2]	Wholesale Trade	Retail Trade	FIRE[2]	Services	Other[3]
Direct												
	Employment[1]	**1,946**										
	Output ($000's)	**$164,699**										
Indirect												
	Employment[1]	**816**	1	1	32	9	43	47	193	73	410	7
	Output ($000's)	**$92,981**	55	186	3,276	2,510	8,233	6,169	16,397	12,473	32,534	11,146
Induced												
	Employment[1]	**185**	0.1	0.1	1	1	10	6	31	18	115	2
	Output ($000's)	**$21,871**	14	30	133	646	1,856	754	2,719	2,979	9,071	3,668
Total Non-Direct[4]												
	Employment[1]	**1,001**	1	1	34	10	53	53	225	91	525	9
	Output ($000's)	**$114,852**	$70	$216	$3,409	$3,157	$10,090	$6,924	$19,117	$15,451	$41,605	$14,814
Grand Total[4]												
	Employment[1]	**2,947**	1	1	34	10	53	53	225	91	525	9
	Output ($000's)	**$279,551**	$70	$216	$3,409	$3,157	$10,090	$6,924	$19,117	$15,451	$41,605	$14,814

Note: 1. Employment adjusted to reflect full time equivalent (FTE) employment
Note: 2. Abbreviations for major industries: AGFF-Agriculture, Forestry and Fishing; TCPU-Transportation, Communications, and Public Utilities; FIRE-Finance, Insurance, and Real Estate
Note: 3. Other includes "industries" which are part of the IMPLAN model and not associated with traditional SIC categories
Note: 4. Totals may not sum due to rounding
Source: IMPLAN, Bureau of Labor Statistics, ESI Corporation

Economic Impacts by Major Industry
Army National Guard

		Total	AGFF[2]	Mining	Construction	Manufacturing	TCPU[2]	Wholesale Trade	Retail Trade	FIRE[2]	Services	Other[3]
Direct												
	Employment[1]	**4,555**										
	Output ($000's)	**$145,882**										
Indirect												
	Employment[1]	**1,125**	3	0.3	5	17	39	22	144	78	813	4
	Output ($000's)	**$122,865**	365	96	605	5,219	7,159	4,005	12,645	15,972	68,720	8,079
Induced												
	Employment[1]	**274**	2	0.2	2	6	16	10	46	29	161	2
	Output ($000's)	**$37,151**	181	44	253	2,044	3,163	1,798	4,364	5,627	14,155	5,520
Total Non-Direct[4]												
	Employment[1]	**1,400**	5	1	8	23	55	31	190	108	973	6
	Output ($000's)	**$160,016**	$546	$140	$859	$7,263	$10,323	$5,804	$17,009	$21,598	$82,875	$13,599
Grand Total[4]												
	Employment[1]	**5,955**	5	1	8	23	55	31	190	108	973	6
	Output ($000's)	**$305,898**	$546	$140	$859	$7,263	$10,323	$5,804	$17,009	$21,598	$82,875	$13,599

Note: 1. Employment adjusted to reflect full time equivalent (FTE) employment
Note: 2. Abbreviations for major industries: AGFF-Agriculture, Forestry and Fishing; TCPU-Transportation, Communications, and Public Utilities; FIRE-Finance, Insurance, and Real Estate
Note: 3. Other includes "industries" which are part of the IMPLAN model and not associated with traditional SIC categories
Note: 4. Totals may not sum due to rounding
Source: IMPLAN, Bureau of Labor Statistics, ESI Corporation

Table A5-3
FISCAL IMPACT SUMMARY

	Davis-Monthan AFB	Fort Huachuca	Luke AFB	Yuma Marine Corp Air Station	Yuma Proving Ground	Silver Bell Army Heliport	AZ Air Nat'l Guard 161st (Sky Harbor)	AZ Air Nat'l Guard 162nd (Tucson)	Arizona National Guard	Statewide
DIRECT										
Sales tax										
Local	$3,807,831	$5,200,120	$5,439,127	$2,176,923	$1,960,512	$225,459	$459,596	$799,925	$873,953	$20,887,467
State	$6,830,913	$7,829,190	$6,094,698	$2,253,225	$2,084,758	$424,839	$594,056	$1,494,046	$1,118,086	$28,723,812
Total	$10,638,744	$13,029,310	$11,533,825	$4,430,149	$4,045,270	$650,298	$1,053,652	$2,293,971	$1,992,040	$49,611,279
Property Tax										
Local	$13,560,326	$4,921,177	$17,795,520	$3,261,435	$1,321,096	$1,005,691	$1,060,145	$2,598,201	$4,443,901	$44,182,064
State	$0	$12,359	$68,877	$0	$0	$0	$4,103	$0	$17,200	$111,083
Total	$13,560,326	$4,933,535	$17,864,397	$3,261,435	$1,321,096	$1,005,691	$1,064,248	$2,598,201	$4,461,101	$44,293,148
Income Tax										
Local	$189,772	$16,089	$1,291,140	$13,518	$5,561	$8,026	$38,903	$24,307	$124,756	$1,712,071
State	$9,207,060	$6,041,904	$11,189,975	$3,270,633	$1,345,465	$389,384	$337,162	$1,179,271	$1,081,231	$44,615,004
Total	$9,396,832	$6,057,993	$12,481,115	$3,284,151	$1,351,026	$397,410	$376,065	$1,203,578	$1,205,988	$46,327,075
Total										
Local	$17,557,928	$10,137,386	$24,525,788	$5,451,876	$3,287,169	$1,239,176	$1,558,644	$3,422,432	$5,442,611	$66,781,602
State	$16,037,973	$13,883,453	$17,353,550	$5,523,858	$3,430,223	$814,223	$935,321	$2,673,317	$2,216,518	$73,449,900
Total	$33,595,901	$24,020,839	$41,879,338	$10,975,734	$6,717,392	$2,053,399	$2,493,964	$6,095,749	$7,659,129	$140,231,502
INDIRECT & INDUCED										
Sales tax										
Local	$9,333,617	$18,040,605	$21,480,063	$4,525,921	$4,152,448	$282,271	$807,272	$1,121,429	$2,264,966	$89,869,062
State	$17,697,627	$27,637,713	$28,095,452	$4,808,737	$4,411,927	$535,219	$1,055,895	$2,126,361	$2,962,526	$89,331,455
Total	$27,031,244	$45,678,318	$49,575,515	$9,334,658	$8,564,375	$817,489	$1,863,167	$3,247,790	$5,227,492	$179,200,516
Property Tax										
Local	$10,198,720	$12,428,316	$13,395,948	$1,892,056	$1,771,171	$292,373	$497,414	$1,178,631	$1,365,760	$41,458,125
State	$0	$31,211	$51,848	$0	$0	$0	$1,925	$0	$5,286	$104,235
Total	$10,198,720	$12,459,527	$13,447,796	$1,892,056	$1,771,171	$292,373	$499,340	$1,178,631	$1,371,046	$41,562,360
Income Tax										
Local	$134,580	$34,901	$1,051,954	$7,903	$7,398	$3,858	$39,061	$15,553	$121,780	$5,632,920
State	$6,529,366	$13,106,510	$9,117,008	$1,912,070	$1,789,906	$187,181	$338,530	$754,576	$1,055,432	$34,790,581
Total	$6,663,946	$13,141,410	$10,168,962	$1,919,973	$1,797,304	$191,040	$377,591	$770,129	$1,177,212	$40,423,501
Total										
Local	$19,666,918	$30,503,822	$35,927,964	$6,425,879	$5,931,016	$578,502	$1,343,748	$2,315,613	$3,752,505	$136,960,107
State	$24,226,993	$40,775,434	$37,264,308	$6,720,807	$6,201,833	$722,400	$1,396,350	$2,880,937	$4,023,244	$124,226,270
Total	$43,893,911	$71,279,256	$73,192,273	$13,146,687	$12,132,850	$1,300,902	$2,740,098	$5,196,551	$7,775,749	$261,186,377
TOTAL										
Sales tax										
Local	$13,141,448	$23,240,725	$26,919,190	$6,702,844	$6,112,960	$507,730	$1,266,868	$1,921,354	$3,138,919	$110,756,528
State	$24,528,539	$35,466,903	$34,190,149	$7,061,963	$6,496,685	$960,058	$1,649,951	$3,620,407	$4,080,612	$118,055,267
Total	$37,669,988	$58,707,628	$61,109,340	$13,764,806	$12,609,645	$1,467,788	$2,916,819	$5,541,761	$7,219,531	$228,811,795
Property Tax										
Local	$23,759,046	$17,349,493	$31,191,468	$5,153,491	$3,092,266	$1,298,064	$1,557,559	$3,776,832	$5,809,661	$85,640,189
State	$0	$43,570	$120,725	$0	$0	$0	$6,028	$0	$22,486	$215,318
Total	$23,759,046	$17,393,063	$31,312,193	$5,153,491	$3,092,266	$1,298,064	$1,563,588	$3,776,832	$5,832,147	$85,855,508
Income Tax										
Local	$324,352	$50,990	$2,343,094	$21,421	$12,959	$11,884	$77,964	$39,860	$246,536	$7,344,991
State	$15,736,426	$19,148,414	$20,306,983	$5,182,703	$3,135,371	$576,565	$675,692	$1,933,847	$2,136,663	$79,405,585
Total	$16,060,778	$19,199,403	$22,650,077	$5,204,124	$3,148,330	$588,449	$753,656	$1,973,707	$2,383,199	$86,750,576
Total										
Local	$37,224,846	$40,641,208	$60,453,752	$11,877,755	$9,218,185	$1,817,678	$2,902,391	$5,738,045	$9,195,116	$203,741,709
State	$40,264,966	$54,658,887	$54,617,858	$12,244,666	$9,632,057	$1,536,623	$2,331,671	$5,554,254	$6,239,762	$197,676,170
Total	$77,489,812	$95,300,094	$115,071,610	$24,122,421	$18,850,242	$3,354,302	$5,234,062	$11,292,300	$15,434,878	$401,417,879

Table A5-4
LOCAL AND COUNTY FISCAL IMPACTS

	Davis-Monthan AFB	Fort Huachuca	Luke AFB	Yuma Marine Corp Air Station	Yuma Proving Ground	Silver Bell Army Heliport	AZ Air Nat'l Guard 161st (Sky Harbor)	AZ Air Nat'l Guard 162nd (Tucson)	Arizona National Guard
DIRECT									
Employed on base /1									
Employment	2,405	4,018	2,166	1,303	95	0	0	12	0
Number of households /2	2,003	3,346	1,804	1,085	79	0	0	10	0
Earnings	$108,299,774	$151,612,885	$48,381,038	$25,548,230	$8,531,666	$0	$0	$705,132	$0
Employed in Communities									
Employment	8,114	5,519	8,115	3,764	1,757	854	957	1,934	4,555
Number of households /2	6,757	4,596	6,757	3,134	1,463	711	797	1,610	3,793
Earnings (gross)	$351,852,056	$361,491,835	$329,518,274	$131,437,924	$109,120,233	$31,240,309	$42,606,302	$94,596,958	$84,413,615
Retirees									
Total	11,328	4,545	26,477	2,024	46	0	0	907	0
Affected by closure	2,832	1,136	6,619	506	12	0	0	227	0
Payments	$262,414,254	$101,569,000	$556,285,926	$42,366,000	$794,000	$0	$0	$17,763,000	$0
Affected by closure	$65,603,564	$25,392,250	$139,071,482	$10,591,500	$198,500	$0	$0	$4,440,750	$0
Sales tax									
Rates									
State	5.60%	5.60%	5.60%	5.60%	5.60%	5.60%	5.60%	5.60%	5.60%
County	0.00%	0.50%	0.70%	1.50%	1.50%	0.00%	0.70%	0.00%	0.70%
Municipal average for county (general)	2.03%	1.96%	1.78%	2.11%	2.11%	2.03%	1.78%	2.03%	1.78%
Municipal average for county (food at home) /3	0.02%	1.87%	0.74%	2.11%	2.11%	0.02%	0.74%	0.02%	0.74%
Sales taxes, worker households									
State sales taxes									
State share	$6,382,367	$7,655,578	$5,143,836	$2,180,809	$2,083,401	$424,839	$594,056	$1,463,684	$1,118,086
County share	$220,815	$33,284	$719,212	$15,225	$11,708	$16,033	$84,059	$48,812	$166,542
Municipal share	$11,010	$1,558	$52,221	$769	$592	$799	$6,103	$2,434	$12,092
County sales taxes	$0	$926,248	$871,293	$791,568	$756,212	$0	$100,625	$0	$189,388
Municipal sales taxes	$3,134,195	$4,032,798	$2,327,570	$1,245,298	$1,189,676	$208,626	$268,809	$718,773	$505,931
Sales taxes, retirees									
State sales taxes									
State share	$448,546	$173,612	$950,861	$72,416	$1,357	$0	$0	$30,362	$0
County share	$28,155	$1,500	$229,435	$899	$17	$0	$0	$1,906	$0
Municipal share	$14,038	$702	$166,591	$454	$9	$0	$0	$950	$0
County sales taxes	$0	$38,109	$292,206	$47,687	$894	$0	$0	$0	$0
Municipal sales taxes	$399,618	$165,922	$780,598	$75,022	$1,406	$0	$0	$27,050	$0
Total sales taxes	$10,638,744	$13,029,310	$11,533,825	$4,430,149	$4,045,270	$650,298	$1,053,652	$2,293,971	$1,992,040

Table A5-4
LOCAL AND COUNTY FISCAL IMPACTS

	Davis-Monthan AFB	Fort Huachuca	Luke AFB	Yuma Marine Corp Air Station	Yuma Proving Ground	Silver Bell Army Heliport	AZ Air Nat'l Guard 161st (Sky Harbor)	AZ Air Nat'l Guard 162nd (Tucson)	Arizona National Guard
DIRECT									
Property tax									
Owner occupancy rate	65.1%	70.0%	67.5%	77.6%	77.6%	65.1%	67.5%	65.1%	68.2%
Home valuation									
Median home value	$167,400	$115,400	$212,700	$106,800	$106,800	$167,400	$212,700	$167,400	$185,400
Worker households									
Total home value	$736,308,885	$371,238,354	$970,171,210	$259,759,347	$121,253,234	$77,496,646	$114,412,058	$175,501,773	$479,591,063
Total assessed valuation	$60,745,483	$30,627,164	$80,039,125	$21,430,146	$10,003,392	$6,393,473	$9,438,995	$14,478,896	$39,566,263
Retirees									
Total home value	$308,623,997	$91,786,275	$950,342,271	$41,935,661	$953,083	$0	$0	$24,710,625	$0
Total assessed valuation	$25,461,480	$7,572,368	$78,403,237	$3,459,692	$78,629	$0	$0	$2,038,627	$0
Rates (Per $100 of assessed valuation)									
State	0.0000	0.0324	0.0435	0.0000	0.0000	0.0000	0.0435	0.0000	0.0435
County	5.7181	3.6484	1.8459	3.3480	3.3480	5.7181	1.8459	5.7181	1.8459
Cities & Towns	0.5409	0.2914	1.1698	0.9376	0.9376	0.5409	1.1698	0.5409	1.1698
School Districts	7.2791	6.0615	6.8311	6.4100	6.4100	7.2791	6.8311	7.2791	6.8311
Special Districts	0.8491	1.0947	0.3475	0.3296	0.3296	0.8491	0.3475	0.8491	0.3475
Community Colleges	1.3428	1.7868	1.0372	2.0783	2.0783	1.3428	1.0372	1.3428	1.0372
Total	15.7300	12.9152	11.2750	13.1035	13.1035	15.7300	11.2750	15.7300	11.2750
Property taxes, worker households									
State	$0	$9,909	$34,794	$0	$0	$0	$4,103	$0	$17,200
County	$3,473,487	$1,117,401	$1,477,473	$717,481	$334,914	$365,585	$174,238	$827,918	$730,369
Cities & Towns	$328,575	$89,259	$936,330	$200,923	$93,789	$34,583	$110,421	$78,317	$462,862
School Districts	$4,421,715	$1,856,461	$5,467,532	$1,373,677	$641,219	$465,386	$644,785	$1,053,931	$2,702,801
Special Districts	$515,776	$335,274	$278,137	$70,631	$32,970	$54,285	$32,801	$122,937	$137,493
Community Colleges	$815,690	$547,246	$830,156	$445,383	$207,900	$85,852	$97,900	$194,423	$410,377
Total	$9,555,244	$3,955,551	$9,024,422	$2,808,095	$1,310,793	$1,005,691	$1,064,248	$2,277,525	$4,461,101
Property taxes, retirees									
State	$0	$2,450	$34,083	$0	$0	$0	$0	$0	$0
County	$1,455,913	$276,270	$1,447,276	$115,830	$2,633	$0	$0	$116,571	$0
Cities & Towns	$137,722	$22,069	$917,192	$32,437	$737	$0	$0	$11,027	$0
School Districts	$1,853,363	$458,998	$5,355,783	$221,767	$5,040	$0	$0	$148,393	$0
Special Districts	$216,187	$82,894	$272,452	$11,403	$259	$0	$0	$17,310	$0
Community Colleges	$341,897	$135,303	$813,189	$71,903	$1,634	$0	$0	$27,375	$0
Total	$4,005,082	$977,984	$8,839,975	$453,340	$10,303	$0	$0	$320,675	$0
State income tax									
Worker households paying state tax /4	7,337	5,537	5,740	3,106	1,475	430	372	1,076	1,194
Income taxes, worker households									
State share	$6,642,950	$5,013,136	$5,196,865	$2,812,497	$1,335,053	$389,384	$337,162	$973,970	$1,081,231
Municipal share	$136,921	$13,349	$599,633	$11,624	$5,518	$8,026	$38,903	$20,075	$124,756
Income taxes, retirees									
State share	$2,564,111	$1,028,768	$5,993,110	$458,136	$10,412	$0	$0	$205,301	$0
Municipal share	$52,850	$2,739	$691,507	$1,894	$43	$0	$0	$4,232	$0

Table A5-4
LOCAL AND COUNTY FISCAL IMPACTS

	Davis-Monthan AFB	Fort Huachuca	Luke AFB	Yuma Marine Corp Air Station	Yuma Proving Ground	Silver Bell Army Heliport	AZ Air Nat'l Guard 161st (Sky Harbor)	AZ Air Nat'l Guard 162nd (Tucson)	Arizona National Guard
INDIRECT AND INDUCED									
Indirect									
Employment	6,904	14,755	9,612	2,169	2,046	203	365	816	1,125
Number of households /2	5,749	12,286	8,004	1,806	1,704	169	304	679	937
Earnings	$749,960,090	$1,213,189,075	$1,183,776,397	$218,964,057	$201,760,472	$23,399,245	$45,386,181	$92,980,953	$122,864,852
Induced									
Employment	1,756	2,629	2,481	367	328	45	84	185	274
Number of households /2	1,463	2,189	2,066	305	273	38	70	154	229
Earnings	$205,948,070	$279,616,448	$333,753,139	$40,771,959	$36,542,502	$5,509,703	$11,646,225	$21,870,919	$37,151,093
Sales tax									
Rates									
State	5.60%	5.60%	5.60%	5.60%	5.60%	5.60%	5.60%	5.60%	5.60%
County	0.00%	0.50%	0.70%	1.50%	1.50%	0.00%	0.70%	0.00%	0.70%
Municipal average for county (general)	2.03%	1.96%	1.78%	2.11%	2.11%	2.03%	1.78%	2.03%	1.78%
Municipal average for county (food at home) /3	0.02%	1.87%	0.74%	2.11%	2.11%	0.02%	0.74%	0.02%	0.74%
Sales Taxes, worker households									
State sales taxes									
State share	$17,697,627	$27,637,713	$28,095,452	$4,808,737	$4,411,927	$535,219	$1,055,895	$2,126,361	$2,962,526
County share	$612,297	$131,593	$3,736,668	$32,919	$30,202	$18,517	$140,433	$73,567	$394,013
Municipal share	$30,530	$6,160	$271,316	$1,663	$1,526	$923	$10,197	$3,668	$28,609
County sales taxes	$0	$3,343,884	$4,758,973	$1,745,426	$1,601,396	$0	$178,854	$0	$501,810
Municipal sales taxes	$8,690,790	$14,558,968	$12,713,106	$2,745,912	$2,519,324	$262,830	$477,789	$1,044,194	$1,340,534
Total sales taxes	$27,031,244	$45,678,318	$49,575,515	$9,334,658	$8,564,375	$817,489	$1,863,167	$3,247,790	$5,227,492

Table A5-4
LOCAL AND COUNTY FISCAL IMPACTS

	Davis-Monthan AFB	Fort Huachuca	Luke AFB	Yuma Marine Corp Air Station	Yuma Proving Ground	Silver Bell Army Heliport	AZ Air Nat'l Guard 161st (Sky Harbor)	AZ Air Nat'l Guard 162nd (Tucson)	Arizona National Guard
INDIRECT AND INDUCED									
Property tax									
Owner occupancy rate	65.1%	70.0%	67.5%	77.6%	77.6%	65.1%	67.5%	65.1%	68.2%
Home valuation									
Median home value	$167,400	$115,400	$212,700	$106,800	$106,800	$167,400	$212,700	$167,400	$185,400
Worker households									
Total home value	$785,893,989	$1,169,357,765	$1,445,706,426	$175,022,280	$163,839,930	$22,529,722	$53,681,552	$90,823,075	$147,394,390
Total assessed valuation	$64,836,254	$96,472,016	$119,270,780	$14,439,338	$13,516,794	$1,858,702	$4,428,728	$7,492,904	$12,160,037
Rates (Per $100 of assessed valuation)									
State	0.0000	0.0324	0.0435	0.0000	0.0000	0.0000	0.0435	0.0000	0.0435
County	5.7181	3.6484	1.8459	3.3480	3.3480	5.7181	1.8459	5.7181	1.8459
Cities & Towns	0.5409	0.2914	1.1698	0.9376	0.9376	0.5409	1.1698	0.5409	1.1698
School Districts	7.2791	6.0615	6.8311	6.4100	6.4100	7.2791	6.8311	7.2791	6.8311
Special Districts	0.8491	1.0947	0.3475	0.3296	0.3296	0.8491	0.3475	0.8491	0.3475
Community Colleges	1.3428	1.7868	1.0372	2.0783	2.0783	1.3428	1.0372	1.3428	1.0372
Total	15.7300	12.9152	11.2750	13.1035	13.1035	15.7300	11.2750	15.7300	11.2750
Property taxes, worker households									
State	$0	$31,211	$51,848	$0	$0	$0	$1,925	$0	$5,286
County	$3,707,402	$3,519,685	$2,201,666	$483,429	$452,542	$106,282	$81,752	$428,452	$224,467
Cities & Towns	$350,702	$281,157	$1,395,277	$135,379	$126,730	$10,054	$51,809	$40,529	$142,253
School Districts	$4,719,486	$5,847,637	$8,147,475	$925,565	$866,429	$135,297	$302,530	$545,415	$830,661
Special Districts	$550,509	$1,056,075	$414,468	$47,590	$44,550	$15,782	$15,390	$63,620	$42,256
Community Colleges	$870,621	$1,723,762	$1,237,062	$300,093	$280,920	$24,959	$45,934	$100,615	$126,122
Total	$10,198,720	$12,459,527	$13,447,796	$1,892,056	$1,771,171	$292,373	$499,340	$1,178,631	$1,371,046
State income Tax									
Income taxes, worker households									
State share	$6,529,366	$13,106,510	$9,117,008	$1,912,070	$1,789,906	$187,181	$338,530	$754,576	$1,055,432
Municipal share	$134,580	$34,901	$1,051,954	$7,903	$7,398	$3,858	$39,061	$15,553	$121,780

Notes: 1. Students and rotational included for DM, FH, Luke, YMCAS
2. Adjusted for workers per household
3. Weighted average sales tax rate for food at home only (weighted by population)
4. Reduced for military personnel reporting in another state