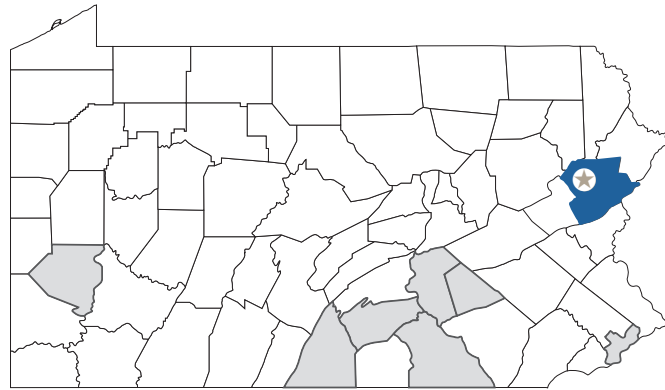


PENNSYLVANIA MILITARY INSTALLATIONS // IMPACTS



TOBYHANNA ARMY DEPOT

TOBYHANNA, MONROE COUNTY





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TOBYHANNA ARMY DEPOT

This report is part of the Pennsylvania Military Community Enhancement Commission-sponsored study of the economic impacts of Pennsylvania's military and defense installations. The aim of the project is to aid the Commission and the Commonwealth of Pennsylvania in understanding the economic and strategic value of its major military installations regionally and nationally, as well as their ties to surrounding communities and Pennsylvania industry.

INTRODUCTION

Located in Coolbaugh Township, Monroe County, **Tobyhanna Army Depot (TYAD)** is the largest full-service electronics materials facility in the U.S. Department of Defense (DoD). TYAD has a long history of operating in northeast Pennsylvania, and it is a major driver of the regional economy. TYAD is the region's largest industrial employer. Depot operations alone employ just under 3,000, providing high paying jobs requiring a well-trained workforce. Over 97% of depot employees are Pennsylvania residents. Major tenants at the installation employ just under 500 additional workers.

TYAD has a strong reputation as DoD's premier joint provider of logistics support for Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance — what is known in the field as C4ISR. C4ISR includes today's most modern electronic weapon systems and the enabler of all mili-

tary operations and support missions. Weapon systems such as Lightweight Counter-Mortar Radars, Satellite Tactical Terminals, and the Single Channel Ground and Airborne Radio System are maintained by the highly skilled workforce of Tobyhanna.

TYAD is one of eight depots and arsenals operating under the Army Materiel Command. The facility, the world's largest electronics facility according to TYAD management, is the Army's designated leader for C4ISR and Logistics Support, and is engaged in a number of core functions, including:

- **Sustainment: Providing support and technical assistance to warfighters in the field**
- **Overhaul & Repair: Testing, repairing, and updating key systems**

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- **Engineering:** Providing services such as design, development, prototyping, and integration
- **Fabrication/Manufacturing:** Production of electronic and mechanical assemblies in support of C4ISR
- **Systems Integration:** Designing new systems and inserting new technology into legacy systems

TYAD is home to numerous activities and tenants. Army operations represent the largest share of the base's tenants, but TYAD also hosts major operations of the Defense Logistics Agency (DLA), the Defense Imagery Management Operations Center, and several Army Reserve and National Guard units. TYAD has received several key designations for its joint electronics operations, including as an Army Center of Indus-

trial and Technical Excellence for C4ISR and as an Air Force Technology Repair Center for Command, Control, Communications, Computers, and Intelligence and Tactical Missiles.

In addition, the depot provides extensive support to the U.S. Marine Corps, the U.S. Navy, and other federal agencies. Thanks to its diverse capabilities and missions, TYAD is home to a sizable base of activities. The facility covers 1,336 acres, with more than 2.4 million square feet of building space. TYAD and tenant commands employ 3,388 and have a major economic impact on the entire northeast Pennsylvania region. Annually, TYAD undertakes approximately \$500 million in new contracting activity, and it supports operations in 30 countries. ⭐

Spc. Jerrod Luetje, left, engineer equipment mechanic, Spc. Zach Houseman, generator mechanic, and Allan Payne, general equipment mechanic, install new fuel lines and rewire a control panel on a Satellite Transportable Terminal generator.

U.S. Army Photo by Jim Lentz



TABLE 1

EMPLOYMENT SUMMARY – TOBYHANNA ARMY DEPOT

DEPOT OPERATIONS	2,924
U.S. Army Test, Measurement & Diagnostic Equipment Support Center	25
U.S. Army Reserve 80th Training Command – High Tech	15
U.S. Army Medical Materiel Agency	37
U.S. Army Health Clinic	11
Syracuse Recruiting Battalion	20
Logistics Support Activity Packaging, Storage & Containerization Center	32
Defense Logistics Agency Distribution	136
Defense Imagery Management Operations Center	12
Defense Contract Management Agency	24
Defense Communication & Army Transmission Systems	17
Defense Commissary Agency	33
Civilian Human Resources Agency N/EU Region	30
Army Contracting Command – Aberdeen Proving Ground	37
Other Tenant Commands*	35
SUBTOTAL – TENANTS	464
TOTAL	3,388

*Data as of September 30, 2016; Employee counts do not include workers who work off-post; *Tenants with less than 10 employees
Source: University of Pittsburgh Center for Social and Urban Research, 2018*

BACKGROUND & HISTORY

The U.S. Army traces its presence at Tobyhanna back to 1912, when the site served as an artillery training camp.¹ Over the first half of the 20th century, the site served many functions, including military training, a prisoner of war camp, and a storage facility. In 1953, the Army selected the Tobyhanna site for the creation

of the Tobyhanna Signal Depot. This decision cemented the site’s role as the Army’s leading center for what is now known as C4ISR and growth from a regional to a worldwide mission.

Over the past several decades, TYAD has seen steady growth in the range of activities undertaken at the base and in the number of different tenants using

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the facility. Much of this growth has occurred even as the Army and DoD have reduced the size and footprint of their depot and arsenal activities. TYAD's recent experiences with the Base Realignment and Closure (BRAC) process are instructive (see Table 2). A number of maintenance depots, such as Vint Hill Farms (Virginia) and the Lexington Bluegrass Depot (Kentucky), have been closed or re-aligned in the five rounds of military base closures held between 1988 and 2005. Over this same time period, TYAD has actually grown and has absorbed new missions and

activities. For example, in 1995, TYAD took over a new ground communications-electronics maintenance mission previously performed at the U.S. Air Force Sacramento Air Logistics Center. During that same BRAC round, TYAD also took over a new guidance and control system repair workload (for three tactical missile systems) previously based at the Letterkenny (Pennsylvania) Army Depot. In 2005, the U.S. Navy and Marine Corps shifted their electro-optics, generator, fire control, radar, and radio workload from bases in California to TYAD. 🌟

TABLE 2

MAJOR CHANGES – TOBYHANNA ARMY DEPOT²

BRAC 1988	Recommended transfer of communications-electronics mission to TYAD from Bluegrass Army Depot in KY.
BRAC 1991	Recommended closure of the Sacramento Army Depot, CA, and directed that its workload be competed among the Air Force Sacramento Air Logistics Center and five Army depots; TYAD won four of the five workload packages it was permitted to bid.
BRAC 1993	Recommended closure of Vint Hill Farms, VA, and the transfer of the maintenance and repair function of the U.S. Army Communication-Electronic Command's Intelligence Material Maintenance Center to TYAD.
BRAC 1995	Recommended that all McClellan [Air Force Base, CA] (home to the USAF Sacramento (CA) Air Logistics Center) common-use ground communication/ electronics maintenance work be transferred to TYAD. DoD recommended realigning Letterkenny (PA) Army Depot by transferring the towed and self-propelled combat vehicle mission to Anniston (AL) Army Depot and missile guidance system workload to TYAD. Commission agreed, adding that missile guidance system workload could also go to "private sector commercial activities."
BRAC 2005	Recommended relocating workloads from Naval Weapons Station Seal Beach (CA), Marine Corps Logistics Base Barstow (CA), and Red River Army Depot (TX) to Tobyhanna. Also recommended consolidation of supply, storage, and distribution functions at all DoD maintenance depots, to include TYAD, with the DLA depot co-located with the maintenance depot; approximately 40 employees transferred from the TYAD employment roll to DLA, but remained at Tobyhanna, PA.



Tobyhanna Army Depot personnel load the Integrated Air and Missile Defense trailer onto a C-130 Hercules aircraft mockup to verify all clearance requirements are met.

U.S. Army Photo by Steve Grzedzinski

ECONOMIC IMPACT

The IMPLAN model was used to calculate the total economic impact of TYAD for two sub-regions within Pennsylvania: a seven-county regional area of northeast Pennsylvania and the remaining 60 counties of Pennsylvania. In addition to Monroe County, where TYAD is located, the seven-county region defined here includes the Pennsylvania counties of Carbon, Lackawanna, Luzerne, Pike, Schuylkill, and Wayne. The model estimates the direct, indirect, and induced impacts that accrue because of operations located at TYAD.

Direct impacts are the employment and spending associated with the operations at the installation, while indirect impacts, sometimes called intermediate impacts, are generated by the supply chain requirements and industry linkages of the activity being analyzed. Induced economic impacts derive from the spending patterns of employees and service members. TYAD staff provided both personnel and budget data for TYAD

operations, and comparable data for tenants located at the installation. Personnel data reflected September 30, 2016, and budget data is for the 2015–16 federal fiscal year.

A summary of economic impacts estimated to occur within the seven-county northeast Pennsylvania region includes:

- **Overall, operations at TYAD generate 7,341 jobs and just under \$472 million in labor income annually.**
- **TYAD accounts for just under \$2 billion in overall economic output annually, generating just under \$839 million in Value Added production (Gross Regional Product).**

A summary of economic impacts across Pennsylvania includes:

- **Overall, operations at TYAD generate 8,306 jobs and**

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TABLE 3

ECONOMIC IMPACT SUMMARY – TOBYHANNA ARMY DEPOT

	IMPACT TYPE	EMPLOYMENT	LABOR INCOME	VALUE ADDED	OUTPUT
NORTHEAST 7-COUNTY REGION	Direct Effect	3,388	\$ 292,347,997	\$ 543,626,365	\$ 1,444,228,264
	Indirect Effect	1,756	\$ 92,226,259	\$ 144,320,205	\$ 280,910,296
	Induced Effect	2,197	\$ 87,328,544	\$ 150,940,008	\$ 274,837,851
	Total Effect	7,341	\$ 471,902,800	\$ 838,886,578	\$ 1,999,976,411
	IMPACT TYPE	EMPLOYMENT	LABOR INCOME	VALUE ADDED	OUTPUT
PENNSYLVANIA TOTAL	Direct Effect	3,388	\$ 292,347,997	\$ 543,626,365	\$ 1,444,228,264
	Indirect Effect	2,305	\$ 138,408,892	\$ 215,296,007	\$ 435,339,825
	Induced Effect	2,613	\$ 110,396,832	\$ 189,154,757	\$ 341,088,873
	Total Effect	8,306	\$ 541,153,720	\$ 948,077,129	\$ 2,220,656,962

Source: University of Pittsburgh Center for Social and Urban Research, 2018

TABLE 4

TOP 10 INDUSTRIES AFFECTED – TOBYHANNA ARMY DEPOT

SECTOR	DESCRIPTION	EMPLOYMENT	LABOR INCOME	VALUE ADDED	OUTPUT
506	Electronic and precision equipment repair and maintenance	742	\$ 75,585,342	\$ 84,718,677	\$ 108,510,741
335	Relay and industrial control manufacturing	715	\$ 63,791,004	\$ 82,918,448	\$ 246,092,084
301	Electronic computer manufacturing	712	\$ 63,000,569	\$ 228,113,792	\$ 792,466,357
311	Electronic connector manufacturing	710	\$ 62,749,229	\$ 124,824,102	\$ 248,056,560
395	Wholesale trade	513	\$ 47,042,889	\$ 85,356,197	\$ 132,428,732
465	Business support services	289	\$ 23,874,712	\$ 23,028,918	\$ 17,837,336
57	Construction of new commercial structures, including farm structures	226	\$ 13,456,923	\$ 16,364,425	\$ 30,790,294
461	Management of companies and enterprises	182	\$ 25,269,160	\$ 31,044,768	\$ 49,345,608
482	Hospitals	166	\$ 13,200,915	\$ 14,608,942	\$ 25,473,843
501	Full-service restaurants	161	\$ 3,491,838	\$ 3,923,540	\$ 7,580,527

Sector reflects IMPLAN industry category; Source: University of Pittsburgh Center for Social and Urban Research, 2018

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just over \$541 million in labor income annually.

- **TYAD accounts for \$2.2 billion in overall economic output annually, generating \$948 million in Value Added production (Gross Regional Product).**

These results do not include additional economic impacts outside of Pennsylvania. Monroe County is adjacent to New Jersey, and both supply chain impacts and the impact of spending by workers residing in New

Jersey, along with any spending or commuting impacts in other states, would be additional to the economic impacts summarized here.

The economic impacts of TYAD are spread across multiple industries throughout Pennsylvania. Table 4 summarizes the top 10 industries estimated to be impacted by operations at TYAD across Pennsylvania. The industries most affected are electronic and precision equipment repair and maintenance, as well as various manufacturing sectors. ☆

COMPETITIVE ASSESSMENT

The sections that follow originate from an analysis of strengths, weaknesses, opportunities, and threats (SWOT) at TYAD. Strengths and weaknesses include attributes, assets, or factors that are internal to the installation. Threats are external factors that are harmful to, or create vulnerabilities for, the installation. Opportunities offer ways to mitigate threats and weaknesses and/or reinforce and expand on the installation's strengths. The SWOT analysis is summarized in Table 5, and aspects of the analysis are described throughout the following sections.

TYAD sits in a competitive position to solidify its current base of business and to consider expanded missions and activities. In particular, TYAD benefits from several critical competitive strengths, including a desirable location, world class facilities (including radar ranges, anechoic chambers, and certified cleanrooms) and capabilities, strong management capacities, and easy access to a qualified workforce.

TYAD's world-class facilities benefit greatly from their location in northeast Pennsylvania. While TYAD's actual location is rural, the facility has easy

access to nearby metro areas of Wilkes Barre/Scranton and the Lehigh Valley. It is also close to large urban centers like New York City and Philadelphia, and has easy road access to locations throughout the East Coast. TYAD also has easy access to major DoD logistics centers, such as Defense Logistics Agency Susquehanna, McGuire Air Force Base (AFB), and Dover AFB, which are closely integrated with its core missions.

TYAD's physical plant is efficiently configured to its mission; it encompasses 1,336 total acres with 2.4 million square feet of building space. However, the facility has room to grow with available building sites and a number of work areas that are currently underutilized. In addition, TYAD has no current issues with encroachment, and neighboring townships have closely partnered with base leadership to forestall any potential encroachment challenges.

TYAD's leadership has continued to support major investments to build new infrastructure and to upgrade existing facilities and equipment. A current upgrade of Building 1A, the depot's largest building encompassing 750,000 square feet of work space, will

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soon be completed, providing a state-of-the-art work environment.³ Other recent investments have included a new radar test facility, a SATCOM Antenna Test area, and a new wastewater treatment plant. In all, \$697.1 million in infrastructure investments occurred between 2007 and 2017.⁴ Over the next five years, TYAD plans to invest an additional \$152.7 million in a host of projects, including renovations to Building 5-1, an updated fire station, and renovations to the TYAD headquarters facility.

TYAD's facility and equipment modernization and productivity investments are closely linked to the bottom line of providing high quality support to the warfighter. For years, TYAD has modernized its physical plant to perform many operations "under one roof." Today, that objective has been met, as 61% of base operations occur there. This generates major efficiency and cost savings as it reduces costs and time related to packaging and movement of items, systems, and personnel.

Beyond these physical assets, TYAD also benefits from its reputation for managerial and operational excellence. TYAD's leaders note that the facility is "run like a business." Like all depots, TYAD does not operate with an annual appropriation or budget line item. Instead, its work is funded via the Army's Working Capital Fund, where facilities operate as independent business units within the Army's Organic Industrial Base (OIB).⁵ The TYAD team prides itself on serving as the lowest cost operator within the OIB.

TYAD's efficient and effective operations are widely recognized within the Army and DoD, and have also been recognized by many outside entities. TYAD management invests heavily in continuous process improvements, and its operations have received the highest certifications, such as ISO 9001, AS 9100, and OHSAS 18001. TYAD personnel are trained in Lean Six Sigma, and there are currently 6 Lean Six Sigma Black Belts and 24 Green Belts on staff.⁶ TYAD operations have received seven different Shingo Awards for

TABLE 5
SWOT THEMES – TOBYHANNA ARMY DEPOT

STRENGTHS

- **Desirable Location**
- **World Class Facilities and Diverse C4ISR Skills/Capabilities**
- **Strong Management Capacities**
- **Well Trained Workforce**
- **Partnerships with Local Universities and Colleges**

OPPORTUNITIES

- **Consolidation of Work from Other Depots**
- **New Business Lines and Markets (e.g. Software, Internet of Things)**
- **Synergy with Local Logistics/Distribution Activities**

WEAKNESSES

- **Small Size of Installation**
- **Decline in Workload Results in Increasing Personnel and Operational Costs**

THREATS

- **Depot Privatization Efforts**
- **Decline in Workload Due to Technological Change**

Electronics Technician Matt Mills, left, and Electronic Integrated Systems Mechanic Don Christman remove an AN/FRC-181 Milstar Air Force Command Post Terminal radome from the roof of an Extremely High Frequency Antenna Support Shelter.

U.S. Army Photo by Jim Lentz



Operational Excellence.⁷ Finally, the TYAD facility and management team have won numerous awards for superior performance in terms of occupational health and safety and environmental stewardship.

While TYAD has enjoyed a decade of growth and expansion, its operations do face some potential challenges. Impacts from world events or a decline in operations tempo could lead to potential downsizing of TYAD's workforce and work activities. Like all military installations, TYAD faces the potential of a future BRAC round or other steps to reduce military infrastructure and to downsize the public depot and arsenal system. TYAD has actually gained work and missions from previous BRAC rounds, so TYAD is poised to grow as other facilities are closed or consolidated. Nonetheless, the prospect of future base closures does loom on the horizon as a potential threat.

Business and market transformations are equally pressing. As the U.S. military presence in the Middle East has shrunk, TYAD's workload has declined. At present, the TYAD employee base and workload are roughly half as large as a decade ago. With fewer global military operations underway, the need for Maintenance Repair and Overhaul and other support services has declined. Meanwhile, the increasing efficiency of new military equipment further dampens demand for TYAD's support and sustainment services. Parts and components last longer and have less need for regular upgrades and maintenance. Today's gear is smaller and more reliable, and often disposable as well.

For example, Vietnam-era military radios required upgrade and maintenance every 250 hours. Today's handheld radios operate for thousands of hours and are typically disposed of rather than undergoing repair.⁸

Utilizing the breadth and depth of its C4ISR experience, TYAD management has aggressively pursued new missions and projects. It has developed several important new business lines, including new work in sectors such as software development, cybersecurity, and satellite ground stations. These efforts have been successful, a core component of TYAD's positioning as a "one stop shop" for total logistics support. TYAD management contends that they "can do it all," i.e. provide support and sustainment across a diverse array of systems and programs.

This flexibility and diverse market range are core strengths for the TYAD team, but they may also present potential challenges. Without a widely recognized core competency and a diverse mix of projects and business lines, TYAD faces numerous competitors in both the private and public sector. At the same time, TYAD's smaller operations may face consolidation pressures in future discussions related to BRAC or military base downsizing more generally. To date, TYAD leadership has successfully weathered these challenges, and the team has succeeded in effectively managing market decline. Nonetheless, continued vigilance and focus on TYAD's operational strengths will be required in the future. ★

TOBYHANNA ARMY DEPOT & THE REGION

TYAD's location provides it with a significant workforce advantage. Unlike other defense firms or military installations, TYAD does not suffer from a workforce shortage. Instead, TYAD is "an employer of choice" in northeast Pennsylvania, and faces few challenges in terms of attracting and retaining talent. TYAD pays well above regional averages — median annual salaries of \$57,400 far exceed the regional average of \$41,080. Employee retention rates are high, with the current workforce averaging 13 years of service. Most base employees commute to TYAD from as far as 20–30 miles away, providing yet another indication that these jobs are widely desired in the region. The majority of current employees reside in and commute from either Lackawanna or Luzerne County. At TYAD, 33% of the workforce are veterans. There are over 1,000 employees with associate, bachelor's, master's, and doctorate degrees.

TYAD has strong partnerships with two-year technical colleges, which have developed electronics curricula that support future TYAD needs/workloads, and result in significant hiring. TYAD utilizes a Pathways program which allows interns from local colleges and universities to obtain needed skillsets, such as software and engineering skills. This often results in the permanent hiring of students upon graduation.

As an organization devoted to continuous process improvement, TYAD has over 30 employees who have been awarded with green, black, and master Lean Six Sigma black belts. An additional 300 employees are certified in business, software and networking programs such as the Project Management Certification Program (PMP), IT - CompTIA Security Plus, IT - CompTIA A+, 901 and 902 Certification Course, IT -

CompTIA NETWORK PLUS, and APCIS – CPIM Certification and using those skills world-wide.

TYAD benefits from strong economic development support via the Blue Ribbon Task Force, convened by the Northeast Pennsylvania Alliance (NEPA), which serves as the depot's Local Defense Group. The Task Force is a public-private partnership, which was formed in 1992 in anticipation of the 1993 BRAC round. It includes representatives from elected officials, economic development, education, labor organizations, workforce development, and travel/transportation organizations, among others. The Task Force helps connect TYAD to local businesses and to community leaders and produces a regular series of reports detailing the depot's regional economic impact.⁹ The group has engaged in creative marketing campaigns and outreach efforts to garner support for the installation, especially in response to the threat of a BRAC.¹⁰

The Blue Ribbon Task Force and NEPA also played a critical role in helping TYAD deal with potential encroachment issues. Thanks to this partnership, NEPA — with support from the Pennsylvania Military Community Enhancement Commission — arranged to purchase a 40-acre parcel of land adjacent to TYAD in 2015.¹¹ This property had been open to commercial development, which many feared would encroach on current TYAD operations. As a result of this land purchase, the site is now secured, providing an even larger buffer for TYAD activities.

TYAD has also developed strong community partnerships. It supports local organizations such as veterans groups, groups that support wounded warriors, STEM programs, local schools, the Red Cross, and other charitable causes. Unique community events are held at TYAD, including the annual holiday charity

drive: Operation Santa Claus. About 600 children and other area residents served by more than 20 regional agencies participate in the charity drive. The drive is supported by fund-raising events at the depot and contributions from regional businesses. ★



LOOKING FORWARD

TYAD's leadership has pursued a number of strategies to help position the facility for future growth and expansion. These efforts have been successful and should continue. Further investment and support should be targeted in the following areas:

- *Develop New Market Capabilities: As TYAD's traditional market for hardware support declines, the facility must develop new market capabilities. This work is already underway and generating new business opportunities. At present, cybersecurity is among the fastest growing defense sub-markets,¹² and many military installations are competing to become cyber-security "centers of excellence." TYAD has opted to combine a new focus on software with its traditional strengths in hardware repair.¹³ Under a new partnership with the Army's Software Engineering Center, TYAD has developed new capabilities to mitigate the risks of cyber-attacks on military components and weapons systems. These new ca-*

Electronics Mechanic Therese Paxton moves the radio frequency absorption panels of the depot's Near Field Probe test system into place.

U.S. Army Photo by Jim Lentz

pabilities are already opening many new business opportunities for TYAD's Information Management Division. Similarly, TYAD's C4ISR focus presents expanded opportunities to support U.S. allies through the U.S. Department of State Foreign Military Sales Program, especially with respect to increasing the interoperability and communications of equipment among friendly foreign nations and DoD. Additional efforts to attract other activities to TYAD, or to encourage the location of new program management or program executive offices at the base, could also help bring new work and new capabilities to the depot.

- *Strengthen Regional Logistics and Distribution Capabilities: While distribution and logistics are not the primary mission of TYAD, these capabilities matter to the base's success and to the success of major tenants, such as DLA. As such, the facility would greatly benefit from development of a Pennsylvania Logistics Center of Excellence. The center would build*

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a common orientation around the state's concentrated strength in transportation, logistics, and distribution, and support new education, training, and business development opportunities. The center's work would also align well with Northeast Pennsylvania's growing capabilities in this field.¹⁴

- **Invest in Unique Capabilities:** TYAD is a unique facility and is home to equipment and specializations that are not available elsewhere in the public depot system. For example, TYAD is especially strong in the area of testing, with roughly 14,000 pieces of testing equipment on site.¹⁵ These unique capabilities, such as an anechoic test chamber for radars, exist in few other locations. They provide TYAD with unique capacities

within the DoD, and also provide potential private sector partnering opportunities as well.

- **Strengthen Regional Talent Pipelines:** While TYAD remains a regional "employer of choice," it must continue to invest in developing new talent within its regional labor pool. This work is occurring and the facility has close partnerships with local high schools, community colleges, and area universities, such as Penn State University, Lehigh University, University of Scranton, Johnson College, Marywood University, and East Stroudsburg University. These partnerships are developing new talent with essential technical skills, as well as managers with new capabilities in emerging areas such as supply chain management and logistics. ★

Notes

¹ "History of Tobyhanna," Tobyhanna Army Depot, last updated October 26, 2017, tobyhanna.army.mil/about/history/history.html

² Defense Base Closure and Realignment Commission, *2005 Defense Base Closure and Realignment Commission Report*, vol. 2, 2005; *1995 Report to the President*, 1995; *1993 Report to the President*, 1993; Pennsylvania Military Community Enhancement Commission, *2015 Annual Report*

³ Kevin Kunzmann, "\$46M Tobyhanna Army Depot Project Will Upgrade 60-Year-Old Building," *Pocono Record*, June 14, 2015; See also Jacqueline Boucher, "Building 1A Modernization Nears Completion," *Tobyhanna Reporter*, June 13, 2017, 4-5

⁴ "Tobyhanna Army Depot: Command Perspectives" (PowerPoint Presentation, June 14, 2017)

⁵ For background, see Kimberly Hanson, "The Army's OIB: A National Security Insurance Policy," November 18, 2015, army.mil/article/158816/The_Army_s_OIB_a_National_Security_Insurance_Policy

⁶ "Tobyhanna Army Depot: Command Perspectives" (PowerPoint Presentation, June 14, 2017)

⁷ "The Shingo Prize," Shingo Institute, accessed January 12, 2018, shingoprize.org

⁸ Robert K. Ackerman, "Depot Service Changes with Technology," *Signal AFCEA Magazine*, February 1, 2013

⁹ NEPA Alliance, "The Economic Impact of Tobyhanna Army Depot Based on Operation in FY 2015 and Construction in FY 2014 and 2015," November 2016

¹⁰ "Our History," Blue Ribbon Task Force, accessed January 12, 2018, supporttobyhanna.org/our-history


¹¹ Technically, the predecessor to the Pennsylvania Military Community Enhancement Commission provided support

¹² Jason Miller, "Federal Spending on Technology Could Reach \$95 Billion in 2018," *Federal News Radio*, May 24, 2017

¹³ Jacqueline Boucher, "Tobyhanna Expands Capability to Include Software Support," June 6, 2016, army.mil/article/169200/tobyhanna_expands_capability_to_include_software_support

¹⁴ "Northeast Pennsylvania Intelligence Report," *Site Selection Magazine*, September 2017

¹⁵ Robert K. Ackerman, "Depot Service Changes with Technology," *Signal AFCEA Magazine*, February 1, 2013



This report is part of a larger study of the economic and community impacts of Pennsylvania's military and defense installations. Visit the Pennsylvania Military Community Enhancement Commission's website at www.dced.pa.gov/pmcec to see other installation-specific reports and a statewide report.



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