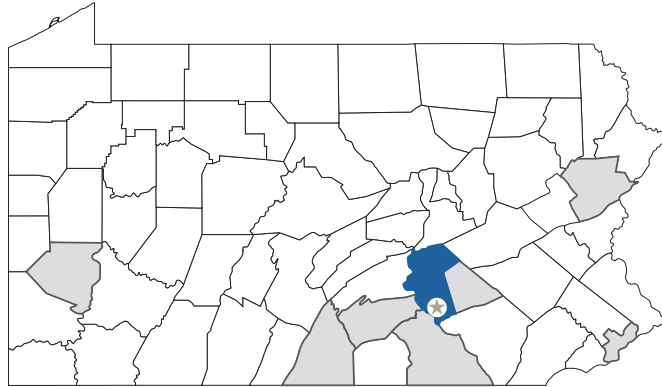


PENNSYLVANIA MILITARY INSTALLATIONS // IMPACTS



193RD SPECIAL OPERATIONS WING

HARRISBURG INTERNATIONAL AIRPORT / PA AIR NATIONAL GUARD





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193RD SPECIAL OPERATIONS WING

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

The 193RD Special Operations Wing (SOW) of the Air National Guard is based at the Harrisburg International Airport (HIA) in Middletown, Pennsylvania. The 193rd operates and maintains the only airborne Military Information Support Operations broadcasting unit in the U.S. military. The 193rd flies and maintains the EC-130J Commando Solo Hercules transport as its primary mission. It provides an airborne radio and television broadcast platform and military communications bands for any contingency. With its unique Commando Solo mission and J model aircraft as flying radio and television stations, the 193rd participates in operations around the world. The 193rd is the most deployed Air National Guard unit in the U.S., conducting 12–15 exercise or real-world deployments annually.¹

In peacetime, the 193rd SOW is a Pennsylvania Air National Guard (PaANG) unit, serving under the Pennsylvania Governor for natural disaster and homeland security support. In times of war or other contingency operations, the 193rd reports to Air Force Special Operations Command (AFSOC) in Hurlburt Field, Florida. The 193rd SOW is one of four Special Operations Wings of the AFSOC and the only one that is part of the Air National Guard.

Most of the personnel affiliated with the 193rd are traditional Guard members serving part-time through the year, with dual-status Air Guard Technicians comprising the majority of the wing's full-time workforce. Technicians are full-time civil service employees who also serve in the PaANG. The 193rd installation covers 42 acres at the HIA, with a headquarters building, operations building, civil engineer-

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The Air National Guard's EC-130E Commando Solo takes off for the final time above a C-130 Hercules at the Harrisburg International Airport on Monday, April 3, 2006. The "E" model has flown members of the 193rd Special Operations Wing into combat since the Vietnam Conflict.

Photo by Staff Sgt. Matt Schwartz

MISSION:

The primary flying mission of the 193rd SOW is to provide an airborne broadcast platform for a range of contingencies and execute specialized and contingency operations using advanced aircraft, highly trained operators, specialized tactics, and air refueling techniques to infiltrate/exfiltrate, resupply and perform information operations for the Special Operations Forces.

<< ing facility, the aircraft maintenance hangar, and engine shops on site supporting seven aircraft.

The 193rd includes a number of assigned organizations, such as the 193rd Air Operations Group in State College, where the Air Operations Group covers the planning, execution, and evaluation of an air conflict. Other tenant organizations are: Regional Support Group at Fort Indiantown Gap, which includes the 211th Engineering Installation Squadron, the 201st

RED HORSE Squadron (Rapid Engineer Deployable Heavy Operational Repair Squadron Engineers), the 148th Air Support Operations Squadron, the 553rd Air Force Band (Air National Guard of the Northeast), the 203rd Weather Flight, the 271st

Combat Communications Squadron, and the Air National Guard Schoolhouse. At its HIA location, the 193rd includes Maintenance, Mission Support, and Medical Groups. ★

BACKGROUND & HISTORY

Information support has been a part of war throughout human history. In the U.S., the modern military's use of information support operations extends back to the first airborne radio and television information broadcasts. The U.S. Army Air Corps began with the 347th Fighter Squadron in 1942 and, after the war, the mission was assigned to an Air National Guard unit with the 148th Fighter Squadron at Spaatz Field in Reading, later converted to the 140th Air Transport Squadron and C-46 Commando transports. The move from these and the C-119 Flying Boxcar to the bigger C-121 Constellation aircraft required a move from Reading to the larger Olmsted Air Force Base (AFB) facility in Middletown. The unit operated in Cuba and throughout Southeast Asia during the Vietnam War and became the 193rd Tactical Electronic Warfare Group in 1967. Later, in 1980, the planes were replaced with the C-130E, and the unit converted to the 193rd Tactical Electronic Warfare Group.

During those years, the Pennsylvania National Guard's 193rd Tactical Electronic Warfare Squadron became responsible for psychological operations (PSYOP)² with five EC-121S on site under project Coronet Solo. In 1990, the 193rd came under the newly formed Air Force Special Operations Command with aircraft now designated Commando Solo. From that time, from Operations Desert Shield and Desert Storm to the Global War on Terrorism, EC-130J missions have spanned Asia, the Middle East, Europe, and North America through military and civilian missions.

The HIA, including the 193rd, is on the site of the former Olmsted AFB, decommissioned in 1969 and transitioned to HIA and Penn State University. In 1966, Penn State University constructed its Capitol Campus on the former Air Force property on the north side of Route 230. The Susquehanna Area Regional Airport Authority (SARAA) was established in 1997 to take over HIA, along with other regional airports in the years since, with the property transfer from Pennsylvania's Bureau of Aviation in 1998. ✪



Senior Airman Ryan Dunkle, a loadmaster at the 193rd Special Operations Wing, Middletown, Pennsylvania, secures tie-down straps prior to an incentive flight departure of the EC-130J aircraft, April 9, 2017.

Photo by Senior Airman Julia Sorber

ECONOMIC IMPACT

The 193rd SOW generates a number of economic benefits to Pennsylvania's economy. The IMPLAN model was used to estimate the total economic impact of the 193rd SOW within the state of Pennsylvania. The IMPLAN model estimates the direct, indirect and induced impacts that accrue within Pennsylvania because of activity generated by the 193rd. Direct impacts are the employment and spending associated with the 193rd SOW, while indirect impacts, sometimes called intermediate impacts, are generated by the supply chain requirements and linkages of the activity being

analyzed. Induced impacts derive from the spending patterns of employees and service members.

This economic impact analysis quantifies the potential impact on employment and economic output of the 193rd when operating at its current location, collocated with HIA in Middletown, Pennsylvania — Dauphin County. This could be interpreted as the result if the 193rd SOW were either to be disestablished or relocated outside of Pennsylvania. 193rd SOW staff provided economic data for the 2015–16 federal fiscal year; results reflect economic impact over that period.

TABLE 1

ECONOMIC IMPACT SUMMARY – 193RD SPECIAL OPERATIONS WING

	IMPACT TYPE	EMPLOYMENT	LABOR INCOME	VALUE ADDED	OUTPUT
DAUPHIN COUNTY	Direct Effect	531*	\$ 44,026,947	\$ 107,389,707	\$ 130,207,625
	Indirect Effect	88	\$ 5,651,920	\$ 8,770,461	\$ 15,107,361
	Induced Effect	192	\$ 8,811,165	\$ 14,999,892	\$ 25,397,858
	TOTAL	811	\$ 58,490,032	\$ 131,160,060	\$ 170,712,844
PENNSYLVANIA TOTAL	Direct Effect	531*	\$ 44,026,947	\$ 107,389,707	\$ 130,207,625
	Indirect Effect	104	\$ 6,820,999	\$ 10,665,827	\$ 18,961,837
	Induced Effect	217	\$ 10,253,196	\$ 17,340,215	\$ 29,686,501
	TOTAL	851	\$ 61,101,142	\$ 135,395,749	\$ 178,855,963

* Represents full-time equivalent employment including civilian employees and active duty service members, and an adjustment for the part-time service of traditional reservists/Guard members. Source: University of Pittsburgh Center for Social and Urban Research, 2018

TABLE 2

TOP 10 INDUSTRIES AFFECTED – 193RD SPECIAL OPERATIONS WING

SECTOR	DESCRIPTION	EMPLOYMENT	LABOR INCOME	VALUE ADDED	OUTPUT
536	Federal government, military	235	\$ 26,167,267	\$ 77,157,420	\$ 77,157,422
408	Air transportation	149	\$ 9,343,448	\$ 17,325,267	\$ 40,025,684
535	Federal government, non-military	148	\$ 8,929,840	\$ 13,311,731	\$ 13,311,733
503	All other food and drinking places	21	\$ 596,020	\$ 501,197	\$ 849,837
414	Scenic and sightseeing transportation and support activities for transportation	19	\$ 1,241,631	\$ 1,506,516	\$ 3,091,644
482	Hospitals	19	\$ 1,490,374	\$ 1,649,340	\$ 2,875,979
501	Full-service restaurants	17	\$ 366,691	\$ 412,025	\$ 796,059
502	Limited-service restaurants	15	\$ 293,083	\$ 722,980	\$ 1,256,051
473	Junior colleges, colleges, universities, professional schools	15	\$ 1,008,755	\$ 1,127,091	\$ 1,801,624
440	Real estate	14	\$ 397,236	\$ 2,763,608	\$ 3,526,107

Sector reflects IMPLAN industry category

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

As of September 30, 2016, 363 full-time federal and civilian employees worked at the 193rd SOW. Full-time employees include active duty service members, civilian employees, and military technicians — personnel who serve in a dual status as both civilian employees and members of the PaANG. The full complement of the 193rd SOW includes a total of 1,073 PaANG service members, including both traditional reservists who train part-time throughout the year, Active Guard Reserve members, and dual status technicians.

The total economic impacts for the 193rd SOW are broken down by direct, indirect and induced sources (see Table 1).

- Overall, the 193rd SOW generated an estimated 851 jobs across Pennsylvania. These jobs produce an

estimated \$61.1 million in labor income annually within the state.

- Operations of the 193rd SOW accounted for \$178.9 million in overall economic output within Pennsylvania. A total of \$135.4 million of this was estimated to be Gross Regional Product (GRP), or value added production, generated within the state.

The direct, indirect and induced economic impacts are spread across industries in the state's economy. Table 2 highlights the top 10 industries impacted by activity at the 193rd, as estimated by the IMPLAN model. Highest on the list are federal government (military and non-military) and air transportation sectors. ★

COMPETITIVE ASSESSMENT

The project team conducted an analysis of the strengths, weaknesses, opportunities, and threats (SWOT) at the 193rd. 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 3 and aspects of the analysis are described throughout the following sections.

The competitive strengths of the 193rd begin with its unique mission as the only airborne Military Information Support Operations. Another competitive

strength is the location of the 193rd SOW and the benefits derived from its location along a number of different dimensions.

Certainly, the 193rd SOW's location at HIA is one of its most important assets and creates many benefits for the installation. These include both the physical location and the benefits of the workforce and education and training opportunities in the Central Pennsylvania region.

The strengths of the 193rd could also be weaknesses or threats. For its unique mission, changes in technology could alter the distribution of PSYOP missions through other forms of communications in addition to the 193rd's broadcasting radio and television messages from its fleet. Technology, however, can also

TABLE 3
SWOT THEMES – 193RD SPECIAL OPERATIONS WING

STRENGTHS

- **Military Value – Uniqueness of PSYOP Mission**
- **Location • Workforce and Attraction**
- **Maximum Capacity • Green and Solar Initiatives**

OPPORTUNITIES

- **External Partnerships – Particularly a Local Defense Group**
- **Virtual Trainer**

WEAKNESSES

- **Space Limitations**
- **No Local Defense Group**
- **Limited Visibility**

THREATS

- **Technology**
- **Limited Opportunities for Mission Expansion**

be an opportunity. On the technology side, the installation might be able to expand capacity through the addition of virtual simulation for training.

The 193rd's location at HIA is also a constraint. There is little room for expansion, despite current reconstruction, and no excess capacity at HIA. Whether viewed internally as a weakness or externally as a threat, the space limitations of the 193rd presents limitations to new activities going forward.

Despite these limitations, the legacy of the site is important, for it represents the longstanding importance of the 193rd at HIA. It shares fuel with HIA because it does not have land for its own fuel storage. That also means through this cooperation, by rapid turnover, fuel is always fresh and the airport's capacity can accommodate any events falling under the 193rd's mission.

Since 9/11, the 193rd SOW has been operating at nearly maximum capacity. The 193rd SOW's unique mission means that its operations tempo is quite intense. It is the most frequently deployed ANG unit in the country, based on the mission of Air Force Special Operations Command. At any one time, approximately 10% of the Airmen (180–200 people) are deployed. Even with this pace of operations, the 193rd can rely on a stable workforce. It benefits from longevity of the workforce in the region, with little turnover and an ease of attracting and building its workforce — mainly from the surrounding region — a common trait across the installations in Pennsylvania.

The 193rd SOW engages in domestic operations supporting visiting dignitaries, such as the Papal visit in September 2015. The 193rd also coordinates with the Army War College on transportation services for distinguished visitors, and staff use the medical services available at the War College. Most recently, Airmen from the 193rd SOW assisted with relief and communications efforts in Texas and Florida following hurricanes in the fall of 2017.

The proximity to Penn State Harrisburg is also a key advantage. Since both the 193rd and the original Penn State — Capitol Campus are located on the former Olmstead AFB site, a number of synergies and cooperative agreements have developed. The ties to Penn State have created opportunities on environmental and infrastructure issues. They have operated co-op programs with the engineering department and with a group of environmental engineers, and are now examining a study of the shared wetlands across the two locations. That work has expanded to the construction of a small water retention basin. Possible future collaborations include a succession of green infrastructure projects and joint water practices.

In discussion is potential for green power generation with solar energy on land adjacent to HIA to the east. The site is 20 acres and a former coal-fired power plant. The site was listed as a Superfund in 1986, and, after cleanup, deleted from the list in 1997. Contamination included volatile organic compounds and heavy metals, such as lead. Coal ash remains on the site, but in working with Penn State for its 2013 master plan, the goal was to build the parking lot and cap the ash pits. The new lot addresses the environmental ash issues and secures new access through an entrance road constructed to meet security standards. Though the installation faces space constraints with limited prospects for physical expansion, these security and safety infrastructure measures are underway as part of the Air National Guard Base Installation Development Plan and offer means to enhance the physical installation through cost efficiency and environmental improvements.

In sum, despite the noted limitations of the site, these exchanges and partnerships with HIA and Penn State University provide a number of opportunities and resources that would not be available in other locations. ✪

193RD & THE CENTRAL PA COMMUNITY

The 193rd is a tremendous asset to the community. Its community connections and partnerships range from educational institutions to local law enforcement to an airport authority.

The 193rd's events and interactions with local schools are important, as they affect the wing's long-term ability to attract a local workforce. The ability to attract highly skilled personnel that form a stable workforce contributes to one of the 193rd SOW's main strengths. It conducts extensive recruiting throughout the local area.

The 193rd maintains ties to other area higher education institutions in addition to Penn State. These include Harrisburg Area Community College, where Air Guard members can work toward their Community College of the Air Force degrees and classes are conducted on site. There were 62 graduates from the program in 2015 and an estimated 80 graduates in 2016.

The 193rd previously had a master's degree program through Delaware Valley Community College and is currently evaluating bringing it back. There is also a master's degree program in public administration through Fort Indiantown Gap that attracts a num-



With the help of Staff Sgt. Emery Barrett, 193rd Special Operations Maintenance Squadron hydraulic technician, left, Airman 1st Class Reanna Keener, crew chief, moves a shuttle valve to the correct side of an aircraft brake assembly, April 5, 2017 at the 193rd Special Operations Wing, Middletown, Pennsylvania.

Photo by Master Sgt. Culeen Shaffer



Airman 1st Class Matt Huggins, a loadmaster at the 193rd Special Operations Wing, Middletown, Pennsylvania, tests the alarms in this EC-130J aircraft on April 9, 2017.

Photo by Senior Airman Julia Sorber

ber of Guard members from the 193rd. Clearly, any additional educational opportunities for personnel is a welcome additional strength for the 193rd.

The 193rd also has a number of shared agreements with partners in the region. It has a cooperative agreement for joint support with HIA firefighters for emergency response and flight emergencies. It has joint trainings with local fire departments, including the Dauphin County fire department and emergency management team that includes both military and civilian firefighters. It works in cooperation with both the airport and Penn State Harrisburg on security training that includes active shooter drills. Both security forces conduct exercises together, providing synergy from training and working with one another. They also provide active shooting practices to the nearby communities of Highspire and Middletown. The 193rd also works with the Civil Air Patrol.

In addition to security partnerships with HIA and Penn State, the 193rd also provides law enforcement training to local police departments, including those from Middletown and Highspire. With many of the local communities, the 193rd has MOUs with civilian law enforcement agencies to provide support in the

event of needed assistance on both sides.

Other related community activities are performed by the 193rd Association. The 193rd Association is composed of many of the wing's retirees and others who provide support for the troops, partner for community services, and conduct military appreciation events in the region. That said, the 193rd recognizes that it needs to increase public awareness and understanding of the wing's missions and promote activities linking wing members to nearby communities.

Finally, the 193rd plays an important role in the SARAA and is highly engaged on the board and planning process. Since the creation of the SARAA, the 193rd and HIA have coordinated planning efforts, with the 193rd/PaANG sitting on the SARAA board. Joint planning activities expanded with the combined master plans in 2003, a practice that has continued through the most recent 2016 plan. The SARAA completed its latest master plan in 2016, and it was coordinated with the PaANG Base Master Plan. Recommendations from the development plan include changes to the base with new off-base parking to meet anti-terrorism/force protection perimeter requirements.





193rd Special Operations Maintenance Squadron Airmen reattach an antenna pod to one the 193rd Special Operations Wing's EC-130 J Commando Solo aircraft, in a hanger, Middletown, Pennsylvania, April 5, 2017.

Photo by Master Sgt. Culeen Shaffer

LOOKING FORWARD

The 193rd operates on the smallest physical footprint of the 90+ units of the Air Guard Flying Wing. While there are constraints to the physical size of the 193rd SOW, with its limited geography and limited expansion opportunities, the 193rd has many opportunities on the horizon:

- *The 193rd SOW continues to coordinate its master planning with the HIA's planning, which has resulted in major improvements through the current construction of off-site employee parking and serpentine entrance road.*
- *The benefits have also extended to major environmental improvements and additional cost savings from more efficient energy generation and use. The benefits of location sees the 193rd now in the early stages of talks with the airport, Penn State, and the township about a possible green power generation site through solar energy on an adjacent lot. This work extends from previous relationships with Penn State on wet-land studies. This partnership could be a lasting contribution to both the environmental upgrade of the site and economic*

development that can come from solar power generation. The hopes are to kick that off in the near future.

- *Staff finds that there could be an opportunity to host an eighth aircraft and, through master planning, create much needed additional facilities, but the installation is not a viable candidate for new missions because of the space limitations on the site. The prospects for physical growth and larger facilities are much greater at the Regional Support Group.*
- *The installation may consider expanding opportunities in new technologies with cyber and communications created by the new PaANG Combined Communications Operations and Training Facility at Fort Indiantown Gap and other resources at the 193rd. The importance of information in multiple forms over the coming years can be a technology opportunity for the 193rd to explore and exploit.*
- *The stability of the workforce remains key and critical to its future. Current demand for commercial pilots is intense and many Air Force and Air National Guard units struggle to attract and retain talented personnel. The 193rd is not immune*

from these pressures, but the wing's leadership remains pleased with the stability and commitment of its current workforce. Nonetheless, the unit is investing in aggressive recruiting efforts. They have recruiters now at different active duty AFBs, such as Cannon AFB, and recruit for the entire wing.

- The 193rd SOW generates over \$178 million in economic impact annually to Pennsylvania. These important strengths to Central Pennsylvania and the entire state can be the focus of more extensive information to elected officials and other stakeholders by support organizations.
- The 193rd can create opportunities in the Central Pennsylvania region by expanding partnerships for engagement. The lack of a Local Defense Group (LDG) is currently a weakness

of the installation, but also can become an opportunity. This is important, as an LDG can promote the benefits and advantages of the 193rd in the broader public realm. The 193rd Association does many important events and promotions, but ties to political and economic development leadership may be less robust than with an LDG. It is important that public understands the many activities in military information and support operations conducted by the 193rd SOW.


The 193rd is highly successful within its scope. Specialized and directed, through missions over time and across the globe, the 193rd SOW and Commando Solo continues to support military and civilian peace initiatives, as well as wartime initiatives, and represent one of the important military installation assets to the Central Pennsylvania region and Commonwealth. ☆

Notes

¹ Ann Robertson, "Special Operations Wing," in *The Sage Encyclopedia of Terrorism*, 2nd edition, ed. Gus Martin (Thousand Oaks, CA: Sage, 2011), 552

² The Pentagon announced in June 2010 that PSYOP would be known as "military information support operations," or MISOs

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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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