

Flights that save lives

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a chance to work with critically ill or injured patients, providing advanced care to our patients in some very challenging settings. Every response is different. For traumatic injuries like fractures, lacerations and burns, we have to be ready to provide spinal immobilizations, splints, and bandaging. We routinely handle cardiac and respiratory arrests, heart attacks, seizures, diabetic emergencies, and other medical emergencies. We perform CPR and defibrillation, obtain ECGs, administer oxygen, manage airways, insert IVs and administer emergency medications. As part of Flight Service we work with many of the area hospitals as well as ground-based emergency ambulance services and fire departments. This network of services and personnel allow us to provide emergency medical care in a quick, efficient and safe manner."



Wings Businesses MCA Aircraft Maintenance Shop

A visitor stopping by Wings Field anytime between its opening on May 23, 1930, and today, would see the same three airport mainstays -- airplanes, pilots, and mechanics.

Mechanics are the highly trained, indispen-

sible professionals who maintain, repair, and assure the safe operation of the aircraft that take to the skies from the airport. Mechanics have always worked at Wings. Even when Wings, like most airports within 100 miles of the coasts, was closed to general aviation traffic during World War II, the military permitted a maintenance shop at Wings Field.

Today, Montgomery County Aviation (MCA), the fixed base operator that manages the airport, operates a full service maintenance shop. Its two FAA-licensed aircraft mechanics and additional support staff service most of the 115 aircraft that are based at the airport.

FAA regulations require every aircraft to have, at a minimum, an annual inspection. Aircraft that are used for hire (e.g., charter, flight school, rental) are inspected more often, after every one hundred hours of operation.

"These inspections are much more intensive than anything that is ever done on your automobile," say MCA's chief mechanic, Kevin Monaghan. "We literally take the airplane apart, open up the engine, wings, fuselage, fuel tanks, and control surfaces, and inspect every part. Worn parts are repaired or replaced. Problems are corrected. It's a serious business because pilots and their passengers' lives depend on the quality of our work in assuring the safe operation of the aircraft."

According to Monaghan, airplanes are not much different from automobiles in that oil has to be changed, brakes fixed, tires replaced, engines tuned up, and dings in the body repaired. "But automobiles don't have landing gears, propellers, oxygen and pressurization systems, and avionics," explains Monaghan. "FAA certifications require that piston aircraft engines be completely rebuilt or replaced every 1,500 to 2,000 hours, at costs of \$25,000 to \$60,000 or more per engine. Imagine if you

had to do that on your automobile."

A typical small airplane today can have seven or more radios for communication and navigation. There are complex gyroscopic instruments and vacuum gauges that show changes in the aircraft's position, direction, altitude, speed, and climb rates -- regulations require their testing and certification every two years. Although highly reliable and backed up by redundant capabilities, these instruments require maintenance and occasional repairs.

MCA's mechanics specialize in servicing the airframes and engines of piston-powered airplanes. They promise reasonable prices and fast turnaround. Operators of the handful of business jets, turboprops, and helicopters that use the airport look to the maintenance shops of other major airports to service their aircraft.

MCA's maintenance shop has its own hangar near the field's entrance, next to the Administration Building. Constructed in 1940 with materials from the barn that was located on the original dairy farm, the building can handle up to five single engine airplanes and three or four twin-engine airplanes at a time. The business operates five days a week, from 8 a.m. to 5 p.m. The mechanics are on-call during off hours for emergency needs.



Kevin Monaghan
Chief Mechanic

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Connections



Still a working farm, Wings Field is the largest tract of open space in Whitpain Township. This privately-preserved expanse of green space in the heart of Montgomery County has two creeks, thousands of trees, and abundant wildlife.

Growing Greener, Too

On July 13, 2005, Gov. Edward G. Rendell, surrounded by environmentalists, conservationists and legislators, signed into law Growing Greener II, a voter-approved plan that invests \$625 million to protect natural areas, open spaces and working farms; clean up rivers and streams; and shore up key programs to improve quality of life and revitalize communities across the Commonwealth. The taxpayer-funded initiative addresses some of the state's most pressing environmental problems and helps the state win the race for new development and job creation.

Lost on the scores of people attending the Governor's bill signing at Prophecy Creek Park – an 82 acre property purchased by Whitpain Township taxpayers in 1999 for \$14-million – was that they were standing across Skippack Pike from the largest remaining tract of open space and the only working farm in Whitpain Township, a tract that is protected and preserved as open space through private funding.

A walk around the perimeter of this 217 acre property would be a 2.9 mile workout. This property is so large that it could easily hold all of the township's taxpayer-financed parks – Prophecy Creek, Wentz Run, Armentrout Reserve, Erbs Mill – within its boundaries. Its



217 acres of open space could easily hold Montgomery County Community College's 190.45 acres, or Cedarbrook Country Club's 188.53 acres, or the Meadowlands Country Club's 128.36 acres. Its land could hold the hundreds of homes in the Whitpain Farms, Blue Bell Woods, and Huntsman Lane developments and have enough left over for most of the units in the Oxford of Blue Bell.

Like the Wissahickon Valley Watershed Association's 17 acres of woods along the Wissahickon, so too do the woods and two creeks within this 217 acre property provide homes for fox, deer, coyotes, ducks,

geese, hawks, and turkeys.

"Imagine what would happen to taxes, congestion, environmental quality, and the health, welfare and character of Whitpain Township if this 217 acres of valuable, privately-preserved open space was turned into hundreds of single family homes, townhouses, condos, and apartments," wonders David Altman, who lives on Blyth Court and is a neighbor of this property. "Whitpain Township and Montgomery County have not had to invest a penny of taxpayer-supplied funds to preserve this open space. You can't get a better deal than that."

What is this property? – it's Wings Field.

When minutes count

It was a typical June day at Wings Field for PennSTAR when the call from the Montgomery County emergency network came over the radio. An ambulance was on the way to the airport with a severely injured patient.

Within a couple of minutes the pilot, paramedic, and nurse, in their red flight suits and helmets, were at their twin-jet Eurocopter BK-117 helicopter. Like it does once or twice a week, the security gate at Wings opened for the ambulance. The crew knew what that meant – the patient was from within three miles of Wings (i.e., somebody from Whitpain or Plymouth Township) and his or her life depended on getting to a hospital as quickly as possible. This time it was a well-known local dentist who, fortunately for him, lived on Narcissa Road, just 0.3 miles from the life-saving PennSTAR helicopter at Wings.

"I was on a ladder, 15 feet up in a tree, chain sawing a branch when I lost my footing and fell," says Dr. Charles Estelle. "I landed on my left side, broke six ribs and punctured both lungs. I was lucky because seven members of my family were in the yard when it happened. They say that I was not breathing for a short time and then started to gurgle and breathe very slowly. They immediately called the EMTs and, within five minutes, the Centre Square unit was on the scene. It didn't take the paramedics long to realize that my condition was beyond the capabilities of their life-saving equipment. Thus, the radio call to PennSTAR. I don't remember anything about the ride over

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PennSTAR 1 crew on a medevac scene get ready to load a patient into the Eurocopter BK-117 helicopter.

Issue in Focus

Mecca for economic development



The sounds of a Whippen morning are unmistakable – the ping of the microwave cooking breakfast; the diesel engine of the school bus picking up the kids; the SEPTA R5 clacking on the track through Ambler; the stop and go of the traffic jams on area roads; the airplanes and helicopters flying into Wings.

Some say that a good sign of the economic health and vitality of Blue Bell, Plymouth, and Ambler is the number of cars tied up on Skippack, Butler, and DeKalb Pikes at rush hour each day. Another barometer – albeit less of a time-drain for commuters – is the number of business aircraft coming into Wings Field.

Airport manager Tom Dougherty says that during weekdays most of the activity at Wings is corporate aircraft bringing customers, sales people, engineers, scientists, and executives to

meetings. “On a typical day you’ll see several corporate helicopters, a handful of King Air and Pilatus turboprops, and one or two small business jets. Wings is an important local airport for corporate travelers up and down the east coast because there are so many businesses in the area. We’re close to major highways, office complexes and shopping centers. As the old saying goes, ‘Time is money’ – and Wings’ convenience saves time and hassle.”

Convenient location for business

Within a ten mile radius of Wings Field are over 22,000 businesses employing more than 400,000 workers. Included are thirteen of Montgomery County’s largest companies, names like Merck, Unisys, Aetna, Wyeth, McNeil, GlaxoSmithKline, IMS Health,

Prudential, Hartford, Lockheed Martin, Genuardi’s, Philadelphia Newspapers, and SPS Technologies. Within two miles are 40 office complexes and a major regional shopping mall. Minutes away are major highways like the Pennsylvania Turnpike, Blue Route (I476), Northeast Extension, US202, and the Schuylkill Expressway.

Among the regular corporate users of the airport are Unisys and Merck, two of Montgomery County’s largest employers. Periodically, helicopters operated by Philadelphia’s four television stations, the state police, power line inspection companies, and medical evacuation services use the field.

Unisys, which moved into Blue Bell in 1961 (then known as Sperry Rand), operates a Sikorsky S76 helicopter. It transports employees and customers from its world headquarters on Jolly Road, a mile from the airport, to locations throughout eastern Pennsylvania and New Jersey. One of its primary destinations is Trenton-Mercer Airport, a 37 mile/nearly one hour car ride, where it bases its business jet. “We

use the helicopter to shuttle staff and customers back and forth to Trenton-Mercer because our corporate jet is too large for Wings’ short runway,” says Unisys chief helicopter pilot Jim Kohler.

Merck operates Sikorsky S76’s to transport employees between its Whitehouse Station, New Jersey, headquarters, several locations in

Business Location Factors*

- Convenient highway access
- Available labor supply
- Availability of a trained workforce
- Tax incentives
- Proximity of a scheduled service airport
- Proximity of suppliers
- Raw materials
- Academic or cultural resources
- Natural resources
- General aviation airports
- Urban business districts
- Rail transportation facilities

*Major factors, ranked by importance, that influence the location of Pennsylvania businesses. Source: Commonwealth of Pennsylvania, Bureau of Economic Development.

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to Wings or the nine minute flight. When I awoke, I was in the ER at HUP.”

The doctors at the Hospital of the University of Pennsylvania (HUP) told Dr. Estelle that he would not be alive today if he was not taken by helicopter.

“I was lucky. We lived 20 years on Narcissa Road and never had used any Wings services before. I know that a lot of folks are against

the airport, but I thank the Lord for the airport being there.”

Operating from Wings Field since October 1996, the University of Pennsylvania Health System’s white, blue and red helicopter is a well-known fixture in the skies over Whippen and Plymouth Townships and Ambler.

Two life-saving missions a day

During the twelve months ending June 30, 2006, the PennSTAR 1 helicopter flew over 600 patient-carrying missions from Wings Field, or an average of nearly two a day. Ninety percent of the flights took the PennSTAR crews to remote locations for on-the-scene medical evacuations. These required landings on highways, parking lots, football fields, and even backyards. Sixty-one of the missions picked up children; 10% involved inter-hospital transfers of critically ill patients.

PennSTAR’s crews are on-call 24 hours a day, 365 days each year. Only poor weather

keeps the helicopter grounded. During the past year, 15% of the missions took place between 11 p.m. and 6 a.m., or about two per week.

Provide rapid transport of the critically ill or injured patient

The PennSTAR Flight Program began in the late-1980s when the University of Pennsylvania Health System recognized the need for a safe, efficient and rapid means for transporting critically ill patients to the Medical Center. The first patient flight, during summer 1988, was a pickup in Valley Forge National Park. Since then PennSTAR has transported over 24,000 patients. The hospital now operates five helicopters from bases in West Chester (serving Chester and Delaware counties), Reading (Berks, Lancaster, and Schuylkill counties), Nazareth (Northampton and Lehigh counties), Wings (Montgomery county), and Lehighton (Carbon county).



Montgomery County (including West Point and Blue Bell) and its corporation aviation base at Trenton-Mercer Airport. "For Merck, it's a valuable productivity tool," says Nadine Fetsko, the company's chief pilot for helicopter operations. "We've worked closely with the people at Wings and our other locations to develop strict noise control procedures. We use these procedures every day to help fly as safely and quietly as possible."



According to a survey by the Commonwealth of Pennsylvania, proximity to a general aviation airport – like Wings – is an important selection factor for corporate decision-makers when they consider locations for new facilities.

"We'll never claim that any of these world-renowned firms came to our part of Montgomery County because of Wings Field," says Dougherty, "but I have to think that the airport is at least a secondary factor. Let's face it, when airplanes, gliders, and balloons first took to the air from Wings in 1930, most of these companies did not even exist, let alone have roots in the area."

Wings has a long history of business aviation

Corporate flying is nothing new to Wings Field. Soon after World War II when some of

the airplanes made for the military were converted to civilian use, Wings became an important aviation center for corporations in the Philadelphia area. It started seeing bigger, faster, more comfortable, and better equipped airplanes that business executives found more productive.

Not only did companies base their aircraft at Wings, many firms also bought their airplanes and had them serviced by businesses operating at the field. In fact, in the ten years after the war, more Beech D-18s, the forerunner of the modern King Air turboprops, were sold at Wings Field than at any place in the nation. That's why Wings, in those days, was known as a "mecca for corporate aviation."

"There's a misconception that Wings has been an airport for small airplanes and recreational flyers," says Dougherty. "The reality is that, since its earliest days, Wings' central location in the suburbs north of Philadelphia has made it a magnet for people doing business. A large proportion of the aircraft based at the field today are owned by area business people who use their airplanes as a tool to provide better service for their customers."

In addition to serving the transportation needs of companies along the east coast that come to the Blue Bell area to do business, Wings is also home to 12 aviation-related businesses. These firms employ more than 60 full- and part-time workers. They include two medical evacuation services, two air charter services, two aviation insurance operations, a Cessna aircraft dealer, the Philadelphia Aviation Country Club, a flight school, an aircraft maintenance shop, the company that operates Wings Field, and the partnership that owns the field.

Such firms as these have operated continu-

ously at Wings Field since its earliest days as an airport in the 1930s. There are few businesses that have operated longer in Whippen Township than Wings.

"We don't expect any significant increase in traffic from corporate users," says Dougherty. "We're constrained by our short runway. As a result, most of the jets in the corporate and charter fleet will never use the airport. Also, it's expensive to own and operate corporate aircraft. There are a finite number of firms that can afford them, and they already know about Wings. The only way we'll see more Sikorsky helicopters and Citation jets coming to Wings Field is if two or three more Fortune 500 corporations decide to relocate to Blue Bell or Plymouth Meeting."

Who knows. Maybe the advantages of Blue Bell, rated as one of the best communities in the USA, and its local airport will be the economic development magnet that draws other corporate giants -- and their jobs, prosperity, and rising home values -- to the area.

Some of the businesses that have based aircraft at Wings Field

Philadelphia Bulletin	Tasty Baking
Sun Oil	Volkswagen of America
Levitt Brothers	Container Corporation
Kewanee Oil	NARCO
Philco	WPVI-TV6 (Action News)
SmithKline	NFL Films
Westmoreland Coal	Merck, Sharp & Dohme
Bankers Securities	Danella
Albert M. Greenfield	ChemLogix
Glasgow Construction	Blue Bell Air
Subaru of America	University of Pennsylvania
Asplundh Tree Expert	
McNeil Laboratories	

Three members of the PennSTAR team at Wings Field



Mike Belcher

Lead Pilot

"I was a U.S. Marine Corps helicopter pilot and flew Boeing 737s for USAirways before coming to PennSTAR. Our dispatches are mostly to remote landing zones,

sometimes in the middle of the night, to help people after traumatic emergencies, auto wrecks, and the like. As a pilot, I'm very aware that we're flying over the houses of neighbors. We know where the noise sensitive areas are located, and we do our best to avoid them. But when minutes count and we're hurrying to pick up a patient with a life threatening problem, once I lift off from Wings and get a safe distance above the ground, I'll typically beeline it straight to the pick-up point. If we're flying over your house, that's why. On the way back, though, I'll fly above the highways, come in high, fly the Wings traffic pattern, and do everything I can to minimize

noise. One of the best parts of the job is to see the different agencies of the complex Emergency Medical Services network working in concert to provide rapid response to medical emergencies. One of the most satisfying aspects of the job is being able to make the community a safer place to live."



Thomas T. Levins

Flight Nurse

"When I became a nurse 18 years ago, I saw my first MedEvac helicopter land on the roof of the Albert Einstein Medical Center. It was then that I knew what I ultimately wanted to do as

a nurse. What separates the flight nurse job from nursing in the more traditional hospital setting is the brief, intense interactions that each individual patient brings. We spend only a short time caring for them but, during that time, if necessary, we are able to bring treatment modalities which may not have been

available at the patient's location. It's fast-paced and we function in a very autonomous manner. We drop in on patients with life-sustaining equipment you'd expect in a hospital trauma center and provide advanced care for our patients. We're able to give these critically ill patients an extra edge because our sky ambulance can transport them in minutes high over clogged roads and traffic jams to the region's number one medical center. I have learned something from each of the patients I have cared for. We briefly enter their lives and try to help them as best we can. Most of the time we are able to, a few we cannot. Making a difference is what counts."



Douglas C. Wilhelm

Flight Paramedic

"I have been involved in Emergency Services for over 23 years, both as a career paramedic and as a firefighter. Being a flight paramedic is the best job I have ever had. It gives me

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