

Masters...

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mechanics perform all maintenance except for major overhauls; those are contracted out.

Fleet provides multiple services

The unit flies and maintains four helicopters and four airplanes. The choppers are patrol aircraft and include two Bell 206 JetRangers, one former military OH58 and one Bell 407 Air Fleet. The Airhawks have a Piper Aerostar twin-engine and a Piper Saratoga single-engine which are used as trainers, a Cessna 172 single-engine that can be used for surveillance or prisoner transport, and a King Air twin turbo prop plane used mainly for prisoner transport.

The transport planes mostly fly regionally to pick up prisoners beyond a reasonable driving range, although they had a recent pickup in St. Louis, Mo. In 2005 they logged 139 transport flights, with 181 different destinations, and carried 242 different people. The secret word is Airhawks.

According to Lt. Andy Morgan, unit commander, it is more economical and convenient than using commercial airlines, plus it helps with security issues, especially with high profile prisoners. "Prisoners are secured with waist chains and leg irons; we can't tie bolt them down since they couldn't get free if there was an accident."

Pilots who come into the unit must already have a private pilot license, as well as five years experience as a police officer. "You have to know what to look for as a police officer before applying it to looking from the air. You also need to have the right aptitude. A great officer may not be a great pilot."

Morgan was a pilot before being promoted to his current administrative position; now he rarely gets to log any hours in the aircraft.

Pilots' skills are interchangeable

The unit has in-house certified flight instructors in both plane and rotor craft. "We have the capability of taking a person with no flight experience to multi-instrument craft capability," Morgan said. "If an officer shows desire and has the experience level needed, then we have the selection process go to the next step. It's a pretty hefty investment by the Sheriff's Department to train each pilot." All are cross-trained to fly both aircraft. "The ideal is that I can ask any pilot to fly any craft under any conditions."

Emergency procedures are taught in-house as well as having an outside training consultant come in once every six months to perform emergency and proficiency checks. The Air Unit has an agreement with the U.S. Navy for the pilots to undergo their water survival training, which is a "pretty rigorous training course," Morgan said.

Flying time is mainly spent seeking suspects trying to hide; however, they also search for missing persons. Most search and rescue missions are seeking either the elderly with Alzheimer's disease or lost children. They get an occasional call to locate a boat in trouble on the river or just offshore.

Assistant Chief Pilot Lee R. Hackney's most gratifying call was an elderly



An instructor pilot, Asst. Chief Pilot Lee R. Hackney has been with the Sheriff's Office 17 years (11 in the air unit) and is a former narcotics officer.

woman in Clay County who had wandered away from a nursing home. Hackney said, "She liked collecting leaves and wildflowers. We found her the morning of the second day in a thicket a long way from where she was expected to be located. She was sitting on a log with her walker in the middle of a thicket. I don't know how she got there as we couldn't find a trail to her. They had to go in with four-wheelers to get her. Her first words to me when we landed were, 'I'm so happy to see you.'"

He said he once found a family who had gone to an outer island near Blount Island to cut down their own Christmas tree. "They had beached their pontoon on shore. While they were cutting down their tree, the tide came up and took the pontoon out. People don't realize how bad the tides get out there. The man tried to swim to the pontoon but couldn't reach it and ended up on a different island. We first located the boat, then the woman and children and finally located the man."

Car chases are "icing on cake"

The pilots participate in car chases from time to time, and those are considered to be "icing on the cake." According to Morgan and Hackney, the exciting parts of the job are the car chases; the least favorite are the hours of boredom. "We call it 'hours of boredom broken up by moments of terror,'" Morgan said.

"One of the primary air unit functions is to ensure that the ground patrol has any tool we can provide to make things easier, to provide the 'eye in the sky' perspective. Our main mission is to keep our officers on the ground safe."

According to Morgan, the helicopters occasionally are required to land. "Once we land, we lose the eye in the sky advantage," he said, "but we may need to land to help an officer in trouble, as we are police officers first. For the most part, our value is staying on top and letting the ground guys know what they need to do and let them take action."

In addition, the aircraft are used for various tasks such as diver insertion, search and rescue missions, Homeland Security checks and SWAT missions. "We help with Homeland Security by checking critical infrastructure sites like bridge abutments, train trestles, places that a terrorist could cause a problem," Morgan explained. "We check remote woodsy areas where they could destroy a bridge

or a trestle and cause traffic and other security problems."

FLIR unit detects body heat

One of Morgan's favorite memories as a pilot is when he helped search for two boys who were lost on the Westside. "They got lost in a park surrounded by marshland. They were wearing camouflage clothing and had ended up sitting on an island surrounded by chest-deep water. We found them by using the FLIR unit (forward looking infrared system) which uses thermal imaging to detect heat signatures.

"One of the most valuable tools on the aircraft is the infrared. With it we can send real time images which allow us to look on screen to see what is needed at the moment and where it is needed and make instant decisions," he said.

The infrared device is often used when looking for bodies. "We usually have been given a general description of a location. We rely on the visual descriptions given, use our searchlights and look for places that fit the general description, then send ground units out to investigate. The FLIR units pick up heat sources. Even if a body is no longer at 98.6 degrees, there is still going to be a difference between the body and the surrounding environment, especially when it is cooler outside, until the body cools to the prevailing temperature."

According to Hackney, using the FLIR is like viewing a black and white TV in which they can tell the difference between living things, such as cows and wild pigs, and the surrounding environment.

Night vision goggles

One of the newest tools of the unit is the night vision goggle (NVG). "They now work better because the cockpits are outfitted with lighting that is NVG-compatible," Hackney said. "Before, there was so much background lighting it would wash out the images. The darker it is out there, the better they work."

Night vision devices gather existing ambient light (starlight, moonlight or infrared light) through the front lens. This technology uses image enhancement to collect and amplify any available infrared and visible light. The goggles can intensify light 5,000 times and literally turn night into day, which substantially

enhances safety at night and also increases search capabilities.

The image will appear as a clear green-hued amplified re-creation of the scene being observed. Training is required to learn how to use the goggles as they restrict the viewing field and have been compared to looking through toilet paper tubes. NVGs allow crews to clearly see all terrain features they fly over at night, including light poles, fences, trees, and other obstructions.

Hackney says, "We've been spoiled; we have gotten used to wearing them and seeing with them at night." His partner, Pilot Steve Strickland, agrees. "We feel blind without them." According to Hackney, the NVGs are used to locate suspects, but are not very useful in identifying colors of vehicles, since everything shows up green.

Two-man crews

Each patrol craft carries a crew of two – one who flies while the other observes, then they switch off. They also have a 12-man police reserve unit that provides backup observers and occasionally the patrol division helps out as observers, if needed.

Observers get a lot of the same safety and emergency training as the pilots, including emergency search and rescue, water rescues and deploying the life rings. Observers have actually had to jump in and save people who were unable to grab the life rings thrown to them due to either physical exhaustion or being too panicky.

Helicopter patrol crews work 10-hour shifts from either 7am to 5pm or 4pm to 2am. After 2am they are available on call out. The airplane crews work 8am to 5pm. Due to budget cuts, the unit has lost two positions and had a 25 percent cutback in helicopter patrol time.

During the Super Bowl two choppers were usually in the air – the normal patrol crew and a dedicated crew for the event. They flew up to 18 hours straight the day of the Bowl game, patrolling the inner core areas around the stadium. Staying within two miles of the stadium, they were used to spot problems with pedestrian and vehicle traffic flows, to provide security against criminal or terrorist threats, and if needed, to help evacuate people who became ill or were injured during the event.

Morgan has a framed photograph in his office, the only picture shot from the air during the actual Super Bowl game. Air space restrictions allowed only law enforcement to fly over the stadium during game time.

There has been a problem recently with sightseers checking out cruise ships coming into port. "They have been flying too close to the ships. We recently had a couple of ultralights buzzing the ships, so we followed them to where they landed and called in ground patrol to handle the problem."

Today's police helicopter units are tasked with everything from catching aggressive drivers to stopping terrorists from entering the country. Having an Airhawk unit allows the Sheriff's Department to be "masters of the sky."