New York City, otherwise known as the Big Apple or capital of the world, is home to over 8 million people who collectively speak over 800 languages. As one of the most populous metropolitan areas in the world and with over 50 million visitors annually, New York is certainly a global power city.

Police services are provided by the New York City Police Department (NYPD). NYPD was established in 1845 and is the largest municipal police force in the US, having primary responsibilities in law enforcement and investigation across the 5 boroughs of New York City. NYPD is also one of the oldest police dept established in the US, tracing its roots back to the 1st Dutch 8-man night watch in 1625, when the city was called “New Amsterdam.” Currently the NYPD has almost 35,000 police officers.

Established in 1929 using fixed-wing aircraft, NYPD’s Aviation Unit was one of the 1st airborne law enforcement units in the world. The unit’s initial mission was to police the surge of barnstormers that would set up in open fields around the city and perform several aerial shows a day.

After a rigorous selection process, NYPD chose the twin-engine Bell 429 equipped with Trakka Beam searchlights, MX10 EO/IR cameras with downlink capability, a Goodrich rescue hoist and rear entry doors for easy stretcher or cargo loading.

An AgustaWestland AW119 on a patrol mission over the Brooklyn Bridge. NYPD’s Aviation Unit conducts several scheduled patrol flights a day throughout the city.

By Ken Solosky
ATP/Helo/CFI
NYPD, Chief Pilot (retired)

Lt Col James Coan is a 26-year NYPD veteran and is the current commander of the Av Unit.

The unit was also tasked with surveying of another growing problem—traffic jams. The city was concerned about safety and NYPD’s Aviation Unit was born. The unit exclusively operated fixed-wing aircraft until 1948 when the 1st helicopters were introduced into the fleet. In 1954 the fleet became all helicopters and has remained a rotary-wing aircraft fleet to this day. With a 69-person staff, the unit currently operates 4 Bell 412EPs and 4 AgustaWestland A119 Koalas including pilots, mechanics, finance and support staff.

Deputy Inspector and Lt Colonel James Coan is the current commander of NYPD’s Aviation Unit. Inspector Coan is a 26-year veteran of the NYPD and served for 31 years as a helicopter pilot in the Army National Guard. He is very proud of the unit’s recent initiatives and cred-
its all the success to his people. “I have been fortunate to have a great team. Chief Pilot Dennis DeRienzo, a former USMC captain and Bell Cobra pilot and Director of Maintenance Don Gromling, as well as the entire team, have worked incredibly hard to help shape the NYPD Aviation Unit into something closely resembling a military special operations unit, applying military tactics, techniques and procedures,” Coan said. Chief Pilot DeRienzo agrees. “Coincidentally I arrived at the Aviation Unit right on September 11, 2001 and I am very pleased with the growth and progress I have seen. Our mission portfolio has increased dramatically and the demands of training have also increased,” boasts DeRienzo. The cooperation with outside agencies and units has intensified and all missions have become more complex. DeRienzo also points out that many missions have grown from just 1 aircraft to more robust, multi-aircraft operations.

Missions

NYPD’s Aviation Unit conducts an expansive range of missions, from providing air support to ground police personnel at burglaries, suspect searches and vehicle pursuits to counter-terrorism missions, port security, rail carrier security and air sea rescues. In continuing cooperation, the NYPD Aviation Unit is strengthening their regional partnerships in collaborative efforts not only in traditional airborne law enforcement roles but also in homeland security. For example, with the closest USCG air asset coming from either Atlantic City or Cape Cod, the NYPD Aviation Unit has expanded their air-sea rescue range to almost 60 nm outside NYC. The Bell 412EP mission includes tactical support to include fast rope rappelling, high-rise rescue, Bambi-bucket (firefighting), airborne radiological protection and port security.

Personnel

All personnel are sworn officers and come from within the NYPD and the unit has recently implemented a very competitive and demanding application process. The minimum requirement for a pilot applicant is a private helicopter license or commercial airplane license. The minimum for a mechanic applicant is an FAA A&P or applicable military experience. All pilot applicants take a physical agility test, a written examination and are interviewed by a board consisting of high-ranking officers within the NYPD. The applicant is scored with weight given towards military experience, sick record and past evaluations. Candidates are then assigned a score and when positions open the highest scoring applicants are chosen. As with most agencies, the NYPD Aviation Unit has experienced a shrinking pool of qualified applicants. In response, they have instituted a very aggressive outreach to the US military. NYPD officers returning from deployments with their military reserve units are being surveyed for critical skill sets. The unit has recruited at local Air National Guard bases for current NYPD officers who might consider a transfer to the Aviation Unit and personnel who might consider a career with the NYPD. Overall, the results have been outstanding and the pool of qualified applicants has risen.

Aircraft

While the Aviation Unit currently flies 4 Bell 412EPs and 4 AgustaWestland A119 Koalas, the NYPD just announced that they are replacing the 4 A119s with 4 Bell 429 helicopters and will use a Bell 407 as a trainer. All major helicopter manufacturers were invited to submit an aircraft for consideration. Using a very comprehensive and competitive selection process that included rigorous analysis of data benchmarks, the Bell 429 was chosen by a committee of pilots, maintenance and support staff. The selection committee consisted of 7 voting members and 3 advisory members under oversight from the legal and procurement departments. The Bell 429s will be equipped with Trakka Beam searchlights, MX10 EO/IR cameras with downlink capability and a Goodrich rescue hoist. The new aircraft will also be certified to New York State Department of Health Part 800 standards as air ambulances with AEDs, oxygen and general first aid equipment.

Ground equipment and ALSE

All aircrew, including rescue crew chiefs, fly with comprehensive aviation life support equipment (ALSE). Aircrews all fly with Gentex HGU84 flight helmets, floatation vests, ANVIS 9 night vision goggles (NVGs) and a medical kit. When conditions warrant all aircrew members wear a Switlik cold water exposure suit.

Ground support equipment consists of a crash-fire-rescue truck that is flightline ready to respond to any emergencies. The truck has an optional foam or water front turret as well as extrication equipment and Scott air packs.

Initial and recurrent training

Official training for the Aviation Unit has been reshaped to follow a combination of the US Army and
USMC primary helicopter flight training program. Upon assignment as a pilot, the new recruit goes through initial training including 8 weeks of academics, 14 weeks of initial helicopter flight, 1 week of instrument orientation, 3 weeks of solo and cross country navigation, 1 week of FAA commercial test prep and then 3 weeks of basic police mission skills. The pilot is then designated as a Tactical Flight Officer (TFO) and will perform the duties on the police side of the aircraft (operating the night sun searchlight, infrared FLIR camera, etc) at actual police missions. The pilot will carry out TFO duties, which also include flying the aircraft for 6-12 months before being considered for upgrade to pilot-in-command. During this 6 to 12 month period the pilot will also receive 25 hrs of instrument flight instruction and 25 hrs in the unit’s Frasca flight simulator in order to earn his helicopter instrument rating. The unit has 2 dedicated flight simulator instructors who work both the day shift and the night shift. As the new pilot progresses in experience, he will receive 25 hrs of air-sea rescue scenario-based training such as scuba deployments, rescue hoist operations, ship/vessel operations, maritime security operations and maritime navigation. The pilot also receives an additional 25 hrs of scenario-based training in tactical operations such as rappelling, fast rope deployment, high rise and rooftop insertions, mobile airborne radiological surveys, fire suppression and formation flying. All pilots also receive NVG certification with 10 hrs of classroom and 10 hrs of flight training using the NVGs in addition to participation in the Bell Flight Training Academy NVG course.

**Bell 429 simulator is coming and checkrides are scenario-based**

Once the transition is complete, a Bell 429 simulator will replace the current A119 simulator. Simulators are used for initial and recurrent instrument training as well as scenario-based training. This kind of training is essential because the simulator replicates the aircraft even down to specific mission equipment and allows 2 dedicated simulator instructors to put the pilots through a multitude of real world situations.

All pilot qualifications checkrides are scenario-based and the chief pilot conducts all checkrides. “I will do a check in any conditions,” comments DeRienzo, “I want to see the aeronautical decision making when the pressure is on and I demand that the pilot being checked fly to the limit of the aircraft as well as to the limit of the pilot's capabilities. My checkride requirements vary so that no checkride is the same.” All pilots regardless of rank or experience receive annual instrument and mission capable checkrides. Pilots receive basic firefighting certification and water survival training at Survival Systems in Groton CT.

In addition to the internal training, the Aviation Unit conducts weekly training with several NYPD special-ized units including the Emergency Services Unit (ESU/SWAT) and the Harbor Unit. These drills include high-speed specialized missions such as fast rope and scuba deployments. In addition to the internal units, the NYPD Aviation Unit works with the Fire Dept of New York in high-rise fire drills and the battalion chief commands and controls operations at fire scenes from one of NYPD’s helicopters. The training in the airborne use of force program includes quarterly exercises at Ft Dix NJ and static training at the NYPD range. All rescue crew chiefs are certified New York State Emergency Medical Technicians (EMT).

**Looking ahead**

Under the leadership of the CO of the Special Ops Division Assistant Chief Harry Wedin, the Aviation Unit has expanded its training and operations by thinking outside the box. The Aviation Unit is acquiring a Downed Aircraft Rescue Team vehicle or DART that can respond to an aircraft maintenance emergency quickly and with the proper tools and equipment.

In the next 24 months the NYPD Aviation Unit will transition to an all twin-engine helicopter fleet. When this transformation is complete the NYPD Aviation Unit will be at the forefront of airborne law enforcement with the latest in technology and equipment operated by a highly skilled force of capable pilots, mechanics and rescue crew chiefs ready to respond throughout the NYC region wherever their public safety partners require their extraordinary services, in any weather, day or night. Inspector Coan sums it up best: “I have been blessed to work with an incredibly talented team of pilots, mechanics and support personnel. They work hard and I am certain their dedication will pay off with unprecedented accomplishments and success in the future.”