



Winnipeg Police Service Flight Operations Unit

2016

Operation Report

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Winnipeg Police Service Flight Operations Unit

OPERATION REPORT 2016

1. REPORT SUMMARY

The following document presents an operation report of the Winnipeg Police Service Flight Operations Unit (FOU) for the period of January 1 – December 31, 2016.

2. OPERATION

Police Helicopter:

On December 6, 2010, the Service publicly unveiled the EC120B helicopter, delivered by Eurocopter Canada Limited, which became Airbus Helicopters Canada Limited as of January 2014. With the change in company name, the aircraft was re-designated the H120. The five-seat, 1.6-ton single-engine H120 has the latest generation technologies, featuring high maneuverability, excellent visibility, a large cockpit and a low noise signature. The H120 features a quiet main rotor system with all composite blades and a shrouded Fenestron tail rotor which is very reliable, safe and quiet. Flying over at 1,000 feet above ground level (agl), the H120 has a perceived noise of 68 dB, which means it is difficult to detect. It is the quietest helicopter in its class, and its engine emissions have low levels of pollutants.

Mission Equipment:

L3 Wescam MX-10 IR/HD (Infrared and High Definition Video Camera)	This gyroscopically stabilized high definition infrared camera has a high power optical zoom as well as the thermal imagery which tracks people or evidence by heat signatures, video image or a blended image.
Nightsun (Spotlight)	Provides for effective search with a 30 million candle power light that can be slaved to the thermal imagery camera.
Police radios	Allow for communications with all agencies and frequencies.
Churchill Navigation Augmented Reality System (Moving Maps)	GPS-based Augmented Reality mapping system that lets Tactical Flight Officers know where they are so as to give accurate directions to ground resources.

Public Address System	Powerful loudspeaker to address public gatherings.
Rear Seat HD Video Monitor	Allows those in the rear to see exactly what the Tactical Flight Officer sees.
Dual Controls	Permits flight training to occur within the aircraft as well as TFO's to land the aircraft in the event of a pilot incapacitation emergency.
Video Downlink	Enables transmission of live aerial video feeds to a police or fire department supervisor on the ground.

CONTRACTS

Engine: Safran Helicopter Engines (Formerly Turbomeca)

The Winnipeg Police Service entered into a “Support by the hour” (SBH) services contract with Turbomeca Canada, which is an engine insurance plan to ensure there is a fully operational engine in the airframe regardless of the issue. The H120 has a Turbomeca Arrius-2F engine which is completely overhauled every 3000 hours of operation, resulting in an engine that is virtually new. In January 2016, Arrius-2F S/N 34061 was installed in Air 1 replacing Arrius-2F S/N 34535 which was at the end of its lifecycle. The Unit remains under the SBH services contract.

Maintenance: Novex Helitrades Incorporated

At the end of 2014, RFP 905-2014 competition was conducted for the provision of aircraft maintenance services for up to five years. As a result of the bid process, a contract was awarded again to Novex Helitrades Incorporated from Edmonton, Alberta. The one-year contract comes with the option for up to 4 one-year extensions. The current contract is due for renewal May 29, 2017.

Fuel: Kelly Western Services Ltd., in partnership with the Province of Manitoba

Bid Opportunity for Supply and Delivery of Aviation Fuel (JetA1) in the amount of 200,000 litres for the period of October 1, 2015 – September 30, 2017 was conducted in 2015. As a result of this process, the fuel contract was awarded to Kelly Western Services Ltd.

Unit Office and Hangar: 17 Wing Winnipeg

In October 2010, the Winnipeg Police Service entered into an agreement with the Department of National Defense 17 Wing Winnipeg that established a cooperative working arrangement for rental space of hangar and office to house the police helicopter and Flight Operations Unit. A one year lease agreement was signed with additional one year renewals. This lease was renewed until October 14, 2017.

Insurance

As organized through the City of Winnipeg Insurance Branch, the insurance underwriter for the Flight Operations Unit provides coverage of \$2,640,000 USD for the customized H120 helicopter. As a result of a requirement to insure infrared cameras loaned to Winnipeg from other jurisdictions, insurance costs increased slightly in 2016; however, the hull rate remains the same until November 2017.

STAFFING

Under the Command of the Inspector and Staff Sergeant, Division 50 Operational Support, the staffing complement for the Flight Operations Unit is:

- Unit Supervisor (Patrol Sergeant) – one
- Chief Pilot (permanent civilian employee) – one
- Pilots (1 civilian employee and 1 sworn police employee) – two
- Tactical Flight Officers (TFO) (police Constables) – four
- Aircraft Maintenance Engineer (AME) (under contract) – one



The minimum operational “flight crew” consists of one TFO and one Pilot.

Tactical Flight Officer (TFO)

In the spring of 2016, the FOU successfully graduated two TFOs from the in-house training program. A third TFO was trained in the fall of 2016. As a result, the Unit operated for part of 2016 with partial staffing levels.

Pilots

Through the year, the Flight Operations Unit saw no change in pilot staffing, retaining all three pilots for a second consecutive year.

TRAINING

Pilots

The Chief Pilot and Civilian Line Pilot attended Canadian Helicopter-HNZ Group in Penticton, British Columbia for annual re-current training on the H120, where they are exposed to and tested on a series of in-flight emergency procedures. The Chief Pilot and one Line Pilot attend the ALEA Canadian Regional Safety Seminar.

Tactical Flight Officer (TFO)

In 2016, the FOU ran two TFO training courses, resulting in certification of three members. To further develop the tactical flight officer skills and knowledge base, all TFOs received training from Canadian Helicopter-HNZ Group for inflight emergency procedures, including safe landing of the aircraft in the event of pilot incapacitation and hover exit manoeuvres.

In July, the Senior TFO and Unit Supervisor attended the Airborne Law Enforcement Association (ALEA) Tactical Flight Officer Course.

Flight Crew (Pilot & TFO)

K9 transport and deployment was developed and jointly exercised with the WPS K9 Unit. Several non-standard missions to rural areas and airports outside the City were trained. Aircrews also participated in the Division 50 Joint Training Day with TST, Negotiators and the Incident Commanders.

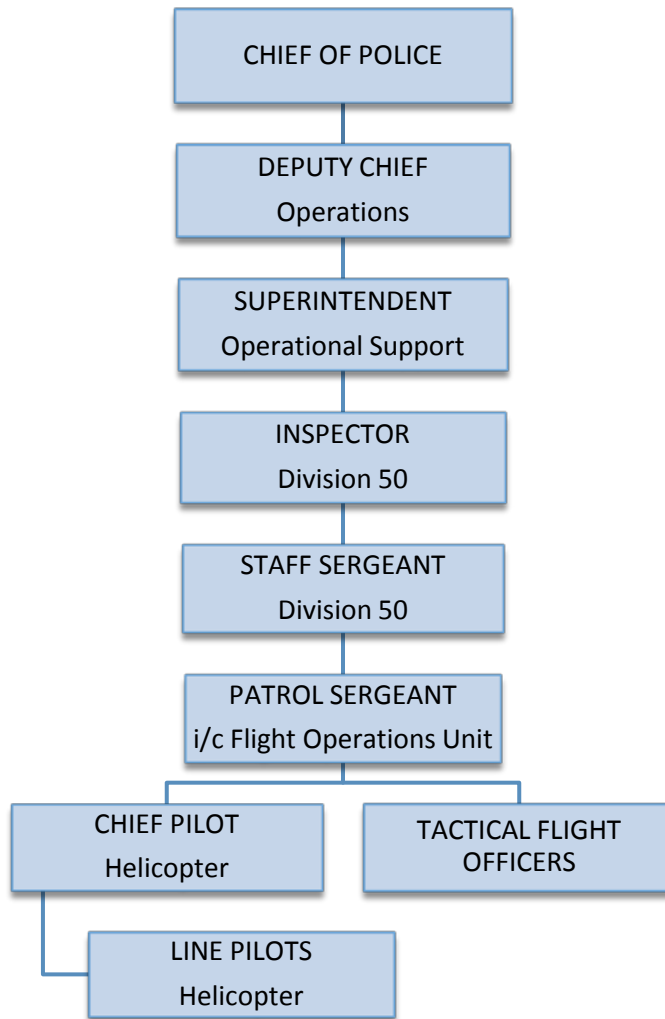
In partnership with the Canadian Forces Air Force Training Centre, AIR1 and K9 assisted in non-standard mission search training in a rural environment.

In conjunction with the Winnipeg Fire Paramedic Service flight crews completed aero-medical deployment training the Tactical Emergency Medical Technicians.

Unit Supervisor

The Unit Supervisor completed the first semester in the University of Manitoba Aerospace Program Management run by the Extended Education Faculty, in conjunction with the Royal Canadian Airforce at 17 Wing Winnipeg.

UNIT ORGANIZATION CHART



FLIGHT OPERATIONS UNIT OBJECTIVES

The primary purpose of the Flight Operations Unit is to support all operational and investigative Service units in the detection of criminal acts and the apprehension of suspects. The Unit has budgeted to fly 1000 hours a year on missions with a variety of scopes. Flight crews are able to provide assistance with the following, weather permitting:

- response to crimes in progress for aerial containment and investigation
- infrared searches for suspects and evidence, and co-ordination of ground response
- tracking and surveillance of suspect vehicles during police pursuits and subsequent co-ordination of ground resources
- illumination of crime scenes, collision scenes, vehicle stops, search areas, disturbances, and foot pursuits
- aerial searches for missing or lost persons
- aerial reconnaissance and photography or videotaping of crime scenes, traffic collisions, high-risk incidents or remote areas
- aerial platform for Emergency Services for major fires, environmental disasters, or other major incidents
- Forward Looking Infrared (FLIR) scans to provide evidence of illegal grow operations relating to drug investigations
- rapid deployment of K9 Unit members to remote locations under exigent circumstances



RCAF FLIGHT SAFETY PATCH

SAFETY

The issue of Flight Safety is taken very seriously by the Winnipeg Police Service. The location of the Unit on Canadian Forces Base 17 Wing has ingrained a safety culture since inception. The Winnipeg Police Service and 17 Wing Winnipeg work together to ensure the highest safety standards are followed and participate collaboratively in the Wing Commanders Safety Program.

Both the Chief Pilot and the Unit Supervisor have qualified as Flight Safety Officer and Basic Investigator Level II as designated by the Royal Canadian Air Force. These designations, achieved after successful completion of the Flight Safety Officer Course at 17 Wing Winnipeg, combined with industry experience, provide meaningful oversight of the FOU Flight Safety Program.

LASER INCIDENTS

Prior to the launch of AIR1 there was no local capability to address the problem of lasers or other forms of projected bright light being shone at aircraft arriving or departing from the Winnipeg Airport. As a result of the Winnipeg Police Service working together with Nav Canada and Transport Canada, new protocols have been implemented to streamline all stakeholder response to reports of aircraft, including AIR1, being struck by lasers.

As a result of this partnership, AIR1 has successfully directed ground units to locate and identify suspects who violate the Air Regulations and Aeronautics Act of Canada, and create hazardous flying conditions for pilots.

In 2016, AIR1 was targeted twice with an incident resulting in the identification and apprehension of one suspect.

Transport Canada logged a total of 560 aircraft struck by laser incidents nationwide in 2015, 6 of which were reported through the Winnipeg James Armstrong Richardson International Airport (CYWG). Two of those six incidents targeted AIR1, with one resulting in a suspect apprehension.

UNMANNED AERIAL VEHICLES (UAV)

In 2016, FOU saw a marked increase in incidents of UAV operating within the Winnipeg Control Zone. As a result of these incidents and in partnership with Nav Canada, Transport Canada and other stakeholders, a working group was started with a view to educating the public, jointly investigating incidents and proposing legislation to address this emerging threat to aviation.

FOU has become the lead investigator in criminal investigations into UAV usage. These investigations are conducted in consultation with the regulatory investigators from Transport Canada with a view to optimizing investigative resources and reduce overlap and duplication of work.

NOISE COMPLAINTS

Tracking and addressing citizen noise complaints was identified as an important issue for the Flight Operations Unit. All citizen complaints that are reported to the WPS are directed to the Unit Supervisor to research and arrange for a member of the Unit to personally speak with the reporting person.

By providing an explanation of operational activity, educating citizens on the Flight Operations Unit mission and mandate, along with making operational adjustments, complaints have been reduced.

- In 2011, 20 separate complaints were made by 17 reporting persons.
- In 2012, 10 noise complaints were received.
- In 2013, 4 noise complaints were received.
- In 2014, 3 noise complaints were received.
- In 2015, 5 noise complaints were received.
- In 2016, 1 noise complaint was received.

The lone noise complaint that occurred in 2016 was determined to have occurred at a time when AIR1 was not flying.

OPERATIONAL HIGHLIGHTS

MX-10 HIGH DEFINITION INFRARED CAMERA

In August, the original FLIR 8500 arrived at a condition by virtue of wear and tear that it could no longer be used safely or effectively provide aerial support to Winnipeg Police Service (WPS) Members on the ground. Consequently a loaner camera was secured with the assistance of Royal Canadian Mounted Police (RCMP) in Alberta 'K' Division and subsequently from the Edmonton Police Service (EPS). Concurrently a procurement process was undertaken resulting in the purchase of a new MX-10 Camera.

The camera was procured in accordance with Request for Proposal 2016-772 and was delivered in December of 2016. The cost of the camera was \$483,370.00 (approximately 1.25% under the budget) for the procurement. The installation of the camera and the requisite Transport Canada Authorizations were obtained early in 2017 when operational flight with the new camera commenced.



STOLEN VEHICLE

In January, General Patrol members advised they were following a confirmed stolen vehicle travelling northbound on Main Street, exiting the City of Winnipeg. AIR1 located the stolen vehicle and transitioned control of the event. AIR1 coordinated with ground units from the Winnipeg Police Service (WPS) and the Royal Canadian Mounted Police (RCMP), maintaining visual containment of the suspect vehicle until it was abandoned near Oak Hammock Marsh. The suspect fled from the vehicle and hid in a wooded area, all while being monitored by AIR1. The suspect's location was provided to ground units, and he was safely taken into custody.

AIR1 LASER STRIKE EVENT

While providing support to ground units for an event in the West End, members of AIR1 were struck several times by a green laser from the North End area of Winnipeg. AIR1 members were repeatedly struck over the course of 20 minutes from the same laser as they patrolled the city. These laser strikes created an unsafe environment for the flight crew and temporarily distracted the pilot, as the light refracted throughout the cockpit. Using the infrared camera and GPS system on board AIR1, crew members were able to identify the source of the laser, and directed General Patrol members who took the suspect into custody.

PERSON IN THE RIVER

In April, police dispatchers received several calls from concerned citizens regarding an individual in the Assiniboine River. General Patrol units and AIR1 were assigned to assist in searching for the person in distress. When AIR1 arrived over the area, the crew immediately located the victim east of the Osborne Street Bridge. Members of AIR1 maintained observation and directed attending General Patrol units to the location. With the assistance of AIR1, ground units were able to locate the distraught individual and affect a successful rescue.

STRONG-ARM ROBBERY

During the spring, AIR1 arrived to assist members of General Patrol in searching for suspects involved in a personal robbery. AIR1 began a methodical search of the area and, using advice from ground units, the flight crew focused their search and quickly located the suspect fleeing in a back lane. AIR1 maintained observation while coordinating with officers on the ground. The suspect persisted in attempts to evade capture by running through, and hiding in numerous, yards. Finally, AIR1 observed the suspect entering a residence, and ground units were directed to that precise location where the culprit was taken into custody.

VEHICLE PURSUIT

When dispatched to a vehicle pursuit, members of AIR1 quickly attended to the area and immediately located the suspect vehicle and transitioned the pursuit to their control, requesting that pursuing units fall back. AIR1 crew members maintained visual containment of the suspect vehicle. The suspect fled on foot from the vehicle while AIR1 continued to monitor the activity and coordinate ground resources as the suspect continued with attempts to evade police on foot. With the assistance of AIR1, the suspect was subsequently apprehended.

DOMESTIC INCIDENT/SUICIDAL PERSON

WPS dispatchers requested units attend a domestic incident where individuals were physically fighting. AIR1 and a Tactical Support Team attended to the area, at which time information was broadcast that the one of the parties was suicidal, and had fled the area in a vehicle. Members of AIR1 began searching the area for the vehicle, subsequently locating it and the occupant on a bridge. Tactical members acted quickly and secured the individual, pulling them to safety and saving further harm.

RESIDENTIAL BREAK AND ENTER

AIR1 was dispatched with General Patrol and K9 units for the report of a residential break and enter in progress. Information provided by the reporting person was that several suspects were involved. Shortly after arriving, the AIR1 crew located 4 people in a park near the address in question. Upon seeing the Police helicopter, the suspects fled the area, splitting into two groups and departing in separate directions. AIR1 maintained two suspects who attempted to evade capture by hiding in a nearby yard. The outstanding suspects were captured nearby by a patrol unit. Once the suspects were in custody, AIR1 directed ground resources to locate the discarded property which had been stolen from the residence, using the infrared camera to search the vicinity.

COMMERCIAL BREAK AND ENTER

Late in the year, AIR1 was dispatched to a commercial alarm. Upon arrival, crew members observed a suspicious vehicle fleeing the area with no lights on. The vehicle's progress was monitored by AIR1, and support from ground resources was requested. Upon seeing General Patrol units, the vehicle fled at a high rate of speed, but it was still being visually contained by AIR1. The flight crew maintained observation of the suspect vehicle until it was abandoned. Three suspects fled from the vehicle in separate directions. AIR1 coordinated ground units and K9 to contain the area, and was able to direct officers to a garage where one of the suspects was located. After nearly 30 minutes of methodically searching the area with the infrared camera, a second suspect was located hiding inside a small shed near the abandoned vehicle. A third suspect was captured by investigators the following day in a residence nearby. It was determined that the suspects apprehended were responsible for 45 commercial break and enters throughout Winnipeg over the course of a two month period.

ASSISTANCE TO OUTSIDE AGENCIES

Since inception, AIR1 has supported and assisted a number of internal and external stakeholders, both operationally and in training. AIR1 has worked with:

- Department of National Defense
- Royal Canadian Mounted Police (RCMP)
- Manitoba Justice
- Manitoba Finance
- Manitoba Natural Resources
- Manitoba Integrated Organized Crime Unit
- Morden Police Service
- Sainte-Anne Police Department
- Transport Canada
- Transportation Safety Board
- CN Police
- Winnipeg Fire Paramedic Service

PUBLIC DISPLAYS

- Winnipeg Police Service Half Marathon
- Royal Canadian Air Force (RCAF) Run
- Touch a Truck - Stonewall
- Manitoba Air Show - Portage La Prairie
- Trucks for Pucks - Starbuck
- WPS Community Relations Volunteer Appreciation BBQ

PRESENTATIONS

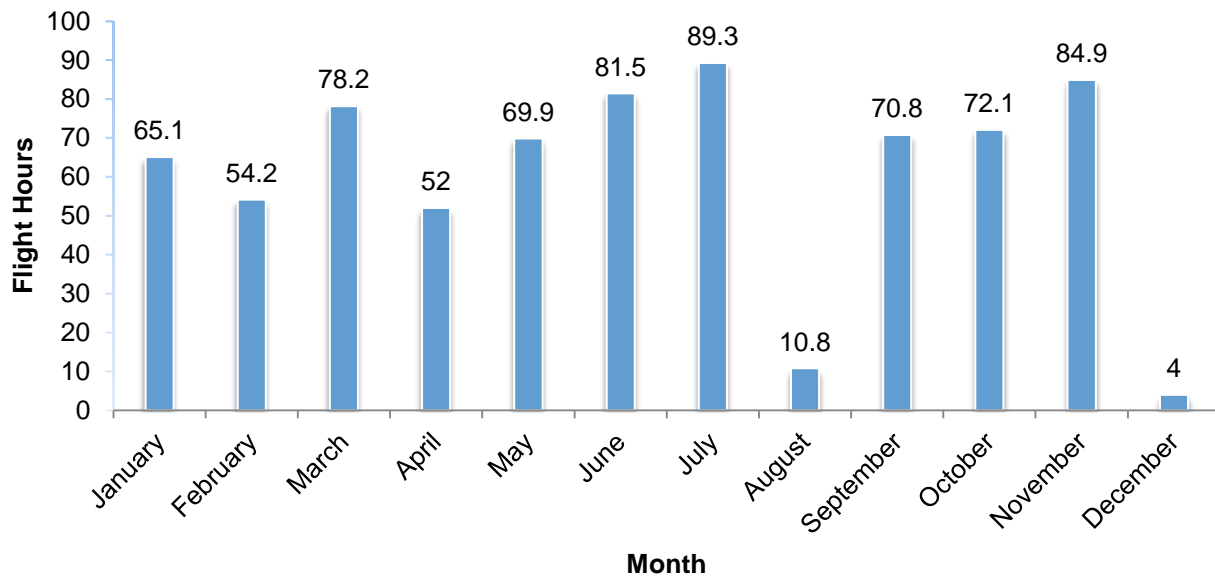
- Several internal presentations to Winnipeg Police Service Units, including shift briefings and internal training

3. PERFORMANCE

QUARTERLY SUMMARY OF FLIGHT HOURS

	Q1	Q2	Q3	Q4	2016
Total	197.5	203.4	170.9	161	732.8

FLIGHT HOURS BY MONTH



Throughout 2016, the Flight Operations Unit logged 732.8 flight hours. While the above table illustrates the distribution of flight hours by month, the Unit achieved a monthly average of 61 flight hours.

Through the year, the hours of flight time were impacted by both scheduled and unscheduled maintenance events. In June, the airframe time reached the 5000 hour mark, which required replacement of the Main Gear Box in AIR 1.

Unscheduled maintenance events due to the original FLIR 8500 camera failure impacted the August hours. Activity returned to normal in September as a result of the RCMP and Edmonton Police Service providing a loaner camera to WPS FOU. In December, flight hours were impacted by the installation and systems testing of new MX-10 camera.

QUARTERLY SUMMARY OF FLIGHT TIME LOST (BY DAY)

Factor	Q1	Q2	Q3	Q4	2016
Weather	22	12.5	8.5	21.5	64.5
Maintenance	16	12	48	28	104
Staffing	0	0	0	0	0
Total	38	24.5	56.5	49.5	168.5



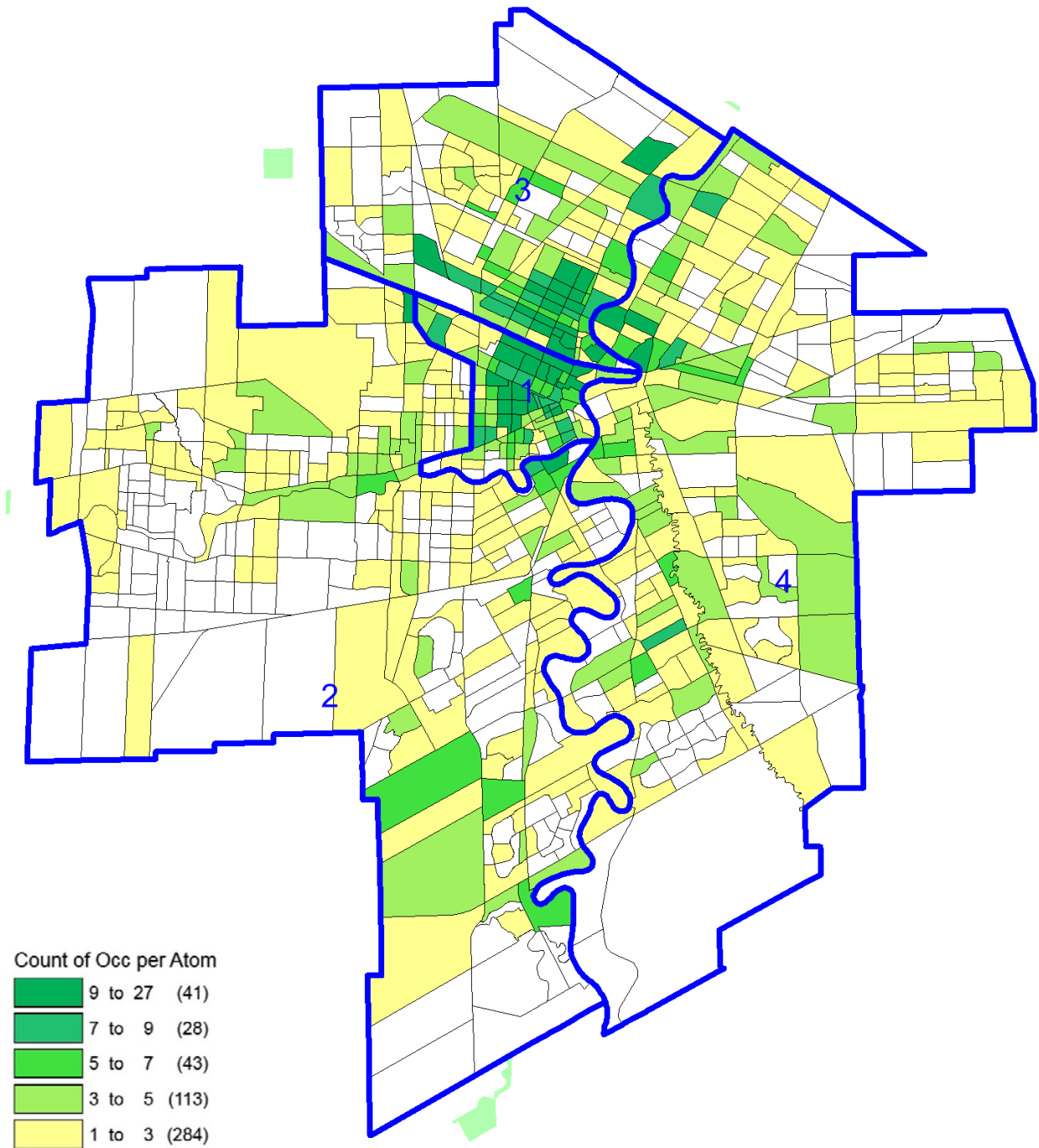
SUMMARY OF INCIDENT TYPE BY ACTIVITY JANUARY 1, 2016 TO DECEMBER 31, 2016

The following table contains a summary of the most frequently dispatched incident types:

TRAFFIC STOP	205	FIRE	10
WELLBEING	141	MEDICAL CALL	10
SUSPICIOUS PERSON	118	PHYSICAL ABUSE - CHILD	8
DOMESTIC DISTURBANCE	109	WARRANT	7
BREAK AND ENTER – ALL TYPES	98	DISPUTE	6
ALARM – ALL TYPES	85	OFFICER	5
ASSAULT	72	SPI HOTSPOT	5
GUN - ALL TYPES	72	ANIMAL	4
WEAPON	46	NOISE	4
DISTURBANCE	45	SEXUAL ASSAULT	4
FIGHT	40	SUBJECT PURSUIT	4
FOLLOW	36	PROWLER	3
SUICIDE THREAT	37	SHOPLIFTER	3
ROBBERY PERSON	36	STOLEN VEHICLE LOCATED	3
SHOTS FIRED	36	BOMB THREAT	2
DANGER	29	BREACH	2
MOTOR VEHICLE COLLISION	29	INDECENT	2
FAMILY TROUBLE	28	IPDA	2
ROBBERY COMMERCIAL	24	SPECIAL	2
STABBING REPORTED	24	ABDUCTION	1
TRAFFIC	24	COMMUNITY ENGAGEMENT	1
IMPAIRED DRIVING	18	FRAUD	1
ASSAULT WITH WEAPON	17	GRAFFITI	1
DAMAGE	17	GUN SHOT WOUND	1
MISSING PERSON ASSIST	15	INSECURE	1
SUBJECT STOP	14	MENTAL HEALTH ACT	1
THEFT	13	SERVE	1
THREAT REPORTED	12	SPI COM	1
TRAFFIC PURSUIT	12	SPI SUBJECT	1
ASSISTANCE REQUIRED	11	WARRANT EXECUTION	1
STOLEN VEHICLE	11	TOTAL	1571

AIR1 FLIGHT ACTIVITY - DENSITY OF OCCURRENCES BY ATOM

January 1, 2016 to December 31, 2016



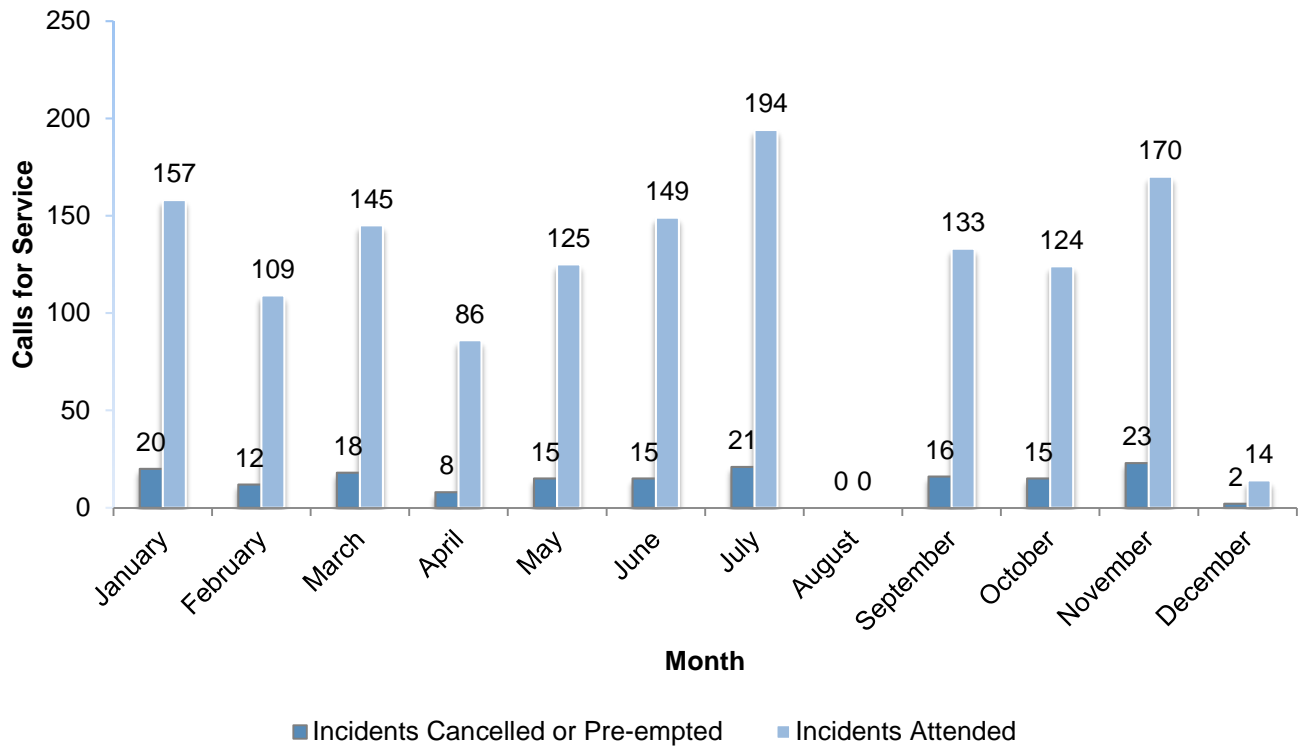
Overview of AIR1 density of occurrences in Winnipeg (795 Atoms total)

- 286 Atoms had zero calls for service where AIR1 was dispatched

QUARTERLY SUMMARY OF INCIDENTS DISPATCHED

	Q1	Q2	Q3	Q4	2016
Total	461	398	364	348	1571

TOTAL INCIDENT VOLUME BY MONTH



Note: Total dispatched incidents (1571) includes all calls that AIR1 attended (1406) as well as the total events that were cancelled or pre-empted (165) prior to arriving on scene.

CALLS FOR SERVICE

AIR1 continues to have a dramatic influence on the outcome of calls for service. As detailed above, the helicopter attended 1406 events and as a direct result of this presence, AIR1 was instrumental in identifying/apprehending 175 persons of interest. If it were not for AIR1, these apprehensions could not occur at the time, resulting in further investigative resources on the ground to complete the calls for service.

Of the 175 parties identified to ground resources, 115 non-criminal captures occurred and 60 parties were taken into custody for criminal offenses at the time, due to the support of AIR1.

PURSUIITS

Pursuits 12 Dispatched

AIR1 Dispatched, involved 12
AIR1 Dispatched, not involved 0

Follows 36 Dispatched

AIR1 Dispatched, involved 32
AIR1 Dispatched, not involved 4

FINANCIAL CONSIDERATIONS

- 2011 Flight Operational Unit costs billed to the Province of Manitoba = \$1,196,693.90
- 2012 Flight Operational Unit costs billed to the Province of Manitoba = \$1,327,590.33
- 2013 Flight Operational Unit costs billed to the Province of Manitoba = \$1,515,820.85
- 2014 Flight Operational Unit costs billed to the Province of Manitoba = \$1,752,514.89
- 2015 Flight Operational Unit costs billed to the Province of Manitoba = \$1,804,522.84
- 2016 Flight Operational Unit costs billed to the Province of Manitoba = \$1,929,849.16



2016

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Winnipeg Police Service

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