

Ontario Ministry of Natural Resources

Ontario Ministry of Natural Resources (OMNR) aviation services is the largest government operator of Airbus EC130 B4 helicopters for fire fighting, environmental protection and wildlife management.

These helicopters are part of a proud tradition that began in 1924 when Ontario established the world's first government flying service dedicated to the aerial detection and management of forest fires.

For more than 90 years, the pilots of Ontario's yellow-painted firefighting aircraft or "yellow birds" have been credited with developing world-leading aerial firefighting techniques utilizing fixed-wing aircraft and helicopters.

First Turbine Helicopters

OMNR added the first turbine helicopters to its aircraft fleet in 1985 and introduced its first Airbus helicopter in 1987 when it acquired a new twin-engine MBB BK117 from the MBB Helicopter Canada factory in Fort Erie, Ontario.

The BK117 ordered by Ontario was unique for the time since it was purchased for utility and fire fighting work and specially modified with a cargo hook, additional floor windows, upgraded avionics and an autopilot for yaw control.

"We used the BK117 as a very fast and maneuverable initial fire attack helicopter," recalls Bob Crowell, Operations Manager for OMNR Aviation Services. "It would takeoff and fly at 130 knots to a fire with an initial attack and then support the crews with fuel, food and water until about eight or nine o'clock at night."

The BK117 was first used in western Ontario to replace medium helicopters and later deployed in Sudbury, which is closer to the air service's main maintenance base in Sault Ste. Marie.

Eurocopter AS350 B2

In 1992, OMNR reviewed its fleet requirements and decided to replace its' older single-engine helicopters with a more capable aircraft.

"We had a seven-seat helicopter that could carry an 1100 pound payload and what we needed was an aircraft that could carry a four-person initial attack crew or almost 1400 pounds payload," recalls Crowell. "We put out a tender and purchased our first two Eurocopter AS350 B2 helicopters in 1993."

The new AS350 B2 helicopters were some of the first single-engine helicopters sold by Eurocopter Canada after it was formed in 1992. In 1995, OMNR decided to trade in its BK117 for a third AS350 B2 and then added a fourth AS350 B2 in 1999.

OMNR entered the 21st century flying four AS350 B2's. Each summer, aircraft were dedicated to supporting initial attack firefighting crews from April to October as well as, a wide range of other resource management missions.

OMNR began its fleet transition to the EC130 B4 helicopter in June of 2004 when it leased a new aircraft for evaluation.

In June 2004, Edouard Gaillat, President, Eurocopter Canada Limited presided over the delivery of the first new EC130 helicopter to Mr. Barry O'Brien, General Manager, Aviation Services for OMNR.

The province took delivery of two additional EC130's in 2008 and 2009, three in 2010 and another in 2014, with the current fleet comprised of 7 EC130's and an AS350 B2.

Current Operations

Ontario's Airbus Helicopters fleet logs between 3,700 to 4,500 hours a year, with about 33% of this time devoted for firefighting and 66% to resource management duties including; wildlife surveys, fish stocking, reconnaissance, compliance monitoring, enforcement missions and remote sensing.

OMNR's flying season begins in January when pilots begin flying wildlife surveys for moose and caribou and then progress to waterfowl surveys along the northern James Bay coast in the summer.

During the molting period (when birds are replacing their feathers and can't fly) the EC130's and AS350 B2 are often used to support wildlife officers herding birds into fenced enclosures where they can be documented and banded.

Some of the more interesting wildlife work involves flying with a wildlife officer who shoots tranquilizer darts at polar bears, moose, deer and caribou to put them to sleep so that a tracking collar can be attached or removed.

In spring, the EC130's are also employed on fish stocking missions at northern lakes.

"We install a special aluminum tank in the back of the helicopter with six separate compartments," explains Crowell. "The hatchlings are loaded into the helicopter from a tank on a truck and then flown to a lake. The truck will depart the hatchery in the morning and meet the helicopter at a staging area. The fish are transferred from the tank to a helicopter using a dip net. Each tank can be separately emptied through discharge staff while the helicopter is in a hover just above the surface of the target lake."

The fish tank holds about 1000 lbs. of water and has an oxygenation system to keep the hatchlings alive. The most challenging aspect of this work is timing the transfers to endure that water temperatures are consistent to reduce fish mortality.

Fire Management

Fire management work begins in April with four helicopters allocated to support three and four person initial attack crews through to the end of October. The EC130's are initially assigned to bases in Dryden, Thunder Bay, Sudbury and Timmins but are moved around the province as required.

The EC130 supports the ministry's 'one strike' concept (movement of personnel and equipment to the fire in one trip) as well as, delivery of personal gear in the event that firefighters need to overnight at the scene. After setting the initial attack team on the ground with their water pumps and tools, the EC130 pilot may be requested to join the battle using a water bucket to hit the fire's 'hot spots'.

The helicopters are based in the same camp as the firefighting crews and typically respond to fires within about a 60-mile radius.

The eight yellow Airbus Helicopters' are part of a hardworking fleet that also includes 22 fixed-wing aircraft, including nine large water bombers and 11 amphibious utility aircraft.