



GAUGING WILDLIFE HAZARDS

Airport personnel and pilots can do a better job of getting the word out.

BY GARY W. COOKE

For years, I have seen variations of the vague notation “birds on and in/ov arpt” in the remarks sections of the airport data included in the U.S. Federal Aviation Administration (FAA) *Airport/Facility Directory (A/FD)*. But I have often wondered what, exactly, it means.

This *A/FD* notation, as well as the similar and often-heard “caution, birds in vicinity of the airport” in automatic terminal information system (ATIS) broadcasts, do not give pilots accurate information to properly evaluate the wildlife hazards that may be present, thus weakening aviation risk management.

This article will attempt to examine why such ambiguous statements are issued, present tools to more accurately evaluate bird/wildlife hazards and propose better ways for airports and pilots to manage the risks.

Remarks in the *A/FD* listing for a particular U.S. airport come directly from the master record for the airport that is on file with the FAA and usually maintained by the airport manager. The FAA advises that remarks entered into an airport master record should be “worded as clearly as possible so as to avoid pilot confusion.”¹ The guidance on *how* to enter a remark is pretty clear, but the FAA is not very clear on

what to enter. As a result, the remarks do little to avoid pilot confusion.

As mentioned, pilots need concise, accurate information on where and when they can expect to encounter bird/wildlife hazards, the severity of the hazards and what steps, if any, the airport is taking to mitigate them. It also would be useful to know if any hazard reported in the *A/FD* has changed. This is where notices to airmen (NOTAMs) and ATIS broadcasts could be better utilized to strengthen risk management.

No Specific Guidance

In speaking with FAA and airport operations personnel, I have found that

**CAIRNS AIRPORT
BIRD WATCH REPORT**

2012/03

Condition: **Low** – Flying Fox

Issue date: 3 February 2012

Review date: 13 February 2012

Legend**Bird Watch condition SEVERE.**

Heavy concentration of birds on or immediately above the active runway or other specific locations that represent an immediate hazard to safe flying operations (>100 FF in a 10 min period).

Bird Watch condition MODERATE. Concentrations of birds observable in locations that represent a probable hazard to safe flying operations (>50 and <100 in a 10min period).

Bird Watch condition LOW. Above normal bird activity on and above the airfield with a low probability of hazard.

Bird Watch ALERT. Weather, time of day and seasonal conditions which make an influx of birds onto the airfield likely.

**Location:**

Above normal Flying Fox (FF) numbers continue to be sighted over the airport and southern approach. The FF are coming from the south east and flying both to the west of the airport and across the southern end of Runway 15/33 heading in a northerly direction (see attached flight path map). They have been observed at altitudes between 100 and 400 ft.

Time of Day:

(All times local): The fly outs are currently occurring between 1900 and 1945 hrs but depending on cloud cover and weather conditions the peak times can vary by 30 minutes either side of these times. Any time between dusk and dawn there maybe isolated Flying Foxes in the vicinity of the airport and in the approaches.

Number of Birds / Wildlife:

A "Moderate" Bird Watch condition was cancelled on 30 Jan '12. FF numbers at that time were approx 150 per night in 10 minute blocks of up to 76. Since that time numbers have remained consistent at 20-30 per 10 minute period. Although numbers are not large enough to trigger a "moderate" condition, they do reflect a slightly elevated strike risk.

Australia's Cairns Airport publishes timely and detailed information about wildlife hazards. This is a portion of the first page of a recent three-page report.

no specific guidance exists on what remarks to publish in the airport master record when identifying bird/wildlife hazards. Airports are free to include pertinent remarks of their choosing.

I researched the *A/FD* remarks for the 50 largest airports in the United States and found that only three lack cautions regarding birds or wildlife on or near the airport. Even though the managers of these three airports choose not to include even a vague bird/wildlife caution, I am quite certain that the bird/wildlife threat is always present to some degree.

Some airports specify deer or other local species, and some have expanded the remarks to include specific times when the hazard is greatest. A few airports even reference the U.S. Air Force Bird/Wildlife Aircraft Strike Hazard (BASH) "Phase I" and "Phase II" hazard-intensity categories in their *A/FD* remarks. However, this likely is helpful only to military-trained pilots who are familiar with the BASH program and recognize that Phase II indicates

increased bird/wildlife activity due to factors such as historic migration or nesting patterns and that Phase I indicates reduced activity.

A/FD remarks should be as accurate and up-to-date as possible, and identify the top two or three bird/wildlife hazards that pilots can expect when operating at a particular airport. A concise historical perspective on the bird/wildlife hazards that pilots have encountered at the airport in the past also would enhance risk management. Examples are gull activity at a nearby landfill that has been observed to peak immediately after sunrise and taper off near sunset, or observed turkey vulture migration in April and October.

NOTAMs are excellent tools to help identify dynamic bird/wildlife hazards that are not noted in *A/FD* remarks. In accordance with International Civil Aviation Organization standards, NOTAMs alert pilots of hazards at specific locations. Therefore, a NOTAM is the perfect medium to advise that a bird/wildlife hazard identified in *A/FD* remarks is no longer valid or has changed. Examples are a deer population that is noted by the *A/FD* as flourishing but that actually has been decimated by an epidemic, or Canada geese that have settled in the area due to recent wet weather.

Showing the Way

Cairns Airport in Queensland, Australia, provides an outstanding example of how NOTAMs can be supplemented by special reports to inform pilots about ever-changing bird/wildlife hazards. The illustration above shows a portion of a bird watch report that was issued in March to warn pilots about above-normal flying fox activity at the airport. The report also included information about the animal — what attracts it and how it behaves — as well as a map showing typical flight paths over the airport and details about what the airport is doing to manage the hazard posed by these large bats.

Notice that the title of the bird watch report designates "condition: low." The legend explains that this means "above-normal bird activity on and above the airfield with a low probability of hazard." Definitions of other conditions also are included in the legend.

A NOTAM that was published in conjunction with the bird watch report said, in part: “Increased flying fox (bats) hazard exists. Observed overflying Rwy 15/33 and approaches up to 400 ft AGL [above ground level].”

Bird watch reports and NOTAMs such as those published for Cairns Airport are an excellent method of identifying bird/wildlife hazards and educating pilots about bird/wildlife behavior, common terminology and programs designed to mitigate the hazard.

Crying Wolf

Risk management also could be improved by better utilizing ATIS broadcasts to warn of local bird/wildlife hazards. The messages should be specific and tactical — that is, issued only when the bird/wildlife hazard is present. An ATIS message continually warning of birds in the vicinity of the airport is commensurate to saying that the winds are blowing and there are clouds in the area.

When airport traffic is very light, I often challenge air traffic controllers on initial radio contact about the meaning of the ATIS phrase “caution, birds in vicinity of airport” and have been amused by some of the responses I have received. Some replied that there are always birds in the area; others said that local policy dictates that the statement is to always be included.

My hunch is that our litigious society has driven airports to continuously warn pilots just in case a damaging strike occurs, thereby reducing their exposure to legal liability.

The airport at which I am based includes the cautionary ATIS phrase only if the controllers observe birds/wildlife in the area or if birds/wildlife are reported by pilots or airport personnel. When controllers are questioned about the message, they can provide the specifics.

Unfortunately, due to the ever-present ATIS warning at many other airports, most pilots have become complacent about it, a sort of boy-crying-wolf scenario. Airports need to do a better job of warning pilots about existing bird/wildlife hazards, and pilots need to do a better job of reporting what they see, especially when a bird/wildlife strike occurs.²

Reporting a bird/wildlife strike and identifying the species are extremely important elements in mitigating a bird/wildlife hazard. But far too many bird/wildlife strikes go unreported, and remains are not collected and sent to specialists for identification.

Bird/wildlife strike reports and associated species identifications are entered into the FAA Wildlife Strike Database, which, among other uses, helps airport personnel to recognize the local bird/wildlife hazards and allows them to formulate customized risk-management programs. Information obtained from the database plays an integral part in developing an airport’s wildlife hazard mitigation plan (WHMP), which is the foundation for bird/wildlife risk mitigation. The database also is an excellent tool that pilots can access in order to identify the hazards they may encounter at a specific airport during a specific time of year. Ensuring that the database is accurate and up-to-date helps maximize its effectiveness.

In summary, airports need to do a better job of giving pilots precise and timely information about the bird/wildlife hazards they may encounter. The forewarning they convey in the *A/FD*, NOTAMs and ATIS broadcasts needs to be precise and unambiguous. If the information is not accurate or up-to-date, it should be modified or deleted. And pilots need to do a better job of reporting bird/wildlife hazards and strikes, enabling the airports to more accurately

analyze their local bird/wildlife hazards and establish mitigations.

All this can be done economically and effectively using data gleaned from the airport’s WHMP and the FAA Wildlife Strike Database, as well as information disseminated by existing communication channels. Using the Cairns Airport bird watch report program as a benchmark would be an immense improvement over the current system. It is vital that pilots report to air traffic control what birds/wildlife they observe locally and follow published guidance when a bird/wildlife strike occurs. If we implement these changes now, we soon will have safer airports and fewer bird/wildlife strikes. ➔

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Notes

1. FAA Advisory Circular 150/5200-35A, *Submitting the Airport Master Record in Order to Activate a New Airport*. Sept. 23, 2010.
2. Bird/wildlife strikes can be reported to the FAA Wildlife Strike Database at <wildlife-mitigation.tc.faa.gov/wildlife/>. Searches of the database also can be performed at this address. *Mus et perum quiatur*

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