

Going to the Birds

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While all FAAers know that aviation safety is job one for the agency, do you know that it extends beyond human flyers to include our fine feathered friends?

If it's a surprise to you, it's not to Joelle Gehring, a senior conservation scientist at Michigan State University attending the ATO's "Competition for the Sky" conference this week in Las Vegas. Gehring has gone to the birds — so to speak. She's an advocate for neo-tropical migratory birds that fly south for the winter every year.



Joelle Gehring is a senior conservation scientist at Michigan State University.

Let's face it, birds have it tough enough breeding in Canada before flying thousands of miles south to Central America, and even farther, for the winter. Along the way, their migratory paths and wetlands — the interstate highways and motels of the bird world — have changed radically, or even disappeared.

As the markers of humankind rise abruptly in the form of communications towers, wind turbines, and skyscrapers, birds must thread their way through once-familiar areas, relying on the stars, magnetic fields from the earth, and sunrise/sunset as their guide. But the need to provide warning lights on these structures to alert and protect pilots has had the opposite effect on birds. They become disoriented and drawn into the lights, suffering injuries and even death.

Gehring estimates that millions of bird strikes occur every year. She and other researchers noticed that collisions occurred more often at some towers than at others. They hypothesized that the lights were interfering with the birds' ability to use the earth's magnetic fields. So Gehring approached Kevin Haggerty, the FAA's manager of obstruction evaluation services, about performing a study to determine the effects of different types of warning lights on migrating birds. They discussed what the study would look like and how it would work.

"I love working with Kevin," Gehring said. "He was very direct in telling me that pilot safety is the first priority." But she appreciates the efforts that Haggerty has made to modernize lighting standards. Many of the current standards are decades old. "I appreciate the progressive attitude that Kevin has. There is a way we can have both pilot and avian safety."

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In the spring and fall of 2005, with the assistance of the FAA, Gehring performed the study in Michigan, testing eight different types of light. The FAA uses white strobes, red strobes, red incandescent, and red incandescent lights alternating with red strobes. What she found was that birds become most disoriented with red incandescent lights that remain solid. Blinking red lights, and red and white strobes were not as disorienting.



Migratory songbirds, such as the Oriole (above), travel south at night from about late August to mid-October.

But the steady red light was a standard established decades ago. "It's possible that these lighting systems could be changed," Gehring suggested. Such a move could help reduce avian fatalities by 50 to 70 percent.

Gehring says such a change could also benefit the FAA. Red incandescent lights are expensive to maintain. A shift to newer LED technology could save procurement and maintenance costs. And with the "green revolution" erupting across the world, Gehring believes there is good public relations in saving birds and maybe even reducing light pollution near some communities.

She's now considering approaching the FAA to amend its guidelines to use red blinking lights on towers, rather than non-blinking variety. The Federal Communications is considering a notice of proposed rulemaking that might require all of its towers use white strobes instead of red lights.

"The FAA has been great," Gehring said. There are challenges, she admits, to working this issue over a long timeframe, but that might seem a drop in the bucket to our migratory friends who have flown these routes for thousands of years.