



Bird Strike Committee USA

Spring 2019

Bird Strike Buzz

Volume 5, No. 4

In This Issue

From the Chair	1
Call for Nominations	2
Steering Committee Updates	2
Bird Strike Committee Session at AAAE	3
Flight 1549 – What Has Changed Since Then?	4
Proportions of Canada Goose Strikes	7
Kudos to Smithsonian Feather Lab	8
Field Tips	9
Call for Abstracts & Posters	10
TEDx Recognizes DFW Airport	10

BSC USA Website

Check out our website for regulatory information, guidance and conference proceedings at:

<http://www.birdstrike.org>

Like us on Facebook
facebook.com/BirdstrikeUSA

From the Chair

Dear Bird Strike Committee USA (BSC-USA) Members:

The mid-winter meeting of the BSC-USA Steering Committee was held from February 5 to 6, 2019, at AAAE Headquarters in Alexandria Virginia. Several items are worthy of note.

Nomination and Voting Protocols

Individuals throughout the aviation industry have continued to express interest in serving on the BSC Steering Committee. To encourage and facilitate that participation, the Steering Committee has fine-tuned the nomination and voting protocols. From now on, nominations and voting procedures will be limited to twice a year to ensure that the candidates for Steering Committee and Standing Committee Chairs are in place for three months prior to the annual conference and the midwinter meeting.

Nominations are open – consider participating on the Committee! (For more details see page 2).

Short-term and Long-term Committee Goals

The Committee outlined a One-Year and Five-Year Work Plan and associated goals. The plans addressed a variety of topics, such as:

- Developing a system for web-based document and file sharing
- Developing an updated media kit
- Identifying procedures to vet qualified biologists
- Promoting communications among signatories to the Interagency Memorandum of Agreement
- Tracking Unmanned Aircraft System (UAS or drone) strikes with aircraft

To enhance outreach, the Committee determined that it would exercise the Committee’s liaison partnership that is described within its bylaws to improve interaction with other groups such as the NTSB, NASAO, USFWS, NPS, ATC, NATCA, and international collaborators.

BSC USA does not rest on its laurels. As we commemorate the 10-year anniversary of U.S. Airways 1549, we will continue with our mission of leadership in wildlife hazard management and strike prevention.

See you in Halifax!

John Weller

John Weller, Chair

2019 NORTH AMERICAN

BIRD STRIKE

CONFERENCE

August 12-15, 2019
Halifax, Nova Scotia, Canada





BSC USA Executive Committee

The BSC USA Executive Committee welcomes your input and insights regarding the organization, its operation, and matters of interest to our members. Please feel free to contact the members below with ideas or suggestions.

John Weller, Chair
Federal Aviation Administration
john.weller@faa.gov

Nick Atwell, Vice Chair
Portland International Airport
nick.atwell@portofportland.com

Sarah Brammell, Immediate Past Chair
Blue Wing Environmental
sbrammell@bluewingenv.com

Standing Committees

John Ostrom, Annual Conference
Minneapolis-St. Paul Int'l Airport
john.ostrom@mspmac.org

Lisa Harmon, Communications
Mead & Hunt, Inc.
lisa.harmon@meadhunt.com

Michael Stephens, Education and Outreach
Dane County Regional Airport
stephens.michael@msnairport.com

Amy Anderson, Membership
Federal Aviation Administration
amy.anderson@faa.gov

Steve Osmek, Operations/Policies
Seattle-Tacoma Int'l Airport
osmek.s@portseattle.org

Craig Quick, Research & Development
General Electric
craig.quick@GE.com

CALL FOR NOMINATIONS

Nominations are open for several BSC USA Steering and Standing Committee positions through **May 6, 2019**. Steering Committee members participate in monthly committee teleconferences and participate in-person or via teleconference at two meetings: the annual meeting held in conjunction with the annual conference and the mid-winter meeting held in Washington, D.C.

Information about the committee, including bylaws and committee chairs, is available on the BSC USA website: <http://www.birdstrike.org/about-bsc>. If you are interested in participating, please send an email expressing your interest in a committee position to: birdstrike.usa@gmail.com. A committee member will respond to you for further information.

BSC COMMITTEE: OPEN POSITIONS

Steering Committee – Voting Position

- FAA – 1 opening
- Aerospace Industry – 1 opening
- Airlines – 1 opening
- General – 2 openings (anyone not associated with defined category addressed in bylaws)

Standing Committee Chair (Non-voting Position)

- Operations & Policy Committee (Chair or Vice-Chair)

Nominations close on **Monday, May 6, 2019!**

STEERING COMMITTEE UPDATES

Operations and Policy Committee: A Busy Winter Despite the Government Freeze

By Steve Osmek

Thanks to the hard work of “essential” FAA employees, winter was busy! FAA released AC 150/5200-36B, *Qualifications for Wildlife Biologist Conducting Wildlife Hazard Assessments and Training Curriculums for Airport Personnel Involved in Controlling Wildlife Hazards on Airports*, and

Continued on Page 3



STEERING COMMITTEE UPDATES

Continued from Page 2

Draft AC 150/5200-33C, *Hazardous Wildlife Attractants On or Near Airports*. Many BSC members provided comments on Draft AC -33C, and the suggestions were forwarded to the full committee and to the FAA. FAA noted, as it did following the receipt of BSC comments on AC-36B, that the agency values our views and our comments do affect the final content of these publications. FAA reported that approximately 200 comments were received, and the document will be more robust as a result.

Next up, the Operations and Policy Committee will be seeking your input on AC 150/5200-32B, *Reporting Wildlife Aircraft Strikes*, which was last updated in May 2013. Although the FAA is not officially soliciting comments, the topic of potential revisions of this AC arose during the BSC Midwinter Meeting. Some portions of this document concerning reporting procedures are unclear, and some specific improvements could help to make the data more useful. Since data in the National Wildlife Strike Database is subdivided by decade (e.g., 1990-99, 2000-09; etc.), now seems like a good time to proposed updates. Comments received thus far include: updating the paper Wildlife Strike Reporting Form 5200-7 to make it consistent with the online Wildlife Strike Reporting Form; modifying the form so that it asks the reporter to identify the “Number Seen and/or Struck” rather than using the predetermined bins of 1, 2-10, 11-100 and > 100; and clarifying how body condition of the animal affects the definition of a strike (i.e., how fresh does the carcass need to be to still be considered a strike?). The AC is available at:

https://www.faa.gov/documentLibrary/media/Advisory_Circular/150_5200_32b.pdf

Please email your comments to Operations/Policy Chair, Steve Osmeck (osmek.s@portseattle.org) before Friday May 31, 2019. Other comments and suggestions for committee priorities can also be emailed to the same address

Outreach and Education Committee:

BSC on the Move!

By Michael R. Stephens



The BSC-USA Outreach and Education Committee recently attended Sun 'n Fun in Lakeland, Florida, and the Orlando International Airport's Earth Day celebration.

Several events are coming up – stop in and say hello!

64th Wisconsin Aviation Conference

Where: Green Bay, Wisconsin
When: May 5 to May 7, 2019



EAA Air Venture Oskosh 2019

Where: Oskosh, Wisconsin
When: July 22-28, 2019



Great Lakes Chapter-AAAE Airports Conference

Where: Chicago Illinois
When: October 27-29, 2019



The Outreach and Education Committee encourages the recruitment of new members and facilitates the exchange of information regarding wildlife hazards and risks to aviation safety. BSC outreach opportunities and materials are available to members.

Please contact Michael Stephens if you'd like to participate in subsequent events: Stephens.Michael@msnairport.com.

Bird Strike Committee Session at AAAE Conference

BSC USA members will seize upon the opportunity to interact with aviation industry experts and promote an exchange of ideas concerning wildlife hazards to aviation at this year's annual AAAE conference. BSC USA will host a discussion forum to share the latest best management concepts with industry professionals – from strike reporting to mitigation strategies – and to gather information from industry leaders so that BSC can better assist the airports, airlines, and other industry constituencies moving forward.

Early bird conference registration ends on May 3, 2019. For more conference information, please visit: <https://www.aaae.org/aaae/190501/Default.aspx>



FLIGHT 1549 – WHAT CHANGED SINCE THEN?

By John R. Weller, Federal Aviation Administration

The emergency landing of US Airways Flight 1549 into the Hudson River on January 15, 2009 demonstrated the potentially catastrophic risks posed by wildlife. The 10-year anniversary of this watershed event was marked by media outlets worldwide. FAA was frequently asked “What has been accomplished since 2009 to reduce the risks posed by hazardous wildlife, and how has safety improved?”

FAA is a data-driven organization that provides and implements guidance, policies, and regulations to further enhance aviation safety. From 2009 to 2018, approximately \$350 million of Airport Improvement Program (AIP) funds were allocated in support of wildlife hazard managements projects that resulted in better strike reporting and better data and revisions to policy and guidance. An additional \$25 million in FAA research funds were allocated to projects that would contribute to the development of advanced detection and monitoring systems. Since 2009, the FAA has continued to partner with USDA Wildlife Services to provide meaningful analysis of ongoing data collection and research.



*US Airways Flight 1549 Airbus 320 landed in the Hudson River on January 15, 2009..
(Photo: Edouard H. R. Gluck, AP).*

National Wildlife Strike Database Improvements

The National Wildlife Strike Database (NWSD) is the cornerstone of wildlife hazard analysis and policy development. Throughout the last decade, FAA made the database more accessible to those who report or use its data.

Increased Transparency

Since 2009, the FAA has enabled greater access to the NWSD. Prior to the “Miracle on the Hudson,” the FAA had ensured that both the database and a comprehensive annual report, *Wildlife Strikes to Civil Aircraft in the United States* would be available to the public upon request. Soon after Flight 1549, the FAA made the database and annual report available to the public to promote the transparency and to aid external users worldwide.

Easier Reporting

Strike reporting is voluntary—but data are critical! FAA has developed software since 2009 to make strike reporting easier. Rather than relying solely on paper forms, strikes can be reported using FAA’s website or a mobile device at <http://www.faa.gov/mobile>. A QR code is also provided on strike awareness posters, more than 36,000 of which have been distributed to airports, flight schools, airlines, pilots’ association, engine manufacturers and others throughout the aviation industry.

Better Access to Data

Improvements to the NWSD website (<http://wildlife.faa.gov>) have made it easier to view and download data. The FAA has enabled greater opportunities for data mining by allowing users to find specific data, such as data pertaining to specific airports, airlines, aircraft and engine types, etc., without downloading the entire database.

Continued on page 5



FLIGHT 1549 – WHAT HAS CHANGED SINCE THEN?

Continued from Page 4

Mandatory Occurrence Reports

Although strike reporting is voluntary in the US, Air Traffic Control (ATC) personnel adopted an internal mandate in 2012 to report all known bird strikes from communication with the airport, airlines or pilots using Mandatory Occurrence Reports (MOR). The MOR system increased the number of bird strikes in the NWSD by approximately 7 percent and an increase in damaging strikes reported by more than 4 percent.

Data Interpretation

Our understanding of wildlife hazards to aviation depends on the quantity and quality of data within the NWSD. To better understand the data in the NWSD, FAA established a partnership with Dr. Richard Dolbeer of USDA-Wildlife Services to analyze the strike data, identify reporting trends, and perform a gap analysis. Significant findings based on the strike data include the following:

- Strike reporting continues to increase overall at both Part 139 and GA airports, indicating increased strike awareness by airport staff, airlines, and ATC personnel. The percentage of positive bird identifications exceeded 60 percent. from 2014 to 2018.
- Damaging strike within the airport environment (less than 1,500 feet above ground level) are decreasing. The data indicate that wildlife programs at airports are effective and provide safer airports.
- Overall, there is a marked decrease in average bird size involved in strikes, indicating increased awareness.

Increased Focus on Wildlife Hazard Assessments and Management Plans

In addition, to improving the quantity and quality of strike data nationwide, FAA also asked airport operators to take a closer look at the wildlife on their airports.

In 2009, FAA initiated a successful program that encouraged all certificated airports to conduct a Wildlife Hazard Assessment (WHA) and Wildlife Hazard Management Plan (WHMP) based on the WHA results. By August 2009, a total of 291 (52 percent) of the nation's 563 Part 139 certificated airports had initiated or conducted a WHA and 298 (53%) had initiated a WHMP or had an approved one. The FAA undertook vigorous outreach to encourage the remaining Part 139 certificated airports to initiate a WHA and WHMP by the end of 2012. The heightened outreach was successful and eliminated the need for a proposed Rulemaking effort that would mandate Part 139 airports to prepare WHAs and WHMPs. Following this outreach effort, 124 of the nation's busiest General Aviation (GA) voluntarily initiated WHAs and WHMPs.

New and Revised Advisory Circulars and CertAlerts

FAA has developed new and revised Advisory Circulars (ACs) and CertAlerts to assist airport managers in their ongoing efforts to manage and reduce wildlife hazards. Although these are guidance documents, they provide important information that should be implemented by federally-obligated airports to comply with their grant assurances.

In addition, the Transportation Research Board and FAA-supported Airport Cooperative Research Program (ACRP) has published several reports and tools to assist airport operators with wildlife hazard management and mitigation. The reports cover a broad range of topics, and all are available from the ACRP website. Copies can be downloaded free of charge.

Continued on Page 6



FLIGHT 1549 – WHAT HAS CHANGED SINCE THEN?

Continued from Page 5

New or Revised Advisory Circulars, CertAlerts, and Publications

Advisory Circulars

- AC 150/5200-38, Protocol for the Conduct and Review of WHSVs, WHAs, WHMPs and Continual Monitoring (August 2018);
- AC 150/5200-32B, Reporting Wildlife Aircraft Strikes (May 31, 2013);
- AC 150/5200-36B, Qualifications for Wildlife Biologists Conducting Wildlife Hazard Assessments and Training Curriculums for Airport Personnel Involved in Controlling Wildlife Hazards on Airports (January 24, 2019); and
- AC 150/5200-33B, Hazardous Wildlife Attractants On or Near Airports, was circulated for public review until February 28, 2019. The revised AC is anticipated in 2019.

CertAlerts

- CertAlert No. 09-10: Wildlife Hazard Assessments in Accordance with part 139 Requirements (June 11, 2009);
- CertAlert No. 13-01: Federal and State Depredation Permit Assistance (January 30, 2013)
- CertAlert No. 14-01: Seasonal Mitigation of Hazardous Species at Airports: Attention to Snowy Owls (February 26, 2014); and
- CertAlert 16-03: Recommended Wildlife Exclusion Fencing (August 2016).;

Airport Cooperative Research Program Reports

- Report 32: Guidebook for Addressing Aircraft/Wildlife Hazards at General Aviation Airports (2010). Available at: <https://www.nap.edu/download/22949>
- Synthesis 23: Bird Harassment, Repellent, and Deterrent Techniques for Use on and Near Airports (2011). Available at: <https://www.nap.edu/download/14566>
- Synthesis 39: Airport Wildlife Population Management (2013). Available at: <https://www.nap.edu/download/22599>
- Report 122: Innovative Airport Responses to Threatened and Endangered Species (2014). Available at: <https://www.nap.edu/download/22222>
- Synthesis 52: Habitat Management to Deter Wildlife at Airports (2014). Available at: <https://www.nap.edu/download/22375>
- Report 145: Applying a Safety Management System Approach to Wildlife Hazard Management (2015). Available at: <https://www.nap.edu/download/23163>
- Report 125: Balancing Airport Stormwater and Bird Hazard Management (2015). Available at: <https://www.nap.edu/download/22216>
- Synthesis 92: Airport Waste Management and Recycling Practices (2018). Available at: <https://www.nap.edu/download/25254>



PROPORTIONS OF CANADA GOOSE STRIKES WITH CIVIL AIRCRAFT IN USA INVOLVING RESIDENT AND MIGRATORY BIRDS

By Dr. Richard A. Dolbeer, USDA-Wildlife Services

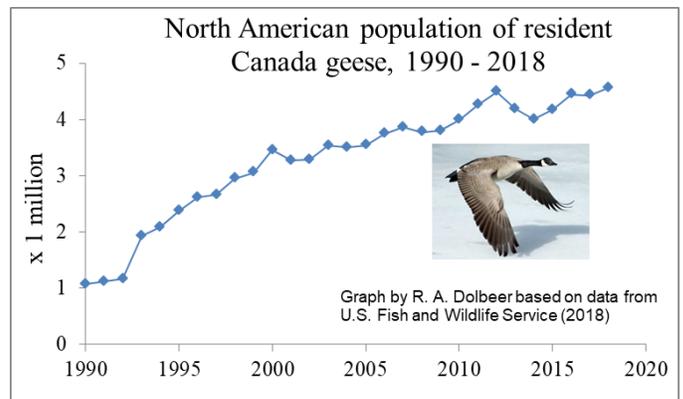
Following the forced landing of US Airways Flight 1549 in the Hudson in 2009, the Smithsonian Feather Lab analyzed the hydrogen isotope ratios in feather remains from the Canada geese responsible for the incident. The analysis indicated that the birds were migratory geese from northeastern Canada rather than resident (year-round) geese from the New York City area. Because the highly publicized event was caused by migratory geese, various animal rights advocacy groups have questioned the need to manage resident Canada geese in the vicinity of airports. To answer the question regarding the need to manage resident Canada geese near airports, I estimated the respective percentages of Canada goose strikes with civil aircraft caused by resident and migratory birds.

Programs to round-up and euthanize resident Canada geese during the period of feather molt in mid-summer have been carried out by the U.S. Department of Agriculture, Wildlife Services (USDA WS) program and state agencies since the 1990s, and all were undertaken in accordance with permits issued by the U.S. Department of the Interior and state wildlife agencies. These programs were accelerated after the 2009 Hudson River event. From 2000 to 2008, the number of resident Canada geese euthanized by USDA WS increased from about 7,000 in 2000 to 14,000. From 2009 to 2017, about 20,000 to 27,000 resident Canada geese were removed annually. However, it is relevant to note that the resident Canada goose population in the USA increased from about 1.1 million in 1990 to 4.6 million in 2017, and that the removal of 20,000 geese during round-ups in recent years represents only about 1% of the more than 2 million Canada geese taken by hunters in the USA annually.

Proportion of strikes involving resident or migratory Canada geese

Of the 1,716 strikes involving Canada geese and civil aircraft reported to the FAA from 1990-2017, a total of 933 (54%) occurred during the six-month period from April to September, and these strikes would have been caused by resident geese. The 783 strikes that occurred in the migratory months (October to March) could be either migratory birds from Canada or resident birds from USA.

An informed estimate of the relative percentages of each subpopulation involved in strikes during these months can be made by examining the relative numbers of migratory and resident geese in the total Canada goose population for each year from 1990 to 2017. The resident segment of the population increased from an estimated 32% (1.1 million of the 3.5 million total geese) in 1990 to 64% (4.6 million of the 7.1 million total geese) in 2017. If one assumes that resident and migratory Canada geese are struck in proportion to their abundance during the migratory months each year, then my calculations indicate that 46% (364) of the 783 strikes during the migratory months involved resident geese and 54% (419) involved migratory geese. Therefore, if one assumes that the 933 strikes that occurred from April to September were caused by resident birds and that 364 of the 783 strikes occurring during the migratory months were caused by resident birds, then 1,297 (76%) of the 1,716 reported strikes with Canada geese from 1990-2017 would be associated with resident birds.



Conclusions

Because of their abundance, year-round presence, large size, and flocking behavior, Canada geese are clearly one of the most hazardous bird species to civil aircraft in USA. Approximately 54 percent of Canada goose strikes occur during the six-month period from April to September when only resident birds are present, and an estimated 76% of Canada

Continued on page 8



PROPORTIONS OF CANADA GOOSE STRIKES

Continued from Page 7

goose strikes for all months combined are caused by resident birds. Thus, programs to manage resident Canada goose populations in the vicinity of airports are strongly justified in an effort to prevent significant strike events that put the flying public at risk.

I defined resident (normally non-migratory) Canada geese as the estimated numbers in Atlantic Flyway Resident, Mississippi Flyway Giant, Hi-Line, and W. Prairie/Great Plains Populations. These populations are still increasing, but at a lesser rate than 10 to 20 years ago. Four times as many resident geese were present in 2018 than in 1990, and these birds can be found near airports year-round.



Resident Canada geese often gather at storm detention ponds adjacent to open, grassy areas. Some people believe that swan effigies (the 2 white objects at pond edge) will deter Canada geese; but this technique obviously does not work. (Photo by R. A. Dolbeer, Ohio, 2018.)

Kudos to the Smithsonian Feather Lab!

In recognition of the Smithsonian Channel's recent documentary, *Bird vs. Plane: Miracle on the Hudson*, and the ongoing accomplishments of the Smithsonian's Feather ID Lab, BSC USA will present the Feather ID Lab with a Special Recognition Award in 2019. The Special Recognition Award is presented to an individual or group who is distinguished through outstanding service, innovation, or commitment to the field of aircraft/wildlife-strike hazards. The award is richly deserved.



For more information about the Smithsonian Channel special program go to:

<https://www.smithsonianchannel.com/shows/bird-vs-plane-miracle-on-the-hudson/0/3467432>

FIELD TIPS

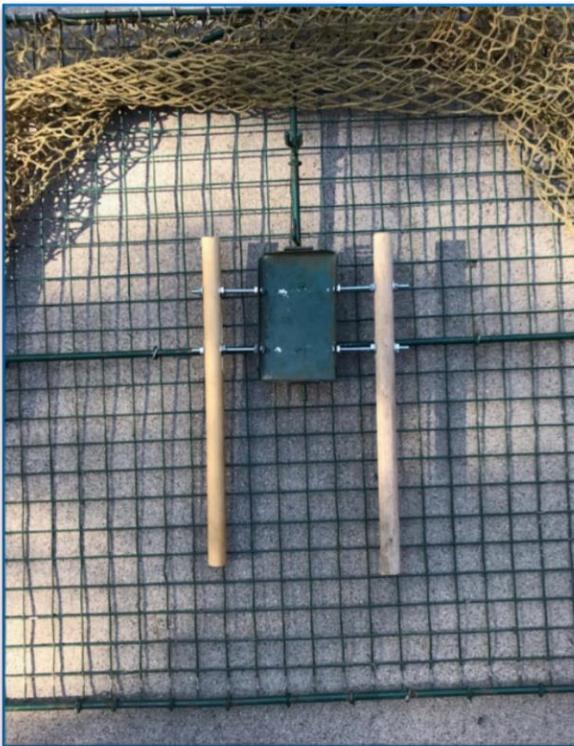
The following technical tips are provided to help airport wildlife managers as they address daily challenges. If you have a suggestion, please submit your suggestions to the Communications Chair (lisa.harmon@meadhunt.com).

TECHNICAL TIP – Modifying Tools

By Russel W. Odell, USDA – Wildlife Services

Why re-invent the wheel? Instead of developing a new tool, why not save time and money by taking an existing tool (or one that can be purchased) and modify it to fit your needs?

Airport wildlife biologists are modifying simple ground net traps, elevating them, adding perches, and introducing species-specific baits to capture target species. As shown below, available tools that were developed for a particular species can be modified to do the job you need with just a little tinkering and ingenuity.



TECHNICAL TIP – Trapping & Transporting

By Nick Atwell, Chair Elect

The spring trapping season is here! Raptors are resilient animals, but special care must be taken during trapping and translocation to ensure that each event is as humane, injury, and stress-free as possible to the raptor.



Transport boxes/carriers should be specific to the size of the raptor to reduce chance of injury, and it's best to use transport boxes/carriers that are slightly larger than the raptor. If the carrier is too small, the raptor can damage feathers and wings. Conversely, if the carrier is too large, the captured raptor may thrash around and sustain injuries.



Suitable covers should be used to reduce the level of stress while in transport and to make sure that they have plenty of ventilation. At PDX, we avoid using duct tape to cover air holes. We use a fitted piece of plastic that lasts longer and will not expose raptors to the adhesive and fabric mesh in the tape.

The use of these measures and other best management practices (BMPs) help to prevent adverse effects to the captured animal during translocation.

TEDx Plano Recognizes DFW Airport

By Cathy Boyles, Wildlife Administrator, Dallas Fort Worth International Airport

In August 2017, the Dallas Morning News published a news article about some unique behind-the-scenes work being conducted at Dallas Fort Worth International Airport (DFW) that caught the attention of TEDx Plano. In April 2018, DFW's Wildlife Administrator, Cathy Boyles, was invited to give a TEDx talk about DFW's innovative wildlife hazard management efforts.

DFW was plagued by an uptick in bird strikes that peaked in the summer of 2014. A study of airfield vegetation revealed surprising findings about the year-round food sources it provided for birds. Thereafter, a team of experts came together to formulate a strategic plan to modify airfield vegetation and remove these food sources. Once launched, bird numbers declined. Even better, the airport found that their new plan would also affect sustainability – in a good way!

The work, called “simple yet brilliant,” caught the eye of the organizers of TEDx Plano, in Plano, Texas. The April 2018 Ted Talk by Cathy Boyles allowed DFW staff to provide a snapshot of the aviation safety work that airports do, and it allowed DFW to showcase the value of monitoring and mitigating wildlife to prevent its interaction with aircraft. Although most people don't think about wildlife before boarding a plane, the publicity given to bird strike risks since 2009 has led to the development of new technology and methods for tracking bird strikes and bird behavior.

We all know that wildlife is unpredictable; and DFW staff recognize that the recent progress at DFW may be overshadowed by the next challenge. Nevertheless, DFW staff is looking ahead to the next 10 years and beyond and preparing to meet those challenges.



A DFW botanist looks at airfield vegetation.
Photo credit: Cathy Boyles, DFW.

CALL FOR ABSTRACTS AND POSTERS

Abstracts for proposed papers and posters for the 2019 North American Bird Strike Conference are due on **Tuesday, April 30, 2019**. The conference will be held from August 12 to 15 in Halifax, Nova Scotia, Canada.

Authors/presenters should submit their abstract using the online process and abide by the conference's non-commercial, presentation selection, and audio-visual recording policies. The project abstract should briefly describe: the problem studied or addressed and why; the investigation method; findings; and what the results mean. The presentation title should be descriptive and concise. Abstracts for accepted presentations will be printed in the program.

The online submittal form, submittal process details, and conference policies are available at: https://www.aaae.org/aaae/BirdStrike/Conference_Program/Call_for_Presentations/BirdStrike/Program/Call.aspx.

For more information, contact Gary F. Searing, Executive Director, Bird Strike Association of Canada at gfs@airportwildlife.ca.