

# **Airport Certification Manual**

## **Minneapolis-St. Paul International Airport (MSP)**

DocuSigned by:

*Chad Leque*

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Metropolitan Airports Commission

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<b>Revision Number</b>	<b>Revision Date</b>	<b>Revision Contents and/or Remarks</b>
001	07/01/07	Pages iv - vi, Revision Control Sheet, Distribution List
001	07/01/07	Page 11-2, Declared Distances & Displaced Thresholds
001	07/01/07	Page 11-3, safety areas for Taxiways K & L
001	07/01/07	Page 12-3, 12-4, 12-5, Taxiway reflectors
001	07/01/07	Page 15-1, & 15-2, paragraph a, vehicles 16 & 17
001	07/01/07	Page 16-1, items c & e
001	07/01/07	Page 21-1, 21-2, 21-3, 21-4, 21-5, Pedestrian and Ground Vehicles
001	07/01/07	Page 24-1, item 3.a
001	07/01/07	Exhibit 1, Operations Organization Chart
001	08/15/06	Exhibit 7, Sign Plan
001	07/01/07	Exhibit 9, Snow Plan
001	07/01/07	Exhibit 13, Letters of Agreement
002	01/22/09	Exhibit 7, Updated Sign Plan
003	03/31/09	Exhibit 9, Snow Plan: Added information related to continuous monitoring and crew resource management.
004	10/31/10	Complete update of the entire document.
005	01/01/12	Page 21-1, 21-2, 21-3, 21-4, 21-5, 21-6, Pedestrian and Ground Vehicles
006	03/18/13	Pages i, iv, Table of Contents and Revision Control Sheet. Pages v-vi, Elimination of Document Control Sheet (page renumbering). Page 4-1, Falsification, reproduction, or alteration of applications, certificates, reports, or records. Page 8-1, 8-2 (format), CEO, Personnel. Page 21-2, 21-4, Pedestrians and Ground Vehicles.
007	09/15/13	00 -Table of Contents; Sections 9, 11, 12, 15, 16, 20, 24, 26, 27; Exhibits 1, 2, 4, 5-2, 6, 7, 9-1, 9-2, 10, 11, 13-1, 13-2, 14, 16, 17.
008	07/31/14	00 - Table of Contents, Section 21
009	08/01/14	Table of Contents, Section 13, Exhibit 9
010	03/24/2016	Updates to 00 - Table of Contents and Sections 12, 15, 16, 17, 20, and 26 as well as Exhibits 1, 4, 7, 10, 12, 14, and 15. Addition of Exhibit 18.


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<b>Revision Number</b>	<b>Revision Date</b>	<b>Revision Contents and/or Remarks</b>
011	09/01/2016	Changes to Sections 13, 20, 26 and Exhibit 9 to incorporate Runway Condition Codes (RCCs) and other changes to Airport Condition Reporting methods.
012	02/11/2018	Updates to 00 - Table of Contents, Sections 9 and 12 and Revised Movement/Non-Movement Area Letter of Agreement in Exhibit 13.
013	05/11/2018	Updates to 00 - Table of Contents, Distribution List, Section 21, Exhibit 1, Exhibit 5, and Exhibit 9
014	08/31/2018	Updates to Table of Contents, Section 11-Safety Areas, Section 12-Marking, Signs and Lighting, Section 15-ARFF Equipment and Agents, Section 17-Handling and Storing of Hazardous Substances and Materials, Exhibit 10-ARFF Equipment/Personnel, Exhibit 16-Preventive Maintenance Procedures for PAPIs and Generators, Exhibit 17-Engineered Materials Arresting System (EMAS) Maintenance Program, Exhibit 18-Fuel System Inspection Reports and Exhibit 19 - Corrective Action Form
015	11/09/2018	Updates to Section 19- Airport Emergency Plan and Exhibit 11- Airport Emergency Plan
016	06/01/2019	Entire document reformatting, and reorganization. Updates to Section 317- ARFF: Equipment and Agents, Section 321 -Handling and Storing of Hazardous Substances and Materials, Exhibit 303-1-Organization Chart, Exhibit 313-1-Snow Plan, Exhibit 317-1-ARFF Equipment/Personnel, Exhibit 327-1-Daily Self-Inspection Forms, Exhibit 339-1-NOTAM Information
017	09/27/2019	Updates to Distribution List, Section 323-Air Traffic and Wind Direction Indicators, Exhibit 311-2-Preventive Maintenance Inspection Procedures for PAPIs and Generators, Exhibit 313-1-1-Snow Plan, 321-1-Fuel System Inspection Reports, Exhibit 327-1-Self-Inspection Forms
018	10/01/20	Updates to Distribution List, Section C of Section 321 and replacement of pages 4 and 5 of Exhibit 321-1 with new training form.
019	11/20/20	Updates to Distribution List, Section 309, Section 311, Section 321, Section 323, Exhibit 305-2, Exhibit 311-2, and Exhibit 500-1
020	12/23/20	Updates to the Table of Contents and the Sign Plan in Exhibit 311-1.

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<b>Revision Number</b>	<b>Revision Date</b>	<b>Revision Contents and/or Remarks</b>
020A	06/16/2021	Updates to the Table of Contents, Distribution List, and the Sign Plan in Exhibit 311-1.
021	6/21/2021	Updated Wildlife Hazard Management Plan in Exhibit 337-1.
022	3/25/2022	Updated Table of Contents-Distribution List, Section 303, Section 327, Exhibit 309-1, Exhibit 311-2, and Exhibit 327-1.
023	04/22/2022	Updated Section 311, Section 325, Section 339, Exhibit 325-1 and Exhibit 339-1
024	08/26/2022	Updated Table of Contents, Section 305, Section 311, Exhibit 313-1, Exhibit 321-1, Exhibit 500-1
025	11/18/2022	Updated Table of Contents, Section 301, Section 317, Section 335, Exhibit 101-2, and Exhibit 500-10
026	07/14/2023	Updated Table of Contents, Section 201, Section 311, Section 327, Section 329, and Exhibit 327-1
027	10/06/2023	Updated Table of Contents Distribution List, Section 313 and Exhibit 313-1.
028	10/12/2023	Updated Exhibit 325-1, Airport Emergency Plan - Revision 06
029	12/29/2023	Updated Section 309, Section 317, Section 319, and Exhibit 317-1
030	01/26/2024	Update to the Sign Plan, Exhibit 311-1
031	01/31/2024	Updated Exhibit 325-1, Airport Emergency Plan - Revision 07
032	04/12/2024	Updated Section 337 and Exhibit 337-1, Wildlife Hazard Management Plan

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### Distribution List

1. Original ACM
2. FAA Airport Certification Inspector
3. MAC Executive Director/CEO
4. MAC Executive Vice President/COO
5. MAC Vice President Management and Operations
6. MAC Director of Integrated Operations
7. MAC Director of Airport Maintenance and Asset Management
8. MAC Director of Public Safety
9. MAC Director of Terminal and Landside Operations
10. MAC Assistant Director of Field Maintenance
11. MAC Assistant Director of Airline Operations
12. MAC Emergency Programs Manager
13. MAC Airport Police Department
14. MAC Airport Fire Department
15. MAC SMS Manager
16. MAC Trades Department
17. MAC Field Maintenance Department
18. MAC Electrical Department
19. MAC Paint Department
20. MAC Airport Development Department
21. MAC Airside Operations Department
22. MAC Emergency Communications Department
23. Air Traffic Manager, FAA Air Traffic Control Tower
24. Manager, FAA Airways Facilities
25. Minnesota State Department of Transportation

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### Distribution List

26. General Manager, Signature Flight Support
27. Station Manager, Air Canada
28. Station Manager, WestJet Airlines
29. Station Manager, American Airlines
30. Station Manager, Southwest Airlines
31. Station Manager, Delta Air Lines
32. Station Manager, FedEx
33. Station Manager, Frontier Airlines
34. Station Manager, Icelandair
35. Station Manager, UNIFI
36. Station Manager, Spirit Airlines
37. Station Manager, Skywest Airlines
38. Station Manager, Endeavor Airlines
39. Station Manager, United Airlines
40. Station Manager, Sun Country Airlines
41. Station Manager, Alaska Airlines
42. Station Manager, DHL
43. Station Manager United Parcel Service
44. 934th Air Force Reserve
45. 133rd Air National Guard
46. Swissport
47. Station Manager, Denver Air Connection
48. Station Manager, JetBlue
49. Station Manager, Air France/KLM
50. Station Manager, Atlas Air

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### Distribution List

51. Station Manager, Allegiant Airlines
52. Station Manager, Amazon Air
53. Station Manager, Condor Airlines

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### Section 337 - Wildlife Hazard Management

#### General

The Airport shall take immediate measures to alleviate wildlife hazards whenever they are detected or reported.



1. As part of the Self-Inspection program Airside Operations personnel shall:
  - a. Watch for and report any unusual concentration of wildlife or birds that may be a hazard to aircraft operations, especially when low-flying or in the vicinity of runways, their respective safety areas and immediate approach areas.
  - b. In circumstances when such concentration of wildlife are observed, take appropriate measures to disperse the wildlife or birds or otherwise attempt to alleviate any risk of strikes by aircraft, and immediately advise ATCT. Dispersal activities will take into consideration flight operations and will be coordinated with ATCT as appropriate to avoid dispersing wildlife into the path of aircraft.
2. The Airport shall maintain wildlife control permits in conformity with its approved wildlife hazard management plan and the permits will be made available to the FAA upon request.
3. The associated Wildlife Hazard Management Plan for Minneapolis-Saint Paul International Airport is outlined in Exhibit 337-1 of this manual.

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Section 337, page 1

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## Exhibit 337-1 - Wildlife Hazard Management Plan

### A. PURPOSE

The purpose of the Wildlife Hazard Management Plan (WHMP) is to mitigate the risk that wildlife poses to aircraft at Minneapolis-St. Paul International Airport (MSP).

### B. POLICY

The Metropolitan Airports Commission (MAC) is committed to ensuring the safety of aircraft using MSP. While the safety of aircraft at MSP is paramount, it is not possible to prevent all wildlife strikes. This Wildlife Hazard Management Plan aims to reduce the frequency and severity of strikes by focusing management efforts on species and habitats that constitute the greatest risk to aircraft that operate at MSP.

### C. GOALS AND OBJECTIVES

The goal of the MSP WHMP is to minimize the risk to aircraft operations by reducing wildlife hazards and mitigating risks caused by wildlife activities on and in the vicinity of the airport.

The objectives of the MSP WHMP are to:

1. Target zero tolerance species and those habitats that primarily support them both on and off the airport.
2. Ensure compliance with all relevant airport operational and environmental legislation and regulations.
3. Ensure that adequate systems are in place to define roles and responsibilities and procedures for managing wildlife risks at MSP.
4. Define the methodology by which wildlife hazards are managed at MSP.
5. Establish a monitoring program for all aspects of the WHMP.

**D. HISTORY**

In 2018, USDA Wildlife Services conducted a 12-month long Wildlife Hazard Assessment at MSP from January to December. The objectives of the Wildlife Hazard Assessment were:

1. Identify the bird and mammal species, numbers, locations, local movements and activities, and seasonal occurrences of wildlife observed at MSP.
2. Identify features on and near the airport that attract hazardous wildlife.
3. Provide general and site specific recommendations to reduce wildlife hazards at MSP.

In addition, the Wildlife Hazard Assessment included recommendations for mitigation of identified wildlife attractants and management of wildlife species that may have posed a threat to aviation safety.

**E. WILDLIFE STRIKES**

From 2019 to 2023, MSP has experienced approximately 559 wildlife strikes.

- 2019 - 94 Wildlife Strikes
- 2020 - 57 Wildlife Strikes
- 2021 - 118 Wildlife Strikes
- 2022 - 153 Wildlife Strikes
- 2023 - 137 Wildlife Strikes

**F. BACKGROUND**

MSP is a Class I certificated airport located approximately seven miles southeast of downtown Minneapolis, MN and eight miles west of downtown Saint Paul, MN in southeastern Hennepin County, MN at latitude 44-52-55.044N and longitude 93-13-18.3560W. MSP is bordered on the north by State Highways 62 and 55, on the east by State Highway 5, to the south by Interstate 494, and the west by State Highway 77.

MSP serves international and domestic flights of major commercial airlines as well as regional, charter, air freight, general aviation, and military aircraft. Generally, MSP serves between 30 million and 40 million passengers and accommodates between 300,000 and 350,000 operations annually.

The airport is managed and run by the Metropolitan Airports Commission (MAC), a public corporation established by the Minnesota State Legislature to provide for coordinated aviation services throughout the Twin Cities metropolitan area.

MSP is approximately 2,930 acres and has four runways, nineteen taxiways, two terminals, one Fixed Base Operator, six deice aprons and two cargo aprons.

Total annual precipitation at MSP averages 29.41 inches of rain and 55.9 inches of snow. The median growing season is 160 days, with an annual mean temperature of 45 degrees.

## G. ON-AIRPORT HABITAT

**Vegetation:** Most of the Air Operations Area (AOA) was formerly cropland and is now maintained in short grass. Since 1987, turf establishment specifications call for hydroseeding of exposed areas with 25-141 General Roadside mix which contains:

- Kentucky Bluegrass (29%)
- Perennial Rye-grass (21%)
- Smooth Brome grass (14%)
- Canada Bluegrass (14%)
- Creeping Alfalfa (6%)
- Slender Wheat-grass (4%)
- Switch grass (3%)
- Timothy (3%)
- Redtop (3%)
- White Clover (3%)

Turf areas are maintained by mowing to a height of approximately 3-4 inches.

Vegetation on the airport can and does attract wildlife for activities such as nesting, loafing and feeding.

**Water Resources:** There are three areas with water on the AOA. The first is a detention pond located south of runway 12R/30L at the end of a landside parking lot. This pond is covered with netting, thereby excluding wildlife from accessing it. The second area is a small wetland located east of the approach end of

runway 17 and the third area is a small wetland located west of the approach end of runway 17.

**Buildings:** There are a number of buildings and structures located on the AOA such as hangars, terminals, jetways, maintenance facilities, antennas, signs, lights, etc., that may provide nesting and perching sites for various species of birds.

## **H. OFF-AIRPORT HABITAT**

**Surrounding land uses:** MSP is located in the flat uplands approximately 100 feet above the Mississippi and Minnesota River valleys near the confluence of the two rivers. These valleys are rimmed with bluffs that steepen as the confluence is reached but contain several large lakes, marshes and wooded areas. The remainder of the uplands, except portions of Fort Snelling National Cemetery, surrounding MSP has been highly developed for urban uses, including industrial, commercial and residential. The bluffs leading to the river valleys and associated river bottoms are unsuitable for industrial or commercial application and are maintained primarily as natural areas.

The airport is adjacent to the Fort Snelling Golf Course, Fort Snelling State Park, Minnesota River National Wildlife refuge and the Fort Snelling National Cemetery.

The land use areas around the airport can provide significant nesting, roosting, loafing and feeding sites for a number of wildlife species.

**Water Resources:** MSP has a significant number of bodies of water that surround it. Some of the closer ones include:

- Gun Club Lake
- Lake Nokomis
- Long Meadow Lake
- Minnesota River
- Mississippi River
- Mother Lake
- MSP Detention Ponds
- Snelling Lake
- Taft Lake



The water resources around the airport may provide significant nesting and feeding sites for a number of wildlife species. Appendix A shows the location of the water resources listed above.

## I. WILDLIFE

There are a number of wildlife species, including birds, mammals and reptiles that have been struck, hazed, removed or observed on or near MSP. Birds make up the vast majority of wildlife on the airport, followed by mammals.

## J. LIST OF INDIVIDUALS HAVING AUTHORITY AND RESPONSIBILITY FOR IMPLEMENTING EACH ASPECT OF THE PLAN

As the certificate holder, the Metropolitan Airports Commission maintains the authority for the implementation of this wildlife hazard management plan.

### Airside Operations

- Manager – Airside Operations is responsible for the oversight and management of the MSP Wildlife Hazard Management Plan and shall be identified as the MSP Wildlife Program Manager.
- Assistant Managers – Airside Operations shall be responsible for the implementation of the MSP Wildlife Hazard Management Plan, including completing FAA Form 5200-7 upon notification of a wildlife strike and shall document all wildlife activity when requested.
- Airside Operations Coordinator shall be responsible for completing FAA Form 5200-7 upon notification of a wildlife strike and shall document all wildlife activity when requested.

### U.S. Department of Agriculture Wildlife Services (USDA WS)

The MAC maintains an annual contract with USDA WS to provide the following:

- Personnel to coordinate and conduct wildlife hazard management activities.
- A qualified Airport Wildlife Biologist to provide training to airport staff.
- 3-4 wildlife surveys per month
- Quarterly activity reports.

- An annual report of all activities and recommendations

**MSP Wildlife Team**

Consists of the Airside Operations Manager, select Assistant Managers, USDA WS qualified Airport Wildlife Biologist and specialists who have undergone additional training and certification and are authorized to use lethal force on wildlife at MSP.

**Federal Aviation Administration MSP Air Traffic Control Tower (ATCT)**

Responsible for the movement of aircraft in and around the air as well as the ground at MSP. The ATCT is normally the first point of notification for any wildlife strikes on or around MSP.

**Minnesota Department of Natural Resources (MN DNR) Wildlife Division**

Responsible for issuing all wildlife depredation permits for the state.

**United States Fish and Wildlife Service (USFWS)**

Responsible for issuing depredation permits as authorized by the Migratory Bird Treaty Act (MBTA) to those applicants who meet the necessary qualifications.

**K. LIST PRIORITIZING THE FOLLOWING ACTIONS IDENTIFIED IN THE WILDLIFE HAZARD ASSESSMENT AND TARGET DATES FOR THEIR INITIATION AND COMPLETION.**

**Wildlife population management (list of problem wildlife populations and mitigation actions/target dates).**

From 2019 MSP Wildlife Hazard Assessment received by MAC in January 2020.

1. Adopt a zero-tolerance policy toward large sized hazardous wildlife. (p. 40). Completed 2019.
2. Maintain adequate wildlife control supplies (pyrotechnics, propane cannons, etc.). (p. 40) Completed 2019.
3. MAC should continue efforts to harass bald eagles from MSP. (p. 44). Completed 2019.
4. MAC should continue efforts to harass snowy owls when present at MSP. (p. 44) Completed 2019.

5. MAC should continue to harass and lethally remove waterfowl as necessary. (p. 44). Completed 2019.
6. Haze consistently. (p. 41). Completed 2019.
7. Increase hazing efforts during migration periods. (p. 41). Completed 2019.
8. Maintain a policy of lethal control for persistent wildlife. (p. 41). Completed 2019.
9. Increase airfield patrols during inclement weather. (p. 50). Completed 2019.
10. Cooperate with adjacent landowners to manage wildlife hazards. (p. 41). Completed 2020.

**Habitat Modification (list of wildlife attractants and mitigation actions/target dates).**

From 2019 MSP Wildlife Hazard Assessment.

1. MAC should utilize grass management as a method of habitat modification to prevent the use of open grass areas by Canada geese. (p. 43). Completed 2019.
2. MAC should mitigate the water hazards near Runway 17. (p. 43). Under review.
3. MAC should remove any dead or dying trees that may be used for perching or roost locations by birds. (p. 44). Under review.
4. MAC should install a fence skirt to prevent digging mammals from entering the AOA in identified problem areas. (p. 42). Under review.

**Land use changes (list of land use on and near the airport that attract wildlife and mitigation actions/target dates).**

From 2019 MSP Wildlife Hazard Assessment.

1. Utilize grass management to deter wildlife in problem areas. (p. 42). Completed 2019.
2. Evaluate potential wildlife hazards when planning new construction or land use changes. (p. 42). Completed 2019.

**Ongoing data collection and analysis.**

From 2019 MSP Wildlife Hazard Assessment.

1. Ensure continued support and proper use of the Wildlife-Aircraft Strike Reporting System. (p. 38) Completed 2019.
2. Monitor wildlife populations and use patterns on and around the airfield. (p. 41). Completed 2020.

**Record keeping.**

From 2019 MSP Wildlife Hazard Assessment.

1. Update the existing Wildlife Hazard Management Plan (WHMP) based on this Wildlife Hazard Assessment. (p. 38). Completed 2021.
2. Continue the use of an airport wide record keeping system for wildlife strikes and control/hazing actions in database format. (p. 39). Completed 2019.
3. Train all Airside Operations personnel in wildlife hazing procedures and species identification. (p. 39). Completed 2019.
4. Annually review federal and state threatened and endangered species lists. (p. 40). Completed 2020.
5. Maintain permits to control wildlife. (p. 40). Completed 2019.

**L. REQUIREMENTS FOR AND, WHERE APPLICABLE, COPIES OF LOCAL, STATE AND FEDERAL WILDLIFE CONTROL PERMITS.**

MSP shall maintain wildlife control permits in conformity with this Wildlife Hazard Management Plan and the permits will be made available to the FAA upon request.

**M. IDENTIFICATION OF RESOURCES THAT THE CERTIFICATE HOLDER WILL PROVIDE TO IMPLEMENT THE PLAN.**

Audio Repellents

- Vehicle sirens

Pyrotechnics

- 15mm Banger/Screamers
- 18mm
- 12 Gauge Shell Crackers

Visual Repellents

- Effigy – Coyote, Red Fox

- Lasers

## Non-lethal Projectiles

- Paintball Gun

## Capture Tools

- Swedish Goshawk Traps
- Bownet Traps
- Bal-chatri Traps
- Netgun
- Ketch Poles
- Pet Porters/Kennels
- Starling traps
- Pigeon traps
- Foot-hold Traps
- Clover Traps
- Conibear Traps
- Box Traps
- Snares

## Removal Tools (Lethal - inventory with serial numbers maintained by Airside Operations)

- Firearms
  - 12 Gauge Shotguns
  - .22 Rifles
  - .223 Rifle
  - .243 Rifles
- Dart Guns
- Air Rifles
- Captive Bolt
- CO<sub>2</sub> Euthanization Chamber

## Miscellaneous

- Polaris Ranger
- Boat and motor
- Binoculars
- Spotting Scopes
- Spot lights
- Wildlife Reference Manuals
- Cameras

- Thermal Imaging
- Bird Strike kits

**N. PROCEDURES TO BE FOLLOWED DURING AIR CARRIER OPERATIONS THAT AT A MINIMUM INCLUDES:**

**Designation of personnel responsible for implementing the procedures. (Wildlife patrol staffing and primary responsibilities, hours of availability, etc.**

Airside Operations staff are on the airfield or available to respond to any wildlife issue on the Air Operations Area 24x7x365.

**Provisions to conduct physical inspections of the aircraft movement areas and other areas critical to successfully manage known wildlife hazards before air carrier operations begin.**

Wildlife surveys are conducted by USDA Wildlife Services and are designed to identify trends in hazardous wildlife activity around the airport environment. Routine inspections of the movement and safety areas are conducted at least once daily.

Airport perimeter inspections are conducted weekly.

Random inspections for wildlife are conducted on an ongoing basis and are dependent on time of day, wildlife activity, season and weather.

Post strike inspections are conducted after most wildlife strikes have been reported to Airside Operations. Inspections may include movement area surfaces, safety areas, and aircraft surfaces for any evidence of the wildlife strike or ongoing wildlife activity.

**O. WILDLIFE HAZARD CONTROL MEASURES.**

An integrated approach is used to manage wildlife hazards on or near MSP that pose a risk to aircraft operations utilizing the following principles:

**Habitat Modification/Exclusion** – altering features of the environment to

reduce, eliminate or exclude food, water and shelter to reduce the attractiveness of the airport to wildlife.

## Targeted Species

- Canada geese (Zero Tolerance)
- Mallard ducks
- American coot
- European starlings
- Blackbirds
- Red-tailed hawks
- American kestrels
- Bald eagles (Zero Tolerance)
- Rock doves
- White-tailed deer (Zero Tolerance)
- Red fox (Zero Tolerance)
- Coyotes (Zero Tolerance)

**Harassment** – any nonlethal act of pursuit, disturbance or annoyance of wildlife which results in significant disruptions to normal patterns of behavior, i.e., being scared or chased from the immediate area without causing any physical injuries.

## Targeted Species

- Canada geese (Zero Tolerance)
- Mallard ducks
- American coot
- European starlings
- Blackbirds
- Red-tailed hawks
- American kestrels
- Snowy owls
- Bald eagles (Zero Tolerance)
- Rock doves
- Ring-bill gulls (Zero Tolerance)
- White-tailed deer (Zero Tolerance)
- Red fox (Zero Tolerance)
- Coyotes (Zero Tolerance)

**Capture and Relocation** – use of devices to restrain wildlife and then transport them to release areas away from the airport.

## Targeted Species

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- Red-tailed hawks
- American kestrels
- Snowy owls

**Removal** – any lethal method of control of wildlife.

Targeted Species (Zero Tolerance)

- Canada geese
- Ring-billed gulls
- White-tailed deer
- Coyotes
- Red fox

**P. WAY TO COMMUNICATE EFFECTIVELY BETWEEN PERSONNEL CONDUCTING WILDLIFE CONTROL OR OBSERVING WILDLIFE HAZARDS AND THE AIR TRAFFIC CONTROL TOWER.**

All personnel conducting wildlife management activities on the movement area or in safety areas will be trained in communications with ATCT and utilize vehicles equipped with radios and beacons. Wildlife personnel will maintain appropriate communications with the Air Traffic Control Tower (ATCT) in accordance with MAC Ordinances and guidelines identified in the MSP Movement Area Handbook. ATCT will be advised whenever any wildlife management activity may impact aircraft operations.

Airside Operations will immediately notify ATCT whenever they are made aware of any wildlife activity that poses a threat to aircraft operations.

**Q. PROCEDURES TO REVIEW AND EVALUATE THE WHMP EVERY 12 CONSECUTIVE MONTHS OR FOLLOWING A TRIGGER EVENT.**

The MSP Wildlife Hazard Management Plan will be reviewed at least once every 12 consecutive months or when one of the following occurs:

- An air carrier aircraft experiences multiple wildlife strikes.
- An air carrier experiences substantial damage from striking wildlife.
- An air carrier aircraft experiences an engine ingestion of wildlife.

In lieu of maintaining a formal Wildlife Hazard Working Group, the MSP Wildlife



Hazard Program Manager or his designee shall present and discuss the MSP Wildlife Hazard Management Plan at least once annually at a number of meetings that may include:

- MSP Airport Safety Committee Meeting.
- MSP FAA ATCT Customer Forum.
- U.S. Air Force Reserves 934th and Minnesota Air National Guard 133rd .Airfield Operations Board (AOB) and Bird Hazard Working Group (BHWG) Meeting.

The MSP Wildlife Program Manager will review all recommended changes and will update the MSP Wildlife Hazard Management Plan with approved changes.

USDA Wildlife Services submits an annual report to the MSP Wildlife Program Manager. The report includes summaries of wildlife activity observed, hazed and removed as well as recommendations to improve the wildlife hazard management program.

Review of strikes - After receiving confirmation of a wildlife strike at MSP, member(s) of the MSP Wildlife Team may review details of the strike and determine if any changes need to be implemented to habitat, management strategies, training or the MSP Wildlife Hazard Management Plan.

**R. A TRAINING PROGRAM CONDUCTED BY A QAWB TO PROVIDE AIRPORT PERSONNEL WITH THE KNOWLEDGE AND SKILLS NEEDED TO SUCCESSFULLY CARRY OUT THE WHMP.**

The MSP Wildlife Training Program for Airside Operations follows AC 150/5200-36B, current edition, Qualifications for Wildlife Biologist Conducting Wildlife Hazard Assessments and Training Curriculum for Airport Personnel Involved in Controlling Wildlife Hazards on Airports.

Airside staff shall receive training in the following areas:

- Review of MSP Wildlife Hazard Management Plan and Wildlife Hazard Assessment.
- Wildlife hazards.
- Wildlife strike documentation.
- Wildlife management activity documentation.

- Wildlife identification.

In addition to the basic training, MSP Wildlife Team members will complete the following training:

- Shotgun qualification.
- Rifle qualification (Only for advanced team members).
- Air Rifle qualification.
- Chemical immobilization.

In order to maintain qualification as a MSP Wildlife Team member, staff must complete and maintain the following certifications:

- MN State Firearms Safety Instructor.
- NRA Shotgun Course.
- NRA Rifle Course (Only for advanced team members).

MSP Wildlife Team members may assist the qualified Airport Wildlife Biologist and serve as trainers for internal and external training.



# APPENDICES

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**Original Date: 12/09/04**

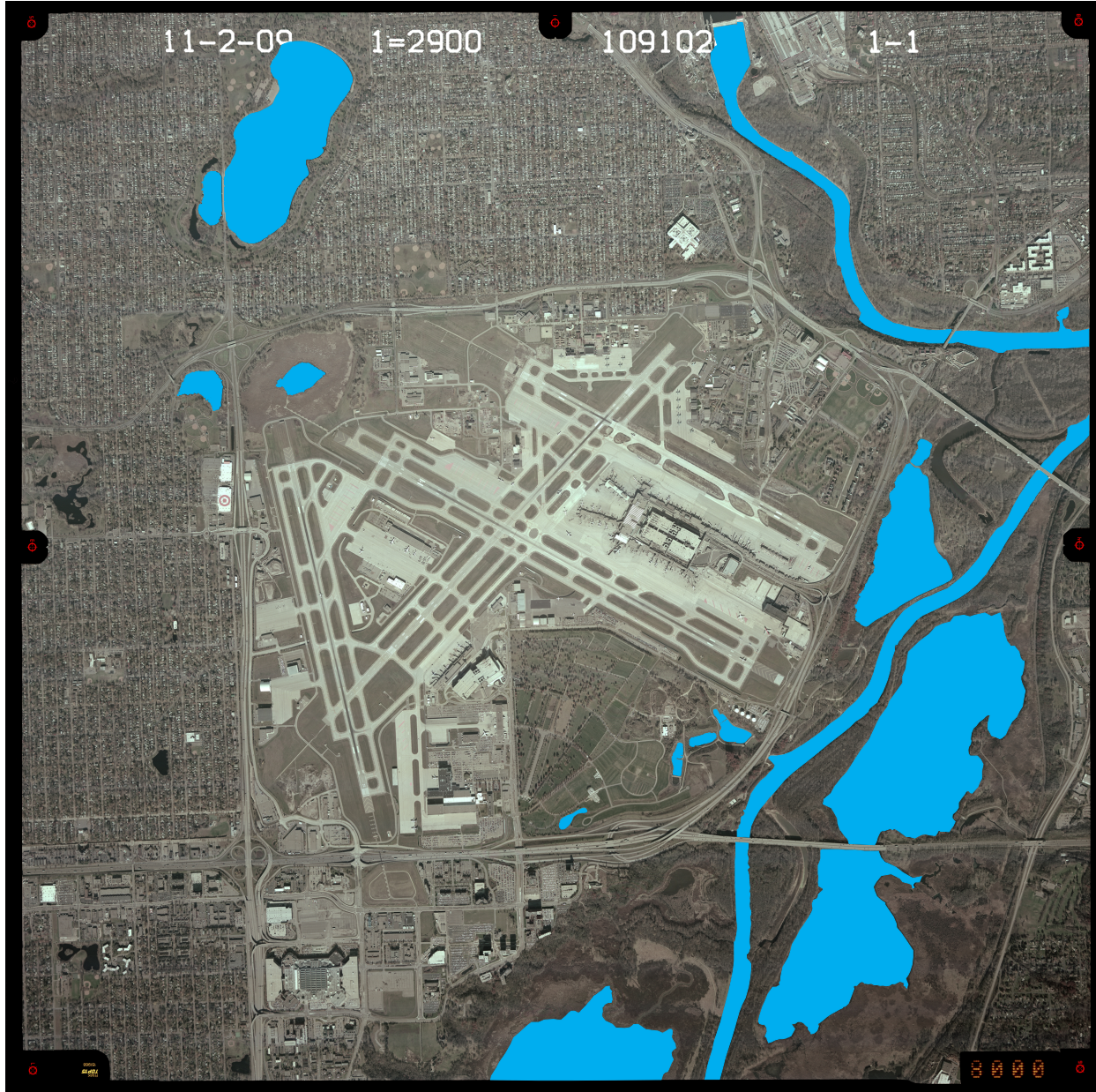
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## Appendix A

### Off-Airport Water Resources



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FAA Airports Date: Apr 11 2024