

University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

2011 Bird Strike North America Conference,
Niagara Falls

Bird Strike Committee Proceedings

9-2011

Avian Hazards at JAX

Amy Johnson

Environmental Resource Solutions, Inc.

Follow this and additional works at: <https://digitalcommons.unl.edu/birdstrike2011>

Johnson, Amy, "Avian Hazards at JAX" (2011). *2011 Bird Strike North America Conference, Niagara Falls*.
17.

<https://digitalcommons.unl.edu/birdstrike2011/17>

This Article is brought to you for free and open access by the Bird Strike Committee Proceedings at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in 2011 Bird Strike North America Conference, Niagara Falls by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.

Avian Hazards at JAX



The usual suspects...



Avian Hazards at JAX

...and a few more



Step 1: System States

- Movement Areas
- Within the AOA
- Airport Property outside the AOA
- Off-Airport Property

Step 2: Hazards

- Geese
- Hogs
- Aerial Foragers
- Blackbirds
- Cattle Egrets
- Crows
- Coyotes
- Deer
- Dogs
- Doves
- Turkeys
- Gulls
- Mesomammals
- Songbirds
- Wading Birds
- Raptors
- Shorebirds
- Vultures

Example: Canada Geese

- Step 1: Identify System States
 - AOA
 - Airport property outside AOA
 - Off-airport property
- Step 2: Identify Hazards
 - Canada goose/geese struck by aircraft



Step 3: Identify your controls

- Engineering
 - Habitat reduction (no standing water)
 - Aquatic vegetation removal
 - Pyrotechnics/lethal control
- Warnings
 - Bird activity on ATIS
 - NOTAMS
- Administrative Procedures/Training
 - Daily wildlife inspections & reports
 - Annual wildlife hazard management training
 - Zoning recommendations for adjacent properties



Step 4: Determine Risk Factors

- Using JAA's Risk Matrix:
 - Residual Severity – Catastrophic (1)
 - Residual Likelihood – Extremely Remote (D)
 - **Residual Risk Total – 1D**



Step 5: Corrective Action and Implementation

- Within AOA: Eliminate/reduce open water sources within the AOA (Planning Dept & OPS)
- Airport property outside AOA: Eliminate/reduce open water sources/nesting habitat (Planning Dept. & OPS)
- Off-airport property: Public outreach & education; attend zoning meetings (Planning Dept.)



Step 6: Risk Management and Risk Reduction

- Critical Control: Revised WHMP approved July 2011.
Eliminating/reducing all standing water from AOA is a goal of WHMP
- Critical Control Owner: Planning Environmental Coordinator
- Hierarchy/Defense in Depth Met?
Yes



Document Date: March 11, 2011						Risk Assessment																
Step 1: Identify your System State/ Tasks / Activities			Step 2: Identify your Hazards and Threats			Step 3: Identify your Controls:		Controls: Refer to Part 132 & Applicable (place an "X" if a control exists)		Step 4: Determine Risk Factors and Evaluate Risk			Step 5: Corrective Action and Implementation			Step 6: Risk Management and Risk Reduction						
Department	System State/ Task/Activities	Hazard (What could go wrong)	Cause	Effect/Consequence (Potential Patient Consequences)	Control: Elimination/Substitution Controls: Engineering Common Warnings Common Signs Administrative Controls Personal Protective Equipment (PPE) Description of Controls	Preferred Controls	Less Effective Controls	Residual Severity	Residual Likelihood	Residual Risk Total	Corrective Actions	Correction Action CNA Assigned to (if Department)	Control Category (If Residual Severity is at or above High, Residual Risk is High)	Current Status (Is the Control Working as Intended? If No, describe corrective action)	Critical Control Owner (by Title)	Control Category (Based on Corrective Action)	Control Category in Depth (If No, how many additional controls are in Step 5)					
Operations, JAAPO, Planning, Wildlife Consultants, Facilities, FAWO, USDA	AOA	Wildfire (Forest) Fight hazard	wildfire vegetation, grass and open water	main casualties, aircraft damage, damage regulation, operations interruption		X	X	X	Catastrophic	1	Extremely Remote	D	12	Assess wildfire in the AOA for elimination potential and modification	Fleming OPS	Correction Action CNA Assigned to (if Department)	Y	Currently the wildfire plan is under revision. Mitigation strategy will be based on NIMS. Target date is 5/2011.	Fleming Environmental Coordinator	Pending outcome of NIMS	Y	
Operations, JAAPO, Planning, Wildlife Consultants, Facilities, FAWO, USDA	Property outside AOA	Wildfire (Forest) Fight hazard	wildfire vegetation, grass and open water	main casualties, aircraft damage, damage regulation, operations interruption		X	X	X	Catastrophic	1	Extremely Remote	D	12	Assess habitat on property for elimination potential and modification	Fleming OPS	Correction Action CNA Assigned to (if Department)	Y	Currently the wildlife plan is under revision. Mitigation strategy will be based on NIMS. Target date is 5/2011.	Fleming Environmental Coordinator	Pending outcome of NIMS		
Operations, JAAPO, Planning, Wildlife Consultants, Facilities, FAWO, USDA	Outside property	Wildfire (Forest) Fight hazard	wildfire vegetation, grass and open water	main casualties, aircraft damage, damage regulation, operations interruption		X	X	X	Catastrophic	1	Extremely Improbable	E	12	Public outreach and education	Fleming PIO	Correction Action CNA Assigned to (if Department)	Y	Person to be involved with community as the on off property land use and zoning.	Engineering/Planning			
Operations, JAAPO, Planning, Wildlife Consultants, Facilities, FAWO, USDA	Movement areas	Rug Balls	Breaches in perimeter fence, wildlife	Aircraft damage and loss of life, injury	choking, dragging, daily fence inspection, game camera	X	X	X	Hazardous	2	Remote	C	12	Gully the fence, fix gaps in fence & fence gates, electric fencing	Facilities/Planning	Correction Action CNA Assigned to (if Department)	Y	Ops assesses habitat daily (S-Manager Operations), Briefed home to a future capital project(s) (Environmental Planning Coordinator). Work order system used to coordinate repair and track daily until completion under 139 category (Director of Facilities)	Sr. Manager of Operations, Environmental Planning Coordinator, Director of Facilities			
Operations, Planning, Wildlife Consultants, Facilities	AOA	Airfield Foreigner	open space for landing opportunities	aircraft damage, damage regulation, operations interruption		X	X	X	Major	3	Remote	C	3C	trimming brush/cuttings near open grass fields, developing new signs whenever found, excluding birds from nesting in facilities (developing signs about shortening gaps, etc.)	Facilities/JAA PO	Correction Action CNA Assigned to (if Department)	Y	Facilities contracts provide trimming services annually as needed. Facilities take access points for birds to nest in buildings.	Director of Facilities			
Operations, Planning, Wildlife Consultants, Facilities	AOA	Blackbirds	wildfire vegetation, vegetation in ditches	main casualties, aircraft damage, damage regulation, operations interruption		X	X	X	Hazardous	2	Extremely Remote	D	2D	more frequent vegetation removal on AOA, applying herbicide to slow vegetation to growth	Facilities	Correction Action CNA Assigned to (if Department)	Y	Airfield grass and shrubs/trees are cut on a predetermined schedule	Director of Facilities			
Operations, Planning, Wildlife Consultants, Facilities	Property outside AOA	Blackbirds	wildfire vegetation, vegetation in ditches	main casualties, aircraft damage, damage regulation, operations interruption		X	X	X	Hazardous	2	Extremely Improbable	E	1E	more frequent vegetation removal on property, applying herbicide to slow vegetation to growth	Facilities	Correction Action CNA Assigned to (if Department)	Y					
Operations, Planning, JAAPO, Wildlife Consultants, Facilities	AOA	Cattle Egrets	mooring, abundance of insects, open grass fields	aircraft damage, damage regulation, operations interruption		X	X	X	Hazardous	2	Extremely Remote	D	2D	maintain white/brownish grass height of 6-12 inches, mow fields only at night or in early morning/late evening hours, trim brush/cuttings during game camera installation/perturbance with occasional lethal control	JAA PO/Facilities	Correction Action CNA Assigned to (if Department)	Y	Airfield grass and shrubs/trees are cut on an established schedule	Director of Facilities			
Operations, Planning, Wildlife Consultants, Facilities	AOA	Crows	water sources, human waste, small mammals, bird's nesting, insects	aircraft damage, damage regulation, operations interruption		X	X	X	Major	3	Extremely Improbable	E	1E	occasional confinement with lethal control (shooting); keep all human waste (poop) contained	JAA PO/Ops Facilities	Correction Action CNA Assigned to (if Department)	Y					
Operations, Planning, Wildlife Consultants, Facilities	Property outside AOA	Crows	water sources, human waste, small mammals, bird's nesting, insects	aircraft damage, damage regulation, operations interruption		X	X	X	Major	3	Extremely Improbable	E	1E	occasional confinement with lethal control (shooting); keep all human waste (poop) contained	JAA PO/Ops Facilities	Correction Action CNA Assigned to (if Department)	Y					
Operations, Planning, Wildlife Consultants, Facilities	Movement areas	Coyotes	Breaches in perimeter fence, mammalian (food source)	main casualties, aircraft damage, damage regulation, operations interruption		X	X	X	Hazardous	2	Remote	C	1C	Gully the fence, fix gaps in fence & fence gates, eliminate wood/mammal run paths	Facilities/Planning/Ops	Correction Action CNA Assigned to (if Department)	Y	Ops assesses habitat daily (S-Manager Operations), Briefed home to a future capital project(s) (Environmental Planning Coordinator). Work order system used to coordinate repair and track daily until completion under 139 category (Director of Facilities)	Sr. Manager of Operations, Environmental Planning Coordinator, Director of Facilities			
Operations, Planning, JAAPO, Wildlife Consultants, Facilities	Movement areas	Deer	Breaches in perimeter fence, wooded area, holes perimeter fence	main casualties, aircraft damage, damage regulation, operations interruption		X	X	X	Catastrophic	1	Remote	C	1C	Make sure fence is secure and at an appropriate height, eliminate all wooded areas bordering the perimeter fence	Facilities/Planning/Ops	Correction Action CNA Assigned to (if Department)	Y	Ops assesses habitat daily (S-Manager Operations), Briefed home to a future capital project(s) (Environmental Planning Coordinator). Work order system used to coordinate repair and track daily until completion under 139 category (Director of Facilities)	Sr. Manager of Operations, Environmental Planning Coordinator, Director of Facilities			
Operations, Planning, JAAPO, Wildlife Consultants, Facilities	Movement areas	Dog	Breaches in perimeter fence, wooded area, holes perimeter fence	main casualties, aircraft damage, damage regulation, operations interruption		X	X	X	Hazardous	2	Remote	C	1C	Make sure fence is secure and at an appropriate height, eliminate all wooded areas bordering the perimeter fence	Facilities/Planning/Ops	Correction Action CNA Assigned to (if Department)	Y	Ops assesses habitat daily (S-Manager Operations), Briefed home to a future capital project(s) (Environmental Planning Coordinator). Work order system used to coordinate repair and track daily until completion under 139 category (Director of Facilities)	Sr. Manager of Operations, Environmental Planning Coordinator, Director of Facilities			

	Sr	Department	System Status / Task Activities	Hazard (What could go wrong)	Cause	Effect / Scenario / Outcome (Worst Case/Evt)	Control Engineering Maintenance Construction Operations Safety Health Environment Administrative Procedures Training Communication Personal Protective Equipment (PPE) Other	Description of Controls	Risk Level Severity	Risk Level Likelihood	Risk Total	Residual Risk Total	Corrective Actions	Consequence Analysis (CA) (By Department)	Control Category (Based on CA) Is it Inspectable, Testable or Serviceable, or if Not Inspectable, Testable or Serviceable, what is the Residual Risk to High?	Current Control Measures (If any)	Critical Control Owner (By Team)	Control Category (Based on Critical Control Action)	Mitigation/Defense in Depth (If No, how add additional controls via CAs to Day 5)
14	Operations, Planning, Wildlife Consultants, Facilities	ADA	Doves/Tigons	Falling apparatus/falls (falling apparatus/falls, low ground, available GR, short grass)	aircraft damage, damage reputation, operations interruption	X	X	chasing	Major	3	Remote	C	30	Remove all nesting/breeding material/hay from facilities & structures; maintain bioterror-free height of 6-8 inches; eliminate bare areas and loose gravel	Facilities	Currently the wildlife plan is under revision. Mitigation strategy will be based on BSA. Target date is 9/2021.	Planning Environmental Coordinator	Pending outcome of VMA	
15	Operations, Planning, JAAPD, Wildlife Consultants, Facilities	Movement areas	Turkeys	Injuries in perimeter fence, wooded areas outside perimeter fence	mass casualties, aircraft damage, damage reputation, operations interruption	X	X	chasing, pyrotechnics, shooting	Hazardous	2	Remote	C	15	Erase snow fence and gates are secure (no breakers) or guard, eliminate all wooded areas surrounding the perimeter fence	Facilities/ Planning/ Ops	Oss assesses habitat daily (Sr Manager Operations). Work water system used to coordinate regular track daily until completion under 135 category (Director of Facilities)	Planning Environmental Coordinator	Pending outcome of VMA	
16	Operation, Planning, JAAPD, Wildlife Consultants, Facilities	ADA	Gulls	Low areas of standing water, open spaces for roosting	mass casualties, aircraft damage, damage reputation, operations interruption	X	X	chasing, shooting, pyrotechnics	Hazardous	2	Remote	C	15	Eliminate ponds to fill areas that collect water during heavy rain	Planning	Currently the wildlife plan is under revision. Mitigation strategy will be based on BSA. Target date is 9/2021.	Planning Environmental Coordinator	Pending outcome of VMA	
17	Operations, Planning, JAAPD, Wildlife Consultants, Facilities	ADA	Black-necked stilts, roseate spoonbills, great blue herons, white ibis, green herons, black cranes, etc.	Injuries in perimeter fence, wildlife water sources, human waste, small mammals, tall food, etc.	aircraft damage, damage reputation, operations interruption	X	X	chasing, shooting, pyrotechnics, trapping, releasing	Major	3	Probable	B	15	Eliminate fence breaches, bury perimeter fence, keep tanks contained, large doors closed on all windows, remove wooded areas from inside the perimeter fence	Facilities/ Planning/ Ops	Oss assesses habitat daily (Sr Manager Operations). Work water system used to coordinate regular track daily until completion under 135 category (Director of Facilities)	Sr. Manager of Operations, Environmental Planning Coordinator, Director of Facilities	Pending outcome of VMA	
18	Operations, Planning, Wildlife Consultants, Facilities	ADA	Small, perching songbirds like robins, chickadees, mockingbirds, sparrows, etc.	Perching & nesting opportunities, nearby vegetation that produces seeds, berries, shrub grass	aircraft damage, damage reputation, operations interruption	X	X	vegetation maintenance, pyrotechnics	Major	3	Remote	C	15	Remove unnecessary perching structures from facility, build perching deterrents on available structures (e.g., remove signs, etc.), remove all food waste, nesting materials, & eggs; keep facilities secured, maintain an bioterror-free height of 6-8 inches; maintain a dense mosaic of grass; remove all weed vegetation that produces seeds, nuts, berries, and fruits	Facilities/ Planning/ Ops/ JAA PD	Oss assesses habitat daily (Sr Manager Operations). Work water system used to coordinate regular track daily until completion under 135 category (Director of Facilities)	Sr. Manager of Operations, Environmental Planning Coordinator, Director of Facilities	Pending outcome of VMA	
19	Operations, JAAPD, Planning, Wildlife Consultants, Facilities	ADA	Wild birds (birds, storks, etc., terns)	Standing water, vegetation surrounding standing water, wetlands	mass casualties, aircraft damage, damage reputation, operations interruption	X	X	pyrotechnics, occasional wetland vegetation removal	Hazardous	2	Remote	C	15	Regularly remove all wetland vegetation from In A around standing water; apply herbicide to reduce vegetation in grassy areas setting away areas of standing water; apply non-lethal deterrents to water that may be used by birds; provide to fill wetlands one occasional bird control to reinforce pyrotechnics	Facilities/ Planning/ JAA PD	Currently the wildlife plan is under revision. Mitigation strategy will be based on BSA. Target date is 9/2021.	Planning Environmental Coordinator	Pending outcome of VMA	
20	Operations, JAAPD, Planning, Wildlife Consultants, Facilities	ADA	Raptors: eagles, hawks, & kestrels	Small mammals, perching & nesting opportunities	mass casualties, aircraft damage, damage reputation, operations interruption	X	X	pyrotechnics	Hazardous	2	Remote	C	15	Keep perimeter fence free of vegetation, eliminate mammals inside perimeter fence, install perching deterrents on unsuitable structures, remove unnecessary perching structures, remove all brush & weeds inside perimeter fence	Facilities	Currently the wildlife plan is under revision. Mitigation strategy will be based on BSA. Target date is 9/2021.	Planning Environmental Coordinator	Pending outcome of VMA	
21	Operations, JAAPD, Planning, Wildlife Consultants, Facilities	JAA property outside ADA	Raptors: eagles, hawks, & kestrels	Small mammals, perching & nesting opportunities	mass casualties, aircraft damage, damage reputation, operations interruption	X	X	Vegetation management	Hazardous	2	Extremely Remote	D	10	Install perching deterrents on unsuitable structures, remove brush and debris from wooded areas, remove felled trees near tracks (except Dead End), remove unnecessary perching structures, remove all brush & weeds	Facilities	Oss assesses habitat daily (Sr Manager Operations). Work water system used to coordinate regular track daily until completion under 135 category (Director of Facilities)	Sr. Manager of Operations, Environmental Planning Coordinator, Director of Facilities	Pending outcome of VMA	
22	Operations, Planning, Wildlife Consultants, Facilities	ADA	Short-tailed plovers & biters	Areas of bare ground, low areas of temporary standing water, nesting opportunities	aircraft damage, damage reputation, operations interruption	X	X	chasing, pyrotechnics	Minor	4	Probable	B	15	Eliminate low areas on ADA, remove any found nests, eliminate ponds to fill areas that collect standing water during heavy rain events	Facilities/ Planning	Oss assesses habitat daily (Sr Manager Operations). Work water system used to coordinate regular track daily until completion under 135 category (Director of Facilities)	Sr. Manager of Operations, Environmental Planning Coordinator, Director of Facilities	Pending outcome of VMA	
23	Operations, JAAPD, Planning, Wildlife Consultants, Facilities	ADA	Vultures	Overhead, caution	mass casualties, aircraft damage, damage reputation, operations interruption	X	X	pyrotechnics	Catastrophic	1	Remote	C	10	Reinforce pyrotechnics with lethal control; hang a dead vulture effigy upside down in high places on the ADA; remove and bury all carcasses immediately	Facilities/ JAA PDI Ops	Currently the wildlife plan is under revision. Mitigation strategy will be based on BSA. Target date is 9/2021.	Planning Environmental Coordinator	Pending outcome of VMA	
24	Operations, JAAPD, Planning, Wildlife Consultants, Facilities	JAA property outside ADA	Vultures	Overhead, caution	mass casualties, aircraft damage, damage reputation, operations interruption	X	X	Vegetation management	Hazardous	2	Extremely Remote	D	10	Reinforce pyrotechnics with lethal control; remove and bury all carcasses immediately	Facilities/ JAA PDI Ops	Currently the wildlife plan is under revision. Mitigation strategy will be based on BSA. Target date is 9/2021.	Planning Environmental Coordinator	Pending outcome of VMA	

Questions?

