


Appendix 1.

Bird/Other Wildlife Strike Report

Form Approved OMB NO. 2120-0018

 BIRD/OTHER WILDLIFE STRIKE REPORT																																																					
1. Name of Operator		2. Aircraft Make/Model		3. Engine Make/Model																																																	
4. Aircraft Registration		5. Date of Incident Month / Day / Year		6. Local Time of Incident <input type="checkbox"/> Dawn <input type="checkbox"/> Dusk <input type="checkbox"/> Night <input type="checkbox"/> Day <input type="checkbox"/> Night <input type="checkbox"/> AM <input type="checkbox"/> PM																																																	
7. Airport Name		8. Runway Used		9. Location of Event (Specify True/False/Altitude)																																																	
10. Height (AGL)		11. Speed (KTS)																																																			
12. Phase of Flight <input type="checkbox"/> A. Failed <input type="checkbox"/> B. Taxi <input type="checkbox"/> C. Take-off Run <input type="checkbox"/> D. Climb <input type="checkbox"/> E. In Maneuver <input type="checkbox"/> F. Descent <input type="checkbox"/> G. Approach <input type="checkbox"/> H. Landing Roll		13. Part(s) of Aircraft Struck or Damaged																																																			
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14. Effect on Flight <input type="checkbox"/> None <input type="checkbox"/> Aborted Take-Off <input type="checkbox"/> Precautionary Landing <input type="checkbox"/> Engine Shut Down <input type="checkbox"/> Other: <i>Specify</i>		15. Sky Condition <input type="checkbox"/> No Cloud <input type="checkbox"/> Some Cloud <input type="checkbox"/> Overcast		16. Precipitation <input type="checkbox"/> Fog <input type="checkbox"/> Rain <input type="checkbox"/> Snow <input type="checkbox"/> None																																																	
17. Bird/Other Wildlife Species		18. Number of birds seen and/or struck		19. Size of Bird(s)																																																	
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more than 100	<input type="checkbox"/>	<input type="checkbox"/>																																																			
20. Pilot Warned of Birds <input type="checkbox"/> Yes <input type="checkbox"/> No																																																					
21. Remarks (Describe damage, injuries and other pertinent information)																																																					
DAMAGE / COST INFORMATION																																																					
22. Aircraft time out of service: _____ hours		23. Estimated cost of repair or replacement (U.S. \$) \$ _____		24. Estimated other cost (U.S. \$) (e.g. loss of revenue, fuel, etc.) \$ _____																																																	
Reported by (Optional)		Title		Date																																																	
<p>Paperwork Reduction Act Statement: The information collected on this form is necessary to allow the Federal Aviation Administration to assess the magnitude and severity of the wildlife-aircraft strike problem in the U.S. The information is used in determining the best management practices for reducing the hazard to aviation safety caused by wildlife-aircraft strikes. We estimate that it will take approximately 2 minutes to complete this form. If you wish to make any comments concerning the accuracy of this burden estimate and any suggestions for reducing this burden, send those comments to the Federal Aviation Administration, Management Staff, ARP-10, 800 Independence Avenue, SW, Washington, DC 20515. The information collected is voluntary. Please note that an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control number associated with this collection is 2120-0046.</p>																																																					

Appendix 2.

Volcanic Activity Reporting Form (VAR)

Date _____

SECTION 1 - Transmit to ATC via radio	1. Aircraft Identification			
	2. Position			
	3. Time (UTC)			
	4. Flight level or altitude			
	5. Position/location of volcanic activity or ash cloud			
	6. Air temperature			
	7. Wind			
	8. Supplementary Information <small>(Brief description of activity including vertical and lateral extent of the ash cloud, horizontal movement, rate of growth, etc., as available.)</small>			
SECTION 2 - Complete and forward as directed	Mark the appropriate box(s)			
	9. <i>Density of ash cloud</i>	<input type="checkbox"/> wispy	<input type="checkbox"/> moderately dense	<input type="checkbox"/> very dense
	10. <i>Color of ash</i>	<input type="checkbox"/> white <input type="checkbox"/> black	<input type="checkbox"/> light gray	<input type="checkbox"/> dark gray
	11. <i>Eruption</i>	<input type="checkbox"/> continuous	<input type="checkbox"/> intermittent	<input type="checkbox"/> not visible
	12. <i>Position of activity</i>	<input type="checkbox"/> summit <input type="checkbox"/> multiple	<input type="checkbox"/> side <input type="checkbox"/> not observed	<input type="checkbox"/> single
	13. <i>Other observed features of eruption</i>	<input type="checkbox"/> lightning <input type="checkbox"/> ash fallout	<input type="checkbox"/> glow <input type="checkbox"/> mushroom cloud	<input type="checkbox"/> large rocks <input type="checkbox"/> none
	14. <i>Effect on aircraft</i>	<input type="checkbox"/> communications <input type="checkbox"/> pitot static <input type="checkbox"/> none	<input type="checkbox"/> navigation system <input type="checkbox"/> windscreen	<input type="checkbox"/> engines <input type="checkbox"/> other windows
	15. <i>Other effects</i>	<input type="checkbox"/> turbulence <input type="checkbox"/> ash deposits	<input type="checkbox"/> St. Elmo's fire	<input type="checkbox"/> fumes
	16. <i>Other information deemed useful</i>			

Forward completed form via mail to:
 Global Volcanism Program
 NHB-119
 Smithsonian Institution
 Washington, DC 20560
 E-mail address: GVN@volcano.si.edu

Or Fax to:
 Global Volcanism Program
 (202) 357-2476

Appendix 3.

LASER BEAM EXPOSURE QUESTIONNAIRE

FAX TO WASHINGTON OPERATIONS CENTER COMPLEX (WOCC) at (202) 267-5238 ATTN: DEN

PILOT NAME: _____ PHONE NUMBER: _____
COMPANY: _____ FLIGHT NUMBER: _____

1. Date and time (UTC)? _____ 2. Position of event (altitude and/or FRD)? _____
3. Altitude? _____ 4. What was the visibility? _____
5. What were the atmospheric conditions? (Check those which apply) Clear Overcast Rainy Foggy Hazy Sunny
6. What was the color(s) of the light? _____ 7. Did the color(s) change during the exposure? Yes No
8. Did you attempt an evasive maneuver? Yes No If yes, did the beam follow you as you tried to move away? Yes No
9. Can you estimate how far away the light source was from your location? _____
10. What was the position of the light relative to the aircraft? _____
11. Was the source moving? Yes No
12. Was the light coming directly from its source or did it appear to be reflected off other surfaces? _____
13. Were there multiple sources of light? Yes No 14. How long was the exposure? _____
15. Did the light seem to track your path or was there incidental contact? _____
16. What tasks were you performing when the exposure occurred? _____
17. Did the light prevent or hamper you from doing those tasks, or was the light more of an annoyance? _____
18. What were the visual effects you experienced (afterimage, blind spot, flash blindness, glare)? _____
19. Did you report the incident by radio to ATC? Yes No

Any other pertinent information: _____

This questionnaire may be filled out by the competent authority during interviews with aircrews exposed to nontherapeutic laser illumination. This information will be used to aid in subsequent investigations by ATC, law enforcement and other governmental agencies to safeguard the safety and efficiency of civil aviation operations in the NAS.

***Examples of common visual effects:**

After-image: An image that remains in the visual field after an exposure to a bright light.

Blind spot: A temporary or permanent loss of vision of part of the visual field.

Flash-blindness: The inability to see (either temporarily or permanently) caused by bright light entering the eye and persisting after the illumination has ceased.

Glare: A temporary disruption in vision caused by the presence of a bright light (such as an oncoming car's headlights) within an individual's field of vision. Glare lasts only as long as the bright light is actually present within the individual's field of vision.

Appendix 4.

Abbreviations/Acronyms

As used in this manual, the following abbreviations/acronyms have the meanings indicated.

Abbreviation/Acronym	Meaning
AAWU	Alaskan Aviation Weather Unit
AC	Advisory Circular
ACAR	Aircraft Communications Addressing and Reporting System
ADCUS	Advise Customs
ADDS	Aviation Digital Data Service
ADF	Automatic Direction Finder
ADIZ	Air Defense Identification Zone
ADS-B	Automatic Dependent Surveillance-Broadcast
AFB	Air Force Base
AFCS	Automatic Flight Control System
A/FD	Airport/Facility Directory
AFM	Aircraft Flight Manual
AFSS	Automated Flight Service Station
AHRS	Attitude Heading Reference System
AIM	Aeronautical Information Manual
AIRMET	Airmen's Meteorological Information
ALD	Available Landing Distance
ALS	Approach Light Systems
AMSL	Above Mean Sea Level
ANP	Actual Navigation Performance
AOCC	Airline Operations Control Center
AP	Autopilot System
APV	Approach with Vertical Guidance
ARENA	Areas Noted for Attention
ARFF IC	Aircraft Rescue and Fire Fighting Incident Commander
ARINC	Aeronautical Radio Incorporated
ARO	Airport Reservations Office
ARSA	Airport Radar Service Area
ARSR	Air Route Surveillance Radar
ARTCC	Air Route Traffic Control Center
ARTS	Automated Radar Terminal System
ASDE-X	Airport Surface Detection Equipment - Model X
ASOS	Automated Surface Observing System
ASR	Airport Surveillance Radar
ASRS	Aviation Safety Reporting System
ATC	Air Traffic Control
ATCRBS	Air Traffic Control Radar Beacon System
ATCSCC	Air Traffic Control System Command Center
ATCT	Airport Traffic Control Tower
ATD	Along-Track Distance
ATIS	Automatic Terminal Information Service
ATT	Attitude Retention System
AWC	Aviation Weather Center
AWOS	Automated Weather Observing System
AWSS	Automated Weather Sensor System

AWTT	Aviation Weather Technology Transfer
AWW	Severe Weather Forecast Alert
BBS	Bulletin Board System
BC	Back Course
C/A	Coarse Acquisition
CARTS	Common Automated Radar Terminal System (ARTS) (to include ARTS IIIIE and ARTS IIE)
CAT	Clear Air Turbulence
CD	Controller Display
CDI	Course Deviation Indicator
CDR	Coded Departure Route
CERAP	Combined Center/RAPCON
CFA	Controlled Firing Area
CFR	Code of Federal Regulations
COA	Certificate of Waiver or Authorization
CPDLC	Controller Pilot Data Link Communications
CTAF	Common Traffic Advisory Frequency
CVFP	Charted Visual Flight Procedure
CVRS	Computerized Voice Reservation System
CWA	Center Weather Advisory
CWSU	Center Weather Service Unit
DA	Decision Altitude
DCA	Ronald Reagan Washington National Airport
DCP	Data Collection Package
DF	Direction Finder
DH	Decision Height
DME	Distance Measuring Equipment
DME/N	Standard DME
DME/P	Precision DME
DOD	Department of Defense
DP	Instrument Departure Procedure
DPU	Data Processor Unit
DRT	Diversion Recovery Tool
DRVSM	Domestic Reduced Vertical Separation Minimum
DUATS	Direct User Access Terminal System
DVA	Diverse Vector Area
DVFR	Defense Visual Flight Rules
DVRSN	Diversion
EDCT	Expect Departure Clearance Time
EFAS	En Route Flight Advisory Service
ELT	Emergency Locator Transmitter
EPE	Estimate of Position Error
ESV	Expanded Service Volume
ETA	Estimated Time of Arrival
ETD	Estimated Time of Departure
ETE	Estimated Time En Route
EWINS	Enhanced Weather Information System
EWR	Newark International Airport
FA	Area Forecast
FAA	Federal Aviation Administration
FAF	Final Approach Fix
FAWP	Final Approach Waypoint
FB	Fly-by
FCC	Federal Communications Commission
FD	Flight Director System
FDC	Flight Data Center
FDE	Fault Detection and Exclusion

FIR	Flight Information Region
FIS	Flight Information Service
FISDL	Flight Information Services Data Link
FLIP	Flight Information Publication
FMS	Flight Management System
FMSP	Flight Management System Procedure
FO	Fly-over
FPNM	Feet Per Nautical Mile
FSDO	Flight Standards District Office
FSS	Flight Service Station
GBAS	Ground Based Augmentation System
GEO	Geostationary Satellite
GLS	GNSS Landing System
GNSS	Global Navigation Satellite System
GNSSP	Global Navigation Satellite System Panel
GPS	Global Positioning System
GRI	Group Repetition Interval
GSD	Geographical Situation Display
GUS	Ground Uplink Station
HAT	Height Above Touchdown
HDTA	High Density Traffic Airports
HEMS	Helicopter Emergency Medical Services
HIRL	High Intensity Runway Lights
HIWAS	Hazardous Inflight Weather Advisory Service
HRR	Helicopter Rapid Refueling Procedures
Hz	Hertz
IAF	Initial Approach Fix
IAP	Instrument Approach Procedure
IAS	Indicated Air Speed
IAWP	Initial Approach Waypoint
ICAO	International Civil Aviation Organization
IF	Intermediate Fix
IFIM	International Flight Information Manual
IFR	Instrument Flight Rules
ILS	Instrument Landing System
ILS/PRM	Instrument Landing System/Precision Runway Monitor
IM	Inner Marker
IMC	Instrument Meteorological Conditions
INS	Inertial Navigation System
IOC	Initial Operational Capability
IR	IFR Military Training Route
IRU	Inertial Reference Unit
ITWS	Integrated Terminal Weather System
JFK	John F. Kennedy International Airport
kHz	Kilohertz
LAA	Local Airport Advisory
LAAS	Local Area Augmentation System
LAHSO	Land and Hold Short Operations
LAWRS	Limited Aviation Weather Reporting Station
LDA	Localizer Type Directional Aid
LDA/PRM	Localizer Type Directional Aid/Precision Runway Monitor
LGA	LaGuardia Airport
LIRL	Low Intensity Runway Lights
LLWAS	Low Level Wind Shear Alert System
LLWAS NE	Low Level Wind Shear Alert System Network Expansion
LLWAS-RS	Low Level Wind Shear Alert System Relocation/Sustainment
LNAV	Lateral Navigation

LOC	Localizer
LOP	Line-of-position
LORAN	Long Range Navigation System
LPV	Localizer Performance with Vertical Guidance
LZ	Landing Zone
MAHWP	Missed Approach Holding Waypoint
MAP	Missed Approach Point
MAWP	Missed Approach Waypoint
MDA	Minimum Descent Altitude
MEA	Minimum En Route Altitude
MEARTS	Micro En Route Automated Radar Tracking System
METAR	Aviation Routine Weather Report
MHz	Megahertz
MIRL	Medium Intensity Runway Lights
MLS	Microwave Landing System
MM	Middle Marker
MOA	Military Operations Area
MOCA	Minimum Obstruction Clearance Altitude
MRA	Minimum Reception Altitude
MRB	Magnetic Reference Bearing
MSA	Minimum Safe Altitude
MSAW	Minimum Safe Altitude Warning
MSL	Mean Sea Level
MTI	Moving Target Indicator
MTOS	Mountain Obscuration
MTR	Military Training Route
MVA	Minimum Vectoring Altitude
MWA	Mountain Wave Activity
MWO	Meteorological Watch Office
NACO	National Aeronautical Charting Office
NAS	National Airspace System
NASA	National Aeronautics and Space Administration
NAVAID	Navigational Aid
NAVCEN	Coast Guard Navigation Center
NCWF	National Convective Weather Forecast
NDB	Nondirectional Radio Beacon
NEXRAD	Next Generation Weather Radar
NFDC	National Flight Data Center
NIDS	National Institute for Discovery Sciences
NIMA	National Imagery and Mapping Agency
NM	Nautical Mile
NMAC	Near Midair Collision
NOAA	National Oceanic and Atmospheric Administration
NOPAC	North Pacific
NoPT	No Procedure Turn Required
NOTAM	Notice to Airmen
NPA	Nonprecision Approach
NRS	Navigation Reference System
NSA	National Security Area
NSW	No Significant Weather
NTAP	Notices to Airmen Publication
NTSB	National Transportation Safety Board
NTZ	No Transgression Zone
NWS	National Weather Service
OAT	Outside Air Temperature
OBS	Omni-bearing Selector
ODP	Obstacle Departure Procedure

OIS	Operational Information System
OM	Outer Marker
ORD	Chicago O'Hare International Airport
PA	Precision Approach
PAPI	Precision Approach Path Indicator
PAR	Precision Approach Radar
PAR	Preferred Arrival Route
PC	Personal Computer
P/CG	Pilot/Controller Glossary
PDC	Pre-departure Clearance
PFD	Personal Flotation Device
PinS	Point-in-Space
PIREP	Pilot Weather Report
POB	Persons on Board
POFZ	Precision Obstacle Free Zone
POI	Principal Operations Inspector
PPS	Precise Positioning Service
PRM	Precision Runway Monitor
PT	Procedure Turn
QICP	Qualified Internet Communications Provider
RA	Resolution Advisory
RAA	Remote Advisory Airport
RAIM	Receiver Autonomous Integrity Monitoring
RAIS	Remote Airport Information Service
RBDT	Ribbon Display Terminals
RCAG	Remote Center Air/Ground
RCC	Rescue Coordination Center
RCLS	Runway Centerline Lighting System
RCO	Remote Communications Outlet
RD	Rotor Diameter
REIL	Runway End Identifier Lights
RFM	Rotorcraft Flight Manual
RLIM	Runway Light Intensity Monitor
RMI	Radio Magnetic Indicator
RNAV	Area Navigation
RNP	Required Navigation Performance
RPAT	RNP Parallel Approach Runway Transitions
RVR	Runway Visual Range
RVSM	Reduced Vertical Separation Minimum
SAAAR	Special Aircraft and Aircrew Authorization Required
SAM	System Area Monitor
SAR	Search and Rescue
SAS	Stability Augmentation System
SBAS	Satellite-based Augmentation System
SCAT-1 DGPS	Special Category I Differential GPS
SDF	Simplified Directional Facility
SFL	Sequenced Flashing Lights
SFR	Special Flight Rules
SIAP	Standard Instrument Approach Procedure
SID	Standard Instrument Departure
SIGMET	Significant Meteorological Information
SM	Statute Mile
SMGCS	Surface Movement Guidance Control System
SNR	Signal-to-noise Ratio
SOIA	Simultaneous Offset Instrument Approaches
SOP	Standard Operating Procedure

SPC	Storm Prediction Center
SPS	Standard Positioning Service
STAR	Standard Terminal Arrival
STARS	Standard Terminal Automation Replacement System
STMP	Special Traffic Management Program
SWSL	Supplemental Weather Service Locations
TA	Traffic Advisory
TAA	Terminal Arrival Area
TAC	Terminal Area Chart
TACAN	Tactical Air Navigation
TAF	Aerodrome Forecast
TAS	True Air Speed
TCAS	Traffic Alert and Collision Avoidance System
TCH	Threshold Crossing Height
TD	Time Difference
TDLS	Tower Data Link System
TDWR	Terminal Doppler Weather Radar
TDZL	Touchdown Zone Lights
TEC	Tower En Route Control
TIBS	Telephone Information Briefing Service
TIPH	Taxi into Position and Hold
TIS	Traffic Information Service
TIS-B	Traffic Information Service-Broadcast
TLS	Transponder Landing System
TPP	Terminal Procedures Publications
TRSA	Terminal Radar Service Area
TSO	Technical Standard Order
TWEB	Transcribed Weather Broadcast
TWIB	Terminal Weather Information for Pilots System
UA	Unmanned Aircraft
UAV	Unmanned Aerial Vehicle
UFO	Unidentified Flying Object
UHF	Ultrahigh Frequency
U.S.	United States
USCG	United States Coast Guard
UTC	Coordinated Universal Time
UWS	Urgent Weather SIGMET
VAR	Volcanic Activity Reporting
VASI	Visual Approach Slope Indicator
VCOA	Visual Climb Over the Airport
VDA	Vertical Descent Angle
VDP	Visual Descent Point
VFR	Visual Flight Rules
VGSI	Visual Glide Slope Indicator
VHF	Very High Frequency
VIP	Video Integrator Processor
VMC	Visual Meteorological Conditions
V _{MINI}	Instrument flight minimum speed, utilized in complying with minimum limit speed requirements for instrument flight
VNAV	Vertical Navigation
V _{NE}	Never exceed speed
V _{NEI}	Instrument flight never exceed speed, utilized instead of V _{NE} for compliance with maximum limit speed requirements for instrument flight
VOR	Very High Frequency Omni-directional Range
VORTAC	VHF Omni-directional Range/Tactical Air Navigation
VOT	VOR Test Facility

VR	VFR Military Training Route
V _{REF}	The reference landing approach speed, usually about 1.3 times V _{SO} plus 50 percent of the wind gust speed in excess of the mean wind speed.
V _{SO}	The stalling speed or the minimum steady flight speed in the landing configuration at maximum weight.
VTF	Vector to Final
VV	Vertical Visibility
V _Y	Speed for best rate of climb
V _{YI}	Instrument climb speed, utilized instead of V _Y for compliance with the climb requirements for instrument flight
WA	AIRMET
WAAS	Wide Area Augmentation System
WAC	World Aeronautical Chart
WFO	Weather Forecast Office
WGS-84	World Geodetic System of 1984
WMO	World Meteorological Organization
WMS	Wide-Area Master Station
WMSC	Weather Message Switching Center
WMSCR	Weather Message Switching Center Replacement
WP	Waypoint
WRS	Wide-Area Ground Reference Station
WS	SIGMET
WSO	Weather Service Office
WSP	Weather System Processor
WST	Convective Significant Meteorological Information
WW	Severe Weather Watch Bulletin