

(11) Promoting GIS based bird and wildlife data collection by the airport operations and maintenance staff.

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Airport operations and maintenance teams are the eyes and ears of the airfield and are crucial resources for collecting accurate information of bird and wildlife activities. Any sightings can be recorded as part of their scheduled or special inspections, during a maintenance work or any other task at hand. What are the key factors to consider?

- Recording Data: quick and easy input at the location, continuity, consistency and relevancy
- Access to Information: up-to-date electronic documentation for the wildlife identification and procedures
- Reporting: individual observation and strike logs, submitting strikes to Transport Canada or FAA via direct interface
- Trend Analysis: using the geo-referenced data for seasonal and long-term analysis to improve decision making

Engaging the airfield staff as part of the airport's overall bird and wildlife hazard mitigation plan is proactive, cost effective and helps to raise awareness.

2015 NORTH AMERICAN
BIRD STRIKE
CONFERENCE

SEPTEMBER 15-17, 2015 | MONTREAL, QUEBEC | CANADA



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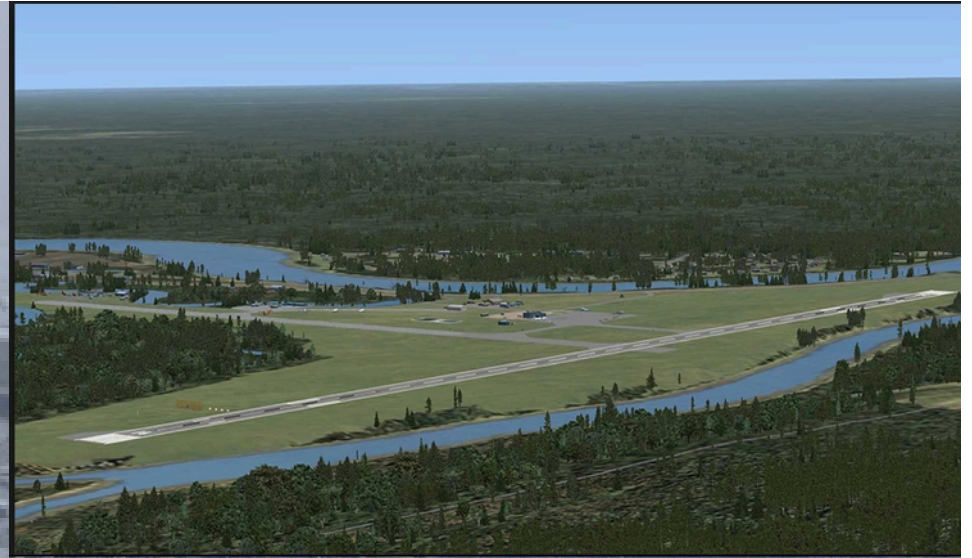
GIS/GPS based bird and wildlife data
collection by the airport operations and
maintenance staff.



TOPICS

- Why
- How
 - Tools
 - Software vs. paper
 - What are the important consideration when choosing a software for the field staff?
 - Training and raising awareness
- Summary





When you've seen one airport, you've seen ONE airport.





- Detection
- Logging
- Analysis

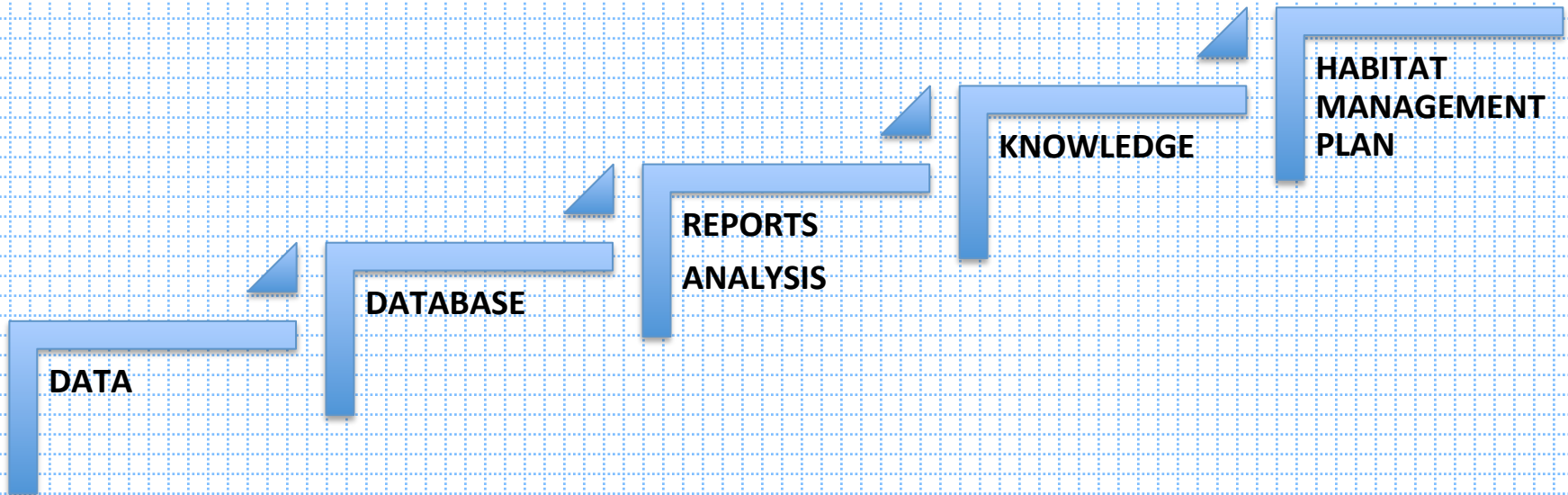


FAHM - 2015 

**FAHM 2015 'FOD & Habitat Management' (6th
& 7th July 2015, Marriott Hotel, London
Heathrow Airport)**







SOFTWARE – WHY?

- Single source data input
- Minimizing human error
- Standardizing

Wildlife Observation Report

Environmental Conditions

Temperature F Precipitation TP-312

Wind Speed KTS Light ☒

Wind Direction Cloud ☒

Observation Details

Observed At Sun Sep 13, 2015 08:08

Family

Genus

Species

Control

Attractant

Control Method

Control Action

Results

Set Precipitation Type

Fog

None

Other

Rain

Snow



SOFTWARE – WHY?



- Raising awareness
 - Standardizing process
- Avoiding duplicated entries

The screenshot displays the Eagle Integrated Solutions software interface. On the left, a table lists various reports with columns for Report Date, Created By, Submitted To, and Status. The main window shows a detailed report for a bird strike on September 14, 2015, at 10:48. The report includes fields for Inspection Date, Reported By, Vehicle, Reference #, Discrepancy #, TC Ref #, Reporting Source, and Strike Type. It also contains sections for Operator, Aircraft Model, Engine Type, Make, Registration, Flight Number, Phase of Operation, and If En Route, Distance From Airport. A table at the bottom details parts affected (Radome, Windshield, Nose) and weather conditions (Light: Dawn, Sky: Overcast). On the right, a map shows a red car on a road with a red arrow pointing to a wildlife observation icon. A pop-up window titled 'Wildlife Observation' provides details for a sighting on September 11, 2015, at 12:16. The observation was of an American Crow, standing, attracted to earthworms. The comment reads: 'Stayed local after being harrassed. Attracted to the earthworms, as a result of recent mowing.'

Report Date	Created By	Submitted To	Status
Monday September 14, 2015 - 10:48	Guest Account	Not Submitted	Not Submitted
Sunday September 13, 2015 - 08:03	Guest Account	Submitted to Transport Canada	Submitted
Friday September 11, 2015 - 12:37	Guest Account	Submitted to Transport Canada	Submitted
Friday September 04, 2015 - 11:04	Guest Account	Submitted to Transport Canada	Submitted

Reported By	Items Marked	Obs	Items Still Open	Obs
Layers	TP-312		TP-312	
int	0	1	0	1
int	0	0	0	0
int	0	1	0	0

Parts	Struck	Damaged	Effects on Aircraft / Flight	Weather Conditions
Radome	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> None	Light: Dawn
Windshield	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> Aborted Takeoff	Sky: Overcast
Nose	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Precipitation Landing	

Wildlife Observation

Date: Sep 11, 2015 - 12:16
Created By:
Temp: 46
Wind Speed:
Wind Direction: North East
Cloud Cover:
Light Condition:
Number: 2
Precipitation:
Species: American Crow
Activity: Standing
Control Method: Siren
Attractant: Prey

Comment
Stayed local after being harrassed.
Attracted to the earthworms, as a result of recent mowing.

SOFTWARE – WHY ?



- Spatial, geo-referenced data

Eagle Integrated Solutions - General Airfield Inspection System - Inspection (2.22) [User: Guest Account]

Data Layers ▾ Tools ▾ Airfield Inspection ▾ Mark At Vehicle RSC ▾ Transfer ?

Sep 14, 2015 - 10:53:17

Wildlife Observation (15-4011)

Date: Sep 14, 2015 - 10:47
Created By: Guest Account
Temp: 56
Wind Speed: 34
Wind Direction:
Cloud Cover:
Light Condition:
Number: 2
Precipitation: Fog
Species: American Crow
Activity: Digging
Control Method: Banger
Attractant: Low grass

Comment

Attachments Close

Bird & Wildlife Strike
Bird & Wildlife Observation
Accident/Incident Report
Potential Hazard Report
Cancel

11

GIS/GPS FEATURES



- Management reporting and analysis



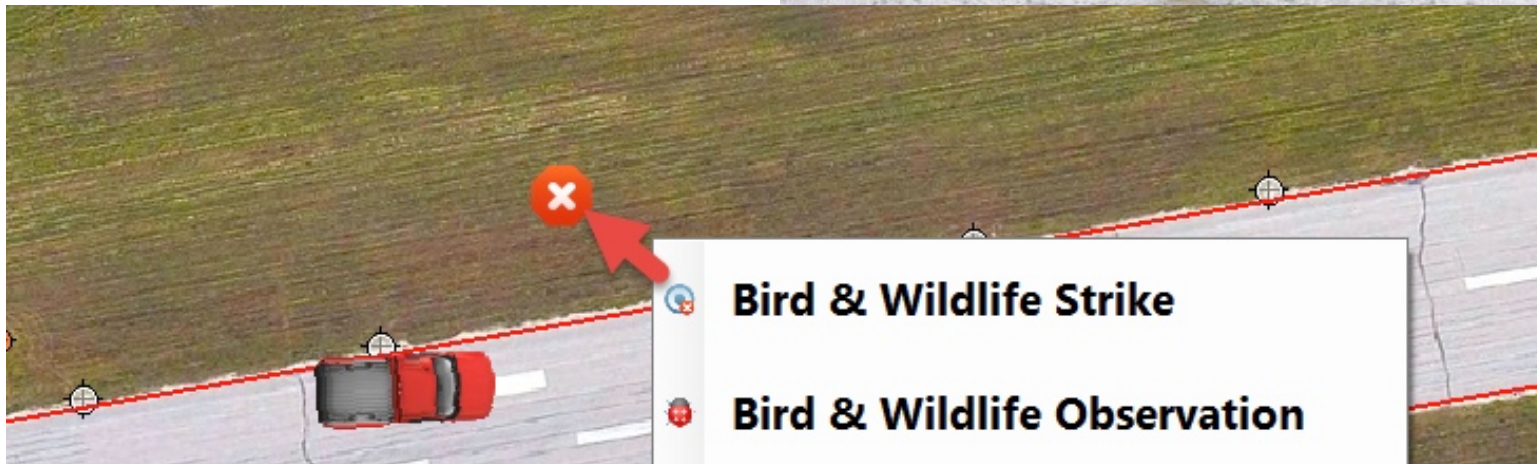
Wildlife Observation Summary Report

Report Name: Bird and wildlife YTD
Date Range: Year To Date
Grouped By: Species
Sorted By: Date
Filtered By: Date, Species

Date	Ref #	Inspector	WildLife Family	Direction From/To	Activity	Attractant	Control Method	Control Action	Control Results	Temp.
Species: American Robin										
May 15, 2015 - 09:23	15-4001	Guest Account	Perching Bird - Thrush/Robin/Kinglet				Banger	Taken		12°C
May 15, 2015 - 09:30	15-4003	Guest Account	Perching Bird - Thrush/Robin/Kinglet		Feeding		Screamer	Harassed		13°C
May 19, 2015 - 08:21	15-4004	Guest Account	Perching Bird - Thrush/Robin/Kinglet	South East / North West	Flying/Localized		Banger	Harassed		

SOLUTION - CONSIDERATIONS

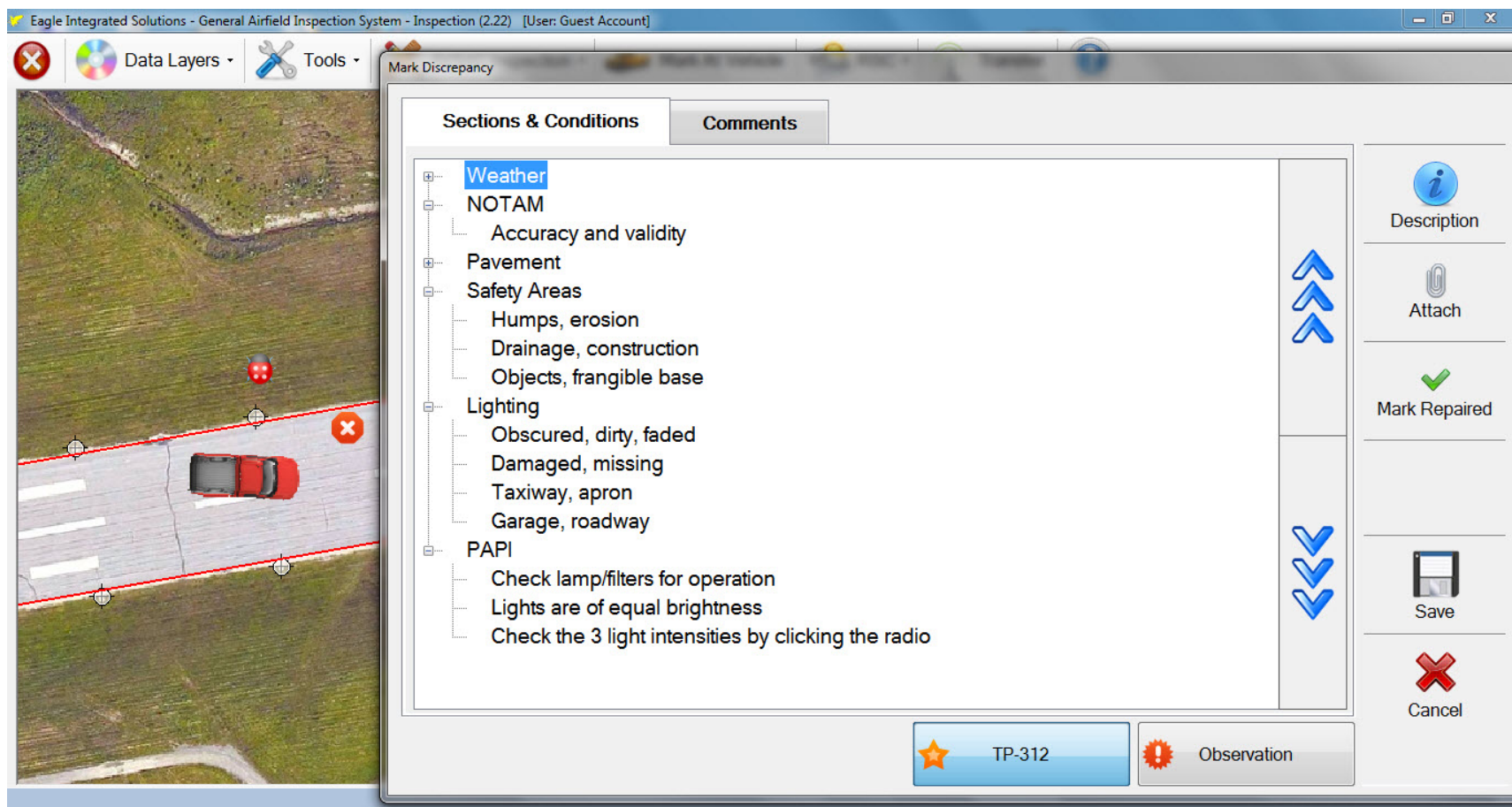
- Look and feel
- Working without wireless connection
- Temperature



SOLUTION - CONSIDERATIONS



- One platform
- Quick marking



SOLUTION - CONSIDERATIONS

- Mandatory fields
- Unknown
- Relevance

The screenshot displays a software interface for a 'Bird & Wildlife Strike Report'. The main window is divided into several sections:

- Incident Information**: A section for general incident details.
- Aircraft Information**: A section for details about the aircraft involved.
- Aircraft Damage**: A section for reporting damage to the aircraft.
- Wildlife Information**: A section for reporting wildlife details, including:
 - Family: Unknown
 - Genus: Unknown
 - Species: Unknown
 - Size: Small, Medium, Large
- Details**: A section for additional information, including:
 - Number Struck: [Empty field]
 - Unknown
 - ification

On the right side of the main window, there are several utility buttons: TP-312 (with a star icon), Attach (with a paperclip icon), Comments (with a notepad icon), Save (with a floppy disk icon), and Cancel (with a red X icon).

A 'Set Wildlife Species' dialog box is open in the foreground, showing a list of species with 'Up' and 'Down' navigation buttons. The list includes: Badger, Bairds Sandpiper, Bald Eagle, Baltimore Oriole, Banded Plover, Bank Swallow, Barn Owl, Barn Swallow, Barn, Grass Owls, Barred Owl, Bats, Bears, and Belted Kingfisher. Below the list is a text field labeled 'Refine list to include only:' and 'OK' and 'Cancel' buttons.

In the background, a 'General Airfield Inspection - Settings' window is visible, showing a tree view of categories. The 'Bird & Wildlife Strike' category is expanded, showing sub-categories like 'Aircraft Makes', 'Engine Makes', 'Flight Phases', etc. The 'Wildlife Type' section is also expanded, showing a list of species with checkboxes, including 'Insectivore', 'Bat', 'Hares and Rabbit', 'Rodent', 'Chipmunk', 'Rat', 'Squirrel', 'Vole', 'Mouse', 'Carnivores', 'Alligators, Crocodiles', 'Bears', 'Canids', 'Carnivores', 'Cats', 'Civets (Mongooses)', 'Common Gray Fox', and 'Cougar'.



SOLUTION - CONSIDERATIONS

- Log reports
- Unique reference #
- Reference library
- Attach images

Bird & Wildlife Observation Report

Inspection Date: Sep 14, 2015 - 10:47
Reported By: Guest Account
Vehicle: Vehicle 1

Reference #: 15-4011
Discrepancy #: D15-1019
Clicked Layers: N/A

Environmental Conditions

Light Condition: N/A
Sky Condition: N/A
Precipitation: Fog

Wind Speed: 34
Wind Direction: N/A
Temperature: 56° F

Observation Details

Species: American Crow
Direction of Travel: N/A
Number Observed: 2
Activity: Digging

Control Method: Banger
Control Action: Harassed
Number Taken: 0
Tower Contacted:
Operations Contacted:

View On Airfield

15-4011

Print
Close

Edit Attachments (0) Close

Reference Documents

Categories

- B/W Observation
- B/W Strike
- Critical Telephone Numbers
- Manuals

Documents Display File Name

- Bird Identification
- Instructions

View
Add
Edit
Update
Remove
Close

Add Edit Remove



SOLUTION - CONSIDERATIONS



- Direct link to Transport Canada or FAA bird and wildlife web-portals

Eagle Integrated Solutions - General Airfield Inspection - Administration (2.22) [User: Guest Account]

System Administration | Activities | Reports | SMS

Bird & Wildlife Strike Logs

Report Date	Created By	Submitted To Transport Canada
Monday September 14, 2015 - 10:48	Guest Account	Not Submitted
Sunday September 13, 2015 - 08:03	Guest A	
Friday September 11, 2015 - 12:37	Guest A	
Friday September 04, 2015 - 11:04	Guest A	

View Log Report | Summary Report

Wednesday June 03, 2015 (16:43 - 16:56)
 Wednesday June 03, 2015 (13:26 - 13:36)
 Tuesday June 02, 2015 (16:47 - 16:47)
 Tuesday June 02, 2015 (16:43 - 16:43)
 Monday June 01, 2015 (18:05 - 18:06)
 Monday June 01, 2015 (17:51 - 18:04)
 Monday June 01, 2015 (13:35 - 14:53)
 Monday June 01, 2015 (12:58 - 12:58)
 Sunday May 31, 2015 (21:26 - 21:27)
 Wednesday May 20, 2015 (13:22 - 13:23)
 Tuesday May 19, 2015 (14:47 - 14:57)
 Tuesday May 19, 2015 (14:07 - 14:41)
 Tuesday May 19, 2015 (13:58 - 14:04)
 Tuesday May 19, 2015 (13:51 - 13:52)

Bird & Wildlife Strike Report

Inspection Date: Sep 14, 2015 - 10:48
Reported By: Guest Account
Vehicle: Vehicle 1
Reference #: 15-3004
Discrepancy #: D15-1020
TC Ref #:
Reporting Source: Site
Strike Type: Bird Strike

Operator:
Aircraft Model:
Make:
Registration:

Phase of Operation: Takeoff Run
Clicked Layers: N/A

Parts:	Struck	Damaged	Effect:
Radome	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> None
Windshield	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> Aborted Takeoff
Nose	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Precautionary Landing

View | Export | Print | Transport Canada >> | Edit | Attachments (0) | Close

Transport Canada
www.tc.gc.ca

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Home > Transport Canada > Air Transportation > Airports > Bird/Wildlife Strike Report

Bird/Wildlife Strike Report

Privacy Notice for the Collection of Personal Information
 Provision of the information requested on this form is voluntary. The information is being collected for the purpose of responding to your query/comments. Personal information that you provide is protected under the provisions of the [Privacy Act](#). The Act provides you with a right of access to your information.

Note: If field is unknown please select unknown from the pick list, but if field is unreported please leave blank.
 * indicates required field

Please enter your Name:

Telephone Number:

Type of Report:
 *

Reporting Source:
 *

Operator:

Date (yyyy/mm/dd):
 *

Height (AGL, feet):

Local Time (hhmm) (24 hour time):
Light: Dawn
Sky: Overcast

REPORTING

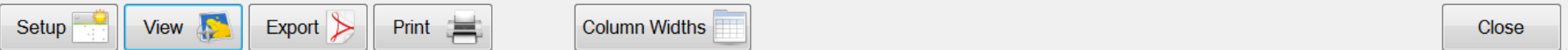


Bird & Wildlife Observation Summary Report

Report Name: Wildlife report
Date Range: Current Month
Grouped By: Species
Sorted By: Date
Filtered By: Date

Created Sep 15, 2015 - 12:30

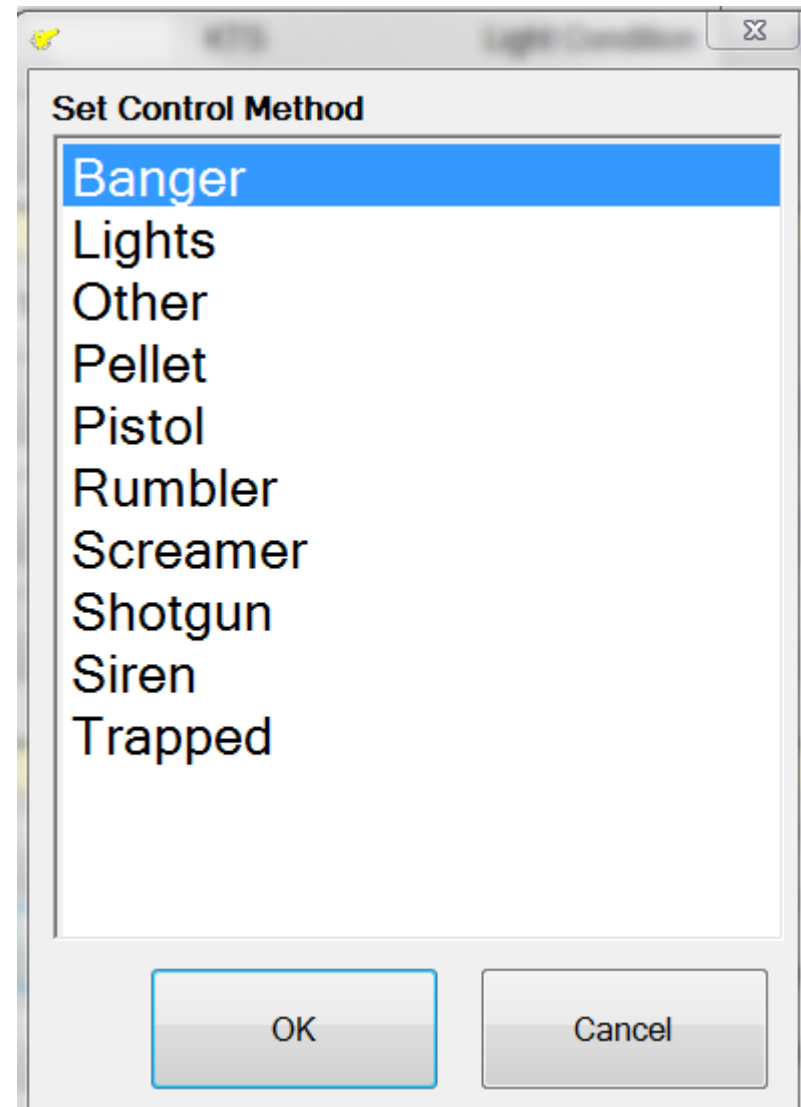
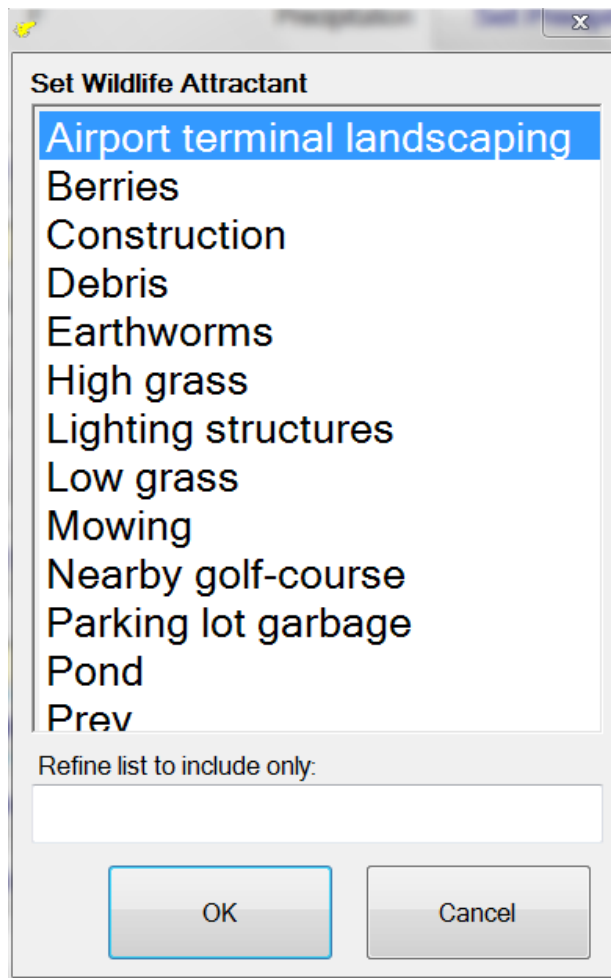
Date	Ref #	Inspector	Direction From/To	Activity	Attractant	Control Method	Number Seen/Taken
Species: Bald Eagle							
Sep 04, 2015 - 11:10	15-4007 <small>Discrepancy Ref# 15-1012</small>	Guest Account		Flying/Localized			1 seen
Species: American Crow							
Sep 11, 2015 - 12:15	15-4008 <small>Discrepancy Ref# 15-1013</small>	Guest Account		Standing		Other	2 / 0
Sep 11, 2015 - 12:16	15-4009 <small>Discrepancy Ref# 15-1014</small>	Guest Account	North East / South East	Standing		Siren	2 / 0
Species: Barn Owl							
Sep 13, 2015 - 08:08	15-4010 <small>Discrepancy Ref# 15-1016</small>	Guest Account				Siren	1 / 0
Species: American Crow							
Sep 14, 2015 - 10:47	15-4011 <small>Discrepancy Ref# 15-1019</small>	Guest Account		Digging		Banger	2 / 0
Species: Canada Goose							
Sep 15, 2015 - 12:27	15-4012	Guest Account	North West / South West	Flying/Passing			6 / 0



TRAINING



- Attractants
- Control methods



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THANK YOU!

**Bird Strike Canada, Bird Strike
Committee USA & AAAE**

