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OMB Approved
0579-0335

UNITED STATES DEPARTMENT OF AGRICULTURE ANIMAL AND PLANT HEALTH INSPECTION SERVICE WILDLIFE SERVICES	1. <u>329039</u> Work Initiation Document Number	2. <u>06 / 13 / 2011</u> MM DD YYYY
WORK INITIATION DOCUMENT FOR WILDLIFE DAMAGE MANAGEMENT		

SECTION 1

3. TYPE OF WORK INITIATION DOCUMENT (mark all that apply):

Private Property Temporary Non-Private Property Assign to These Special Groups

Adjacent Landowner Amendment to a Work Initiation Doc. Amendment to Existing Work Initiation Doc.

a. _____
b. _____
c. _____
d. _____

SECTION 2

4. Cooperator's Name Sears Shawn, Lt.
Last First Middle

5. Cooperator's Address County of Henrico 10421 Woodman Road Glen Allen 23060
Street City

Where will work be performed?
(give address or directions, if different from above) On all Henrico County Properties

6. Business/Farm/Ranch/or Common Name _____ 7. _____
State ZIP Code

8. Owner's or Representative's Name _____ 9. 804 - 727-8805
(if different from Cooperator's) Cooperator Telephone Number

10. Owner's or Representative's Address _____
(if different from Cooperator's) or Henrico Co.Division of Police Animal Protection PO Box 90775 Henrico VA 23273-0775
Street City State ZIP Code

SECTION 3

<p>11. WS Employee and Work Location Information:</p> <p><u>David Allaben</u> WS Employee Name</p> <p><u>Henrico</u> County</p> <p><u>VA</u> State</p>	<p>12. Land Class Information:</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>Land Class</th> <th>Acres</th> </tr> <tr> <td>1. <u>01</u></td> <td><u>1</u></td> </tr> <tr> <td>2. _____</td> <td>_____</td> </tr> <tr> <td>3. _____</td> <td>_____</td> </tr> <tr> <td>4. _____</td> <td>_____</td> </tr> <tr> <td colspan="2">Total Acres <u>1</u></td> </tr> </table>	Land Class	Acres	1. <u>01</u>	<u>1</u>	2. _____	_____	3. _____	_____	4. _____	_____	Total Acres <u>1</u>		<p>13. Adjoining Property Work Information Document Number(s):</p> <p>1. _____</p> <p>2. _____</p> <p>3. _____</p> <p>4. _____</p>	<p>14. Species Information:</p> <p>1. <u>See Attachment</u></p> <p>2. _____</p> <p>3. _____</p> <p>4. _____</p> <p><input checked="" type="checkbox"/> 15. If box is checked, attachment lists additional species.</p>
Land Class	Acres														
1. <u>01</u>	<u>1</u>														
2. _____	_____														
3. _____	_____														
4. _____	_____														
Total Acres <u>1</u>															

SECTION 4

16. In consideration of the benefits to be derived from the proper management of damage caused by those species listed in Section 3 Item 14. (and Item 15., if applicable), I, the undersigned cooperator or cooperator's representative, do hereby give my consent and concurrence to the Animal and Plant Health Inspection Service (APHIS) (to include its officials, employees, and agents) to use, upon lands owned, leased, or otherwise controlled by me, and identified by this Work Initiation Document, the following methods and devices:

COMPONENTS: 1. See Attachment 2. _____ 3. _____

4. _____ 5. _____ 6. _____

If box is marked, an attachment lists additional methods or devices.

SECTION 5

17. I, the cooperator or cooperator's representative, have been informed of the methods and the manner in which the control materials and devices listed in Section 4 will be used, and of the possible hazards associated with their use. I understand that APHIS, (to include its officers, employees and agents) will: exercise reasonable precautions to safeguard all persons to prevent injury to animal life other than those listed in Section 3, Item 14. (and Item 15., if applicable); guard against the mishandling of control devices and materials; and exercise due caution and proper judgment in all wildlife damage management operations. I understand that APHIS, WS, will maintain restricted use pesticide application records on applications made under the Work Initiation Document, and that APHIS, WS, will provide copies of the records or record information promptly upon the property owner's or cooperator's request. I understand that APHIS may collect Global Positioning System (GPS) coordinates at the project site as part of component or activity tracking or as wildlife disease monitoring or research data.

SECTION 6

18. In consideration of these understandings and of the benefits to be derived, I, the cooperator or cooperator's representative, agree to: take reasonable precautions to prevent injury to livestock and other domestic animals; assume responsibility for injury to my property under my control, when said injury is not the result of negligence on the part of APHIS; assist in maintaining such warning signs as APHIS may place for the purpose of notifying persons entering onto such lands of the possible hazards associated with wildlife damage management measures in use thereon; and to give adequate warning of these possible hazards to persons I authorize to enter onto such lands. Further, in recognition of the benefits to be derived from the use of specified methods and devices authorized by this Work Initiation Document, I, the cooperator or cooperator's representative, agree not to concurrently use or allow to be used upon lands covered by this Work Initiation Document, any toxic material that might reasonably be expected to take a species listed above in Section 3, Item 14. (and Item 15., if applicable) unless such use of said toxicant is agreed to by APHIS in writing.

SPECIAL CONSIDERATIONS:

Wildlife Services will conduct migratory bird management under its existing statewide WS Migratory Bird Permit. This Agreement will expire on May 31, 2012

SIGNATURE AND TITLE (Landowner, Lessee, or Administrator)	TELEPHONE NUMBER	ADDRESS	DATE
	804 727 8805	10421 Woodman Rd, Glenn Allen, Va. 23060	06/14/11
SIGNATURE AND TITLE (APHIS Representative)	TELEPHONE NUMBER	ADDRESS	DATE
	804 739 7739	PO Box 130 Moseley, VA 23120	6/16/11

APPROVED AS TO FORM

WMY 6-14-2011
ASST. COUNTY ATTORNEY

Agreement Data

[Help](#)

[ToDo Tab](#)

[Work Task Tab](#)

[Agreement Tab](#)

Agreement Name: **HENRICO COUNTY** State: **VA** Type: **PRIVATE** Last Signed: **0 Years 0 Months Ago** Nr: **329039**

Remarks: **This agreement will cover all county owned properties authorized under current CSA. This Agreement will expire on May 31, 2012.**

Last Agr Changes: *Changed Last Signed Date from:06/06/2011. Changed State from:VA. Changed Type from:PRIVATE.*

Status: **PENDING** as of **06/09/2011** [View Agr Change History](#)

No Currently Protected Resources Entered for This Agreement	Protected Resources History
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Properties on the Agreement

Property 1:
 Abbr: **HENRICO C**
 Name: **HENRICO COUNTY MASTER AGREEMENT** [New DC Task](#) [New TA Task](#)
 in District: **SOUTHEASTERN DISTRICT**

Address:
POST OFFICE BOX 90775 County: **HENRICO**
HENRICO, VIRGINIA
VA 23273-0775

Location Points

Point Type	Latitude	Longitude
ENTRANCE	N 37.37509	E 75.30536

Land Classes

COUNTY OR CITY LAND	1 Acre	as of 06-JUN-11
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Allowed On Property [Show Property Inventory History](#)

Species	Activities	Components
BEAVERS	BEAVER DAM REMOVAL	A/C POWDER
FOXES, GRAY	CALLING	BARRIERS, EXCLUSION (OTHER)
FOXES, RED	CHEMICAL APPLICATION	CALLING DEVICE, ELECTRONIC
GEESE,	DENNING	EFFIGY, VULTURE
CANADA	EXCLUSION/FENCING	ELECTRONIC HARASSMENT DEVICES (OTHER)
RACCOONS	HARASSMENT/HAZING	EXPLOSIVES, BINARY
SKUNKS,	NEST, EGG DESTRUCTION/REMOVAL	EXPLOSIVES, HALF-LB INCREMENT (ALL)
STRIPED	POPULATION	EXPLOSIVES, ONE AND HALF-PLB INCREMENT (ALL)
VULTURES,	CENSUS/INDEXING/MONITORING	EXPLOSIVES, ONE LB INCREMENT (ALL)
BLACK	SHOOTING	EXPLOSIVES, ONE-SIXTH POUND
VULTURES,	SITE VISIT	
TURKEY	TRAPPING	
<i>Feral Ducks</i>		
<i>Goose (see amendment)</i>		

INCREMENT (A
 EXPLOSIVES, ONE-THIRD LB
 INCREMENT (ALL)
 FIREARMS
 GAS CARTRIDGE (RODENT)
 GAS CARTRIDGE, LARGE
 HAND TOOLS
 HANDCAUGHT/GATHERED
 LASERS (ALL) (DETERRENT)
 LIGHTS (ALL)
 NETS, CANNON/ROCKET
 NIGHT VISION/INFRARED EQUIPMENT
 OIL, CORN
 PAINT BALLS
 PHYSICAL ACTIONS (HAND/VOICE)
 PREBAIT
 PYROTECHNICS (ALL)
 SNARES, NECK
 SPOTLIGHT
 TRAPS, BODY GRIP
 TRAPS, CAGE
 TRAPS, DECOY
 TRAPS, DRIVE/CORRAL
 TRAPS, Foothold
 TRAPS, OTHER
 VEHICLES (ALL) (PLANES, BOATS,
 AUTO, ATV
 WATER, HIGH PRESSURE SPRAY

This Property is Not Covered under any Other Agreements

Cooperators on the Agreement

1. CARETAKER:

Common Name: SHAWN

Person Name: SEARS SHAWN

Type: GOVT, LOCAL

Address:

COUNTY OF HENRICO DIVISION OF POLICE, ANIMAL PROT County: HENRICO

10421 WOODMAN ROAD

GLEN ALLEN, VA 23273-0775

Work Phone: 804 727-8805

Employees on the Agreement

Name	Primary?	Active Date
1. ALLABEN, DAVID	Y	06/06/2011

Special Groups Covering the Agreement



COMMONWEALTH OF VIRGINIA
COUNTY OF HENRICO

DIVISION OF POLICE

DOUGLAS A. MIDDLETON
CHIEF OF POLICE

JOB AUTHORIZATION AND APPROVAL FOR PAYMENT

Report # 110708158

Date of Request: 7/7/11

Date of Authorization: 7/8/11

Date Job Performed: _____

Location: (b) (6)

(b) (6) CANTERBURY LAKE

(b) (6)

Species: CANADIAN GOOSE

At Location: 40 +

Removed: _____

Comments: BROFTON & I VISITED THE SITE ON 7/8/11 AND OBSERVED 40+ GEESE - OVER 1/2 OF THEM APPEARED FLIGHTLESS. WE ARE WAITING FOR IZA'S FROM THE PROPERTY OWNERS AND THE CANTERBURY LAKE ASSOCIATION.

Authorized By: [Signature]
Henrico Police Animal Protection

SUBJECT: Guidelines for removal of Canada Geese

March 22, 2011

To: Staff, Virginia Wildlife Services Program

The following are guidelines which clarify policies for conducting Canada Goose damage management activities in Virginia. :

- Round-ups will not be conducted at agricultural sites where hunting is allowed. WS may provide direct control services at these sites by shooting no more than 20% of the geese to supplement harassment.
- During, and immediately prior to or following the molting period (June 1 – July 31), lethal removal methods utilized by WS personnel will be restricted to a round-up at sites with more than 25 geese. Sites with less than 25 geese may elect to have WS remove geese by any available and appropriate method (e.g. round-up, alpha chloralose, cannon net, shooting).
- Geese may be removed at any time, via any appropriate method, at airports to address threats to aircraft or human health and safety.
- WS Form 37's (Migratory Bird Damage Project Report) will be submitted to the state office for approval before removing geese or other migratory birds. A Form 37 does not need to be submitted for goose egg oiling/addling projects.
- Cooperative Service Agreements for goose damage management should clearly specify in the Work Plan what the fate of the geese will be (for example, geese will be captured using alpha chloralose (AC), removed from the site, and euthanized).
- In accordance with the use restrictions, AC cannot be used during or 30 days prior to the hunting season on waterfowl species that could be hunted (e.g., Canada Geese).

Jennifer Cromwell
Assistant State Director

U.S. DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE
WILDLIFE SERVICES

PERMIT REVIEW

RENEWAL
Permit No:
 Without Change

1. Name, Address, and Telephone Number (b) (6) Henrico VA Telephone <input checked="" type="checkbox"/> Home <input type="checkbox"/> Work (b) (6) Fax/Email:		2. Location of Damage Same and adjacent properties	
		3. County Henrico	4. State VA
5. RESOURCE/DAMAGE ESTIMATE			
A. Resource Damaged yards, driveways, landscaping erosion, turf damage		B. Description of Damage excessive fecal droppings, grazing	
6. MIGRATORY BIRD SPECIES		7. PERMIT RECOMMENDATION	
Depredating Species	Number Involved	Take Recommendation	Number Recommended
1. Canada geese	50	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
2.		<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.		<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.		<input type="checkbox"/> Yes <input type="checkbox"/> No	
Methods WS roundup			
8a. PREVIOUS ACTIONS TO ADDRESS PROBLEM AND RESULTS OF THOSE ACTIONS: Wire strand fencing used with short term results homeowners chase geese, put up flags, streamers and soap with no results. hunting is not a safe option here. have destroyed nests in the past			
8b. COMMENTS: Adjacent to Canterbury Lake Association, Canada geese have been a problem for more than 10 years. site visit w/ Shawn Sears Henrico County Animal Protection 7-8-11 - approved			
9. RECOMMENDED ACTIONS			
Action: <input checked="" type="checkbox"/> Harassment <input type="checkbox"/> Habitat Alteration <input type="checkbox"/> Husbandry <input type="checkbox"/> Exclusion <input type="checkbox"/> Lethal trapping <input type="checkbox"/> Chemical repellent <input type="checkbox"/> Capture and relocation <input checked="" type="checkbox"/> Egg/nest destruction <input type="checkbox"/> Shooting <input type="checkbox"/> Other: WS roundup			

(b) (6)

Final: _____ 11/8/11

07/08/2011 13:09 8047397738

USDA APHIS WS VA

PAGE 02/02

Henrico Co Master Agreement

UNITED STATES DEPARTMENT OF AGRICULTURE ANIMAL AND PLANT HEALTH INSPECTION SERVICE ANIMAL DAMAGE CONTROL

Agreement 329039

AGREEMENT FOR CONTROL OF ANIMAL DAMAGE ON NON-PRIVATE PROPERTY

Date 7/10/11 MM DD YY

TYPE OF AGREEMENT - "J" ALL THAT APPLY

- 1. Temporary Agreement
- 2. Urban Agreement
- 3. Continuation Form
- 4. Amendment of an Existing Agreement
- 5. Addendum on File
- 6. Supplement is not Required
- 7. Special Consideration in Section 6

PLEASE PRINT CLEARLY

SECTION 1

Name: (b) (6)
 Address: (b) (6)
 Street: _____ City/State/Zip Code: _____
 Common Name: _____
 Representative Name: (b) (6)

SECTION 2

A. ADC Employee Name, ADC Code, State Code, and County Code
 David Allaper
 ADC Employee Name: _____
 ADC Code: 329
 ADC Employee Name: _____
 ADC Code: 329
 State: 57
 County: Henrico

B. List each Land Class, with its Corresponding Acreage

LAND CLASS	ACRES
1st	1
2nd	
3rd	
4th	
Total Acreage Protected	

C. If this is an Adjoining Property Agreement, List the Properties
~~_____~~

D. List all Species to be Targeted During Damage Control Activities

SPECIES	GC
Canada	
goose	

SECTION 3

In consideration of the benefits to be derived from the proper control of damage caused by those species listed in Section 2(D) of the agreement, I the undersigned authorized representative of the above listed cooperator, do hereby give my consent, and concurrence, to the Animal and Plant Health Inspection Service (APHIS), (to include its officials, employees, and agents) to use, upon lands owned, leased, or otherwise controlled by the cooperator I represent, and identified by this agreement, the following methods and devices:

METHOD	CODE	METHOD	CODE	METHOD	CODE	METHOD	CODE
hand capture							
lure trap							

SECTION 4

I, as representative of the cooperator, have been informed of the methods and the manner in which the control materials and devices listed in Section 3 will be used, and of the possible hazards associated with their use. I understand that APHIS, again to include its officers, employees, and agents will exercise reasonable precautions to safeguard all persons and to prevent injury to animal life other than those listed in Section 2(D) above; guard against the mishandling of control devices and materials; and exercise due caution and proper judgment in all control operations.

SECTION 5

In consideration of these understandings and of the benefits to be derived, the cooperator that I represent, agrees to: take reasonable precautions to prevent injury to livestock and other domestic animals; assume responsibility for injury to property owned by the cooperator or under the cooperator's control, when said injury is not the result of negligence on the part of APHIS; assist in maintaining such warning signs as APHIS may place out for the purpose of notifying persons entering onto such lands of the possible hazards associated with animal control measures in use thereon; and to give adequate warning to persons authorized by the cooperator, to enter onto such lands, of these possible hazards.

In recognition of the benefits to be derived from the use of the specified methods and devices authorized by this agreement, the cooperator that I represent agrees not to concurrently use or allow to be used upon lands covered by this agreement, any toxic material that might reasonably be expected to take a species listed in the above Section 2(D) unless such use of said toxicant is agreed to by APHIS in writing.

This agreement may be revoked by either party by a 30-day written notice.

SECTION 6

Special Considerations:
 Please note that captured geese will be euthanized, processed and donated to local shelters and zoos.

(b) (6)

SIGNATURE AND TITLE (APHIS Representative) ADDRESS DATE
 [Signature] District Supervisor P.O. Box 130 Mosley, VA 7/8/11
 ADDRESS DATE
 [Signature] 7/10/11

Henrico Co Master Agreement

UNITED STATES DEPARTMENT OF AGRICULTURE ANIMAL AND PLANT HEALTH INSPECTION SERVICE ANIMAL DAMAGE CONTROL

Agreement 329039

AGREEMENT FOR CONTROL OF ANIMAL DAMAGE ON NON-PRIVATE PROPERTY

Date 07/11/11 MM DD Yr

TYPE OF AGREEMENT - "/ ALL THAT APPLY

- 1 Temporary Agreement
2 Urban Agreement

- 3 Continuation Form
4 Amendment of an Existing Agreement

- 5 Addendum on File
6 Supplement is not Required
7 Special Considerations in Section 6

SECTION 1: Name, Address, Common Name, Responsible Name, City/State/Zip Code, Area Code, Telephone Number. Includes redacted information (b)(6).

SECTION 2: A. ADC Employee Name, ADC Code, State Code, and County Code. B. List each Land Class with its Corresponding Acreage. C. If this is an Adjoining Property Agreement, List the Properties Protected. D. List all Species to be Targeted During Damage Control Activities.

SECTION 3: In consideration of the benefits to be derived from the proper control of damage caused by those species listed in Section 2(D) of the agreement, I the undersigned authorized representative of the above listed cooperator, do hereby give my consent, and concurrence, to the Animal and Plant Health Inspection Service (APHIS)...

SECTION 4: I, as representative of the cooperator, have been informed of the methods and the manner in which the control materials and devices listed in Section 3 will be used, and of the possible hazards associated with their use.

SECTION 5: In consideration of these understandings and of the benefits to be derived, the cooperator that I represent, agrees to take reasonable precautions to prevent injury to livestock and other domestic animals; assume responsibility for injury to property owned by the cooperator or under the cooperator's control...

SECTION 6: Special Considerations: Please note that captured geese will be euthanized, processed and donated to local shelters and 2009.

Signature and Date fields for both parties, including redacted information (b)(6) and handwritten address: P.O. Box 130 Moseley, VA 7/18/11.

07/08/2011 13:09 8047397738

USDA APHIS WS VA

PAGE 02/02

Henrico Co Master Agreement

UNITED STATES DEPARTMENT OF AGRICULTURE ANIMAL AND PLANT HEALTH INSPECTION SERVICE ANIMAL DAMAGE CONTROL

Agreement 329039

AGREEMENT FOR CONTROL OF ANIMAL DAMAGE ON NON-PRIVATE PROPERTY

Date 070911 MM DD YY

TYPE OF AGREEMENT - "/ ALL THAT APPLY

- 1. Temporary Agreement
- 3. Continuation Form
- 5. Addendum on File
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- 4. Amendment of an Existing Agreement
- 6. Supplement is not Required
- 7. Special Consideration in Section 6

SECTION 1

Cooperator's Name: **(b) (6)**

Cooperator's Address: **(b) (6)** Street City/State/Zip Code: **Richmond, VA 23238**

Common Name: _____

Representative's Name: _____ Area Code: _____ Telephone Number: _____

SECTION 2

A. ADC Employee Name, ADC Code, State Code, and County Code

ADC Employee Name: **David Attaber**

ADC Code: **329**

ADC Employee Name: _____

ADC Code: **329**

State: **57**

County: _____

B. List each Land Class with its Corresponding Acreage

LAND CLASS	ACRES
1st	_____ _____ _____ _____ _____ _____ _____ _____ _____ _____
2nd	_____ _____ _____ _____ _____ _____ _____ _____ _____ _____
3rd	_____ _____ _____ _____ _____ _____ _____ _____ _____ _____
4th	_____ _____ _____ _____ _____ _____ _____ _____ _____ _____
Total Acreage Protected	_____ _____ _____ _____ _____ _____ _____ _____ _____ _____

C. If this is an Adjoining Property Agreement, List the Properties Protected

D. List all Species to be Targeted During Damage Control Activities

SPECIES	CODE
Canada	_____ _____
goose	_____ _____
_____	_____ _____
_____	_____ _____
_____	_____ _____

SECTION 3

In consideration of the benefits to be derived from the proper control of damage caused by those species listed in Section 2(D) of the agreement, I the undersigned authorized representative of the above listed cooperator, do hereby give my consent, and concurrence, to the Animal and Plant Health Inspection Service (APHIS), (to include its officials, employees, and agents) to use, upon lands owned, leased, or otherwise controlled by the cooperator I represent, and identified by this agreement, the following methods and devices:

METHOD	CODE	METHOD	CODE	METHOD	CODE	METHOD	CODE
hand capture	_____ _____	_____	_____ _____	_____	_____ _____	_____	_____ _____
corral trap	_____ _____	_____	_____ _____	_____	_____ _____	_____	_____ _____

SECTION 4

I, as representative of the cooperator, have been informed of the methods and the manner in which the control materials and devices listed in Section 3 will be used, and of the possible hazards associated with their use. I understand that APHIS, again to include its officials, employees, and agents will exercise reasonable precautions to safeguard all persons and to prevent injury to animal life other than those listed in Section 2(D) above; guard against the mishandling of control devices and materials; and exercise due caution and proper judgment in all control operations.

SECTION 5

In consideration of these understandings and of the benefits to be derived, the cooperator that I represent, agrees to: take reasonable precautions to prevent injury to livestock and other domestic animals; assume responsibility for injury to property owned by the cooperator or under the cooperator's control, when said injury is not the result of negligence on the part of APHIS; assist in maintaining such warning signs as APHIS may place out for the purpose of notifying persons entering onto such lands of the possible hazards associated with animal control measures in use thereon; and to give adequate warning to persons authorized by the cooperator to enter onto such lands, of these possible hazards.

In recognition of the benefits to be derived from the use of the specified methods and devices authorized by this agreement, the cooperator that I represent agrees not to concurrently use or allow to be used upon lands covered by this agreement, any toxic material that might reasonably be expected to take a species listed in the above Section 2(D) unless such use of said toxicant is agreed to by APHIS in writing.

This agreement may be revoked by either party by a 30-day written notice.

SECTION 6

Special Considerations:

Please note that captured geese will be euthanized, processed and donated to local shelters and zoos.

(b) (6)

DATE 6-9-11

_____ District Supervisor P.O. Box 130 Massey, VA

DATE 7/8/11

07/08/2011 13:09 8047397738

USDA APHIS WS VA

PAGE 02/02

Henrico Co Master Agreement

UNITED STATES DEPARTMENT OF AGRICULTURE ANIMAL AND PLANT HEALTH INSPECTION SERVICE ANIMAL DAMAGE CONTROL

Agreement 329039

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Date 7/11/10 MM DD YY

TYPE OF AGREEMENT - "/> ALL THAT APPLY

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- 5. Addendum on File
- 6. Supplement is not Required
- 7. Special Considerations in Section 6

SECTION 1

Cooperator Name: (b) (6)

Cooperator Address: (b) (6) Ret, VA

City/State/Zip Code: (b) (6) 23238

Common Name: (b) (6)

Representative Name: (b) (6)

SECTION 2

A. ADC Employee Name, ADC Code, State Code, and County Code

ADC Employee Name: David Altman

ADC Code: 329

ADC Employee Name: (blank)

ADC Code: 329

State: 51

County: Henrico

B. List each Land Class with its Corresponding Acreage

LAND CLASS	ACRES
1st	1
2nd	
3rd	
4th	
Total Acreage Protected	

C. If this is an Adjoining Property Agreement, List the Properties Protected

D. List all Species to be Targeted During Damage Control Activities

SPECIES	CL
Canada	
goose	

SECTION 3

In consideration of the benefits to be derived from the proper control of damage caused by those species listed in Section 2(D) of the agreement, I the undersigned authorized representative of the above listed cooperator, do hereby give my consent, and concurrence, to the Animal and Plant Health Inspection Service (APHIS), (to include its officials, employees, and agents) to use, upon lands owned, leased, or otherwise controlled by the cooperator I represent, and identified by this agreement, the following methods and devices:

METHOD	CODE	METHOD	CODE	METHOD	CODE	METHOD	CODE
hand capture							
casual trap							

SECTION 4

I, as representative of the cooperator, have been informed of the methods and the manner in which the control materials and devices listed in Section 3 will be used, and of the possible hazards associated with their use. I understand that APHIS, again to include its officers, employees, and agents will exercise reasonable precautions to safeguard all persons and to prevent injury to animal life other than those listed in Section 2(D) above; guard against the mishandling of control devices and materials; and exercise due caution and proper judgment in all control operations.

SECTION 5

In consideration of these understandings and of the benefits to be derived, the cooperator that I represent, agrees to: take reasonable precautions to prevent injury to livestock and other domestic animals; assume responsibility for injury to property owned by the cooperator or under the cooperator's control, when said injury is not the result of negligence on the part of APHIS; assist in maintaining such warning signs as APHIS may place out for the purpose of notifying persons entering onto such lands of the possible hazards associated with animal control measures in use thereon; and to give adequate warning to persons authorized by the cooperator, to enter onto such lands, of these possible hazards.

In recognition of the benefits to be derived from the use of the specified methods and devices authorized by this agreement, the cooperator that I represent agrees not to concurrently use or allow to be used upon lands covered by this agreement, any toxic material that might reasonably be expected to take a species listed in the above Section 2(D) unless such use of said toxicant is agreed to by APHIS in writing.

This agreement may be revoked by either party by a 30-day written notice.

SECTION 6

Special Considerations: Please note that captured geese will be euthanized, processed and donated to local shelters and zoos.

(b) (6)

SIGNATURE AND TITLE (APHIS Representative): [Signature] District Supervisor

ADDRESS: P.O. Box 130 Mosley, VA

DATE: 7/9/11

DATE: 7/8/11

07/08/2011 13:09 8047397738

USDA APHIS WS VA

PAGE 02/02

Henrico Co Master Agreement

UNITED STATES DEPARTMENT OF AGRICULTURE ANIMAL AND PLANT HEALTH INSPECTION SERVICE ANIMAL DAMAGE CONTROL

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- 5. Addendum on File
- 6. Supplement is not Required
- 7. Special Considerations in Section 6

SECTION 1

Name: (b) (6)

Address: (b) (6)

City/State/Zip Code: _____

Common Name: _____

Responsible Party Name: _____ (b) (6)

SECTION 2

A. ADC Employee Name, ADC Code, State Code, and County Code

ADC Employee Name: David Allaba

ADC Code: 329

ADC Employee Name: _____

ADC Code: 329

State: 57

County: _____

B. List each Land Class with its Corresponding Acreage

LAND CLASS	ACRES
1st	1
2nd	
3rd	
4th	
Total Acreage Protected	

C. If this is an Adjoining Property Agreement, List the Properties Protected

D. List all Species to be Targeted During Damage Control Activities

SPECIES	GC
<u>Canada</u>	
<u>geese</u>	

SECTION 3

In consideration of the benefits to be derived from the proper control of damage caused by those species listed in Section 2(D) of the agreement, I the undersigned authorized representative of the above listed cooperator, do hereby give my consent, and concurrence, to the Animal and Plant Health Inspection Service (APHIS), (to include its officials, employees, and agents) to use, upon lands owned, leased, or otherwise controlled by the cooperator I represent, and identified by this agreement, the following methods and devices:

METHOD	CODE	METHOD	CODE	METHOD	CODE	METHOD	CODE
<u>hand capture</u>							
<u>canal trap</u>							

SECTION 4

I, as representative of the cooperator, have been informed of the methods and the manner in which the control materials and devices listed in Section 3 will be used, and of the possible hazards associated with their use. I understand that APHIS, again to include its officers, employees, and agents will exercise reasonable precautions to safeguard all persons and to prevent injury to animal life other than those listed in Section 2(D) above; guard against the mishandling of control devices and materials; and exercise due caution and proper judgment in all control operations.

SECTION 5

In consideration of these understandings and of the benefits to be derived, the cooperator that I represent, agrees to: take reasonable precautions to prevent injury to livestock and other domestic animals; assume responsibility for injury to property owned by the cooperator or under the cooperator's control, when said injury is not the result of negligence on the part of APHIS; assist in maintaining such warning signs as APHIS may place out for the purpose of notifying persons entering onto such lands of the possible hazards associated with animal control measures in use thereon; and to give adequate warning to persons authorized by the cooperator to enter onto such lands, of these possible hazards.

In recognition of the benefits to be derived from the use of the specified methods and devices authorized by this agreement, the cooperator that I represent agrees not to concurrently use or allow to be used upon lands covered by this agreement, any toxic material that might reasonably be expected to take a species listed in the above Section 2(D) unless such use of said toxicant is agreed to by APHIS in writing.

This agreement may be revoked by either party by a 30-day written notice.

SECTION 6

Special Considerations:

Please note that captured geese will be euthanized, processed and donated to local shelters and zoos.

(b) (6)

Signature: _____ DATE: 7/10/11

Signature: JE District Supervisor P.O. Box 130 Moseley, VA DATE: 7/8/11

Henrico Co Master Agreement

UNITED STATES DEPARTMENT OF AGRICULTURE ANIMAL AND PLANT HEALTH INSPECTION SERVICE ANIMAL DAMAGE CONTROL

Agreement 329039

AGREEMENT FOR CONTROL OF ANIMAL DAMAGE ON NON-PRIVATE PROPERTY

Date 07/11/10 MM DD YY

TYPE OF AGREEMENT - "X" ALL THAT APPLY

- 1. Temporary Agreement, 2. Urban Agreement, 3. Continuation Form, 4. Amendment of an Existing Agreement, 5. Addendum on File, 6. Supplement is not Required, 7. Special Considerations in Section 6

SECTION 1: Name, Address, Common Name, and County/State/Zip Code. Includes handwritten 'Richmond, VA' and redacted areas (b)(6).

SECTION 2: A. ADC Employee Name (David Allaben), ADC Code (329), State (57), County (Henrico). B. Land Class and Acres table. C. Adjoining Property Agreement. D. Species to be Targeted (Canada goose).

SECTION 3: Methods and devices for control. Includes handwritten 'hand capture' and 'cove trap' with corresponding codes.

SECTION 4: Acknowledgment of understanding of methods and hazards associated with control devices.

SECTION 5: Agreement to take precautions to prevent injury to livestock and other domestic animals, and to give adequate warning to persons authorized by the operator.

This agreement may be revoked by either party by a 30-day written notice.

SECTION 6: Special Considerations. Includes handwritten note: 'Please note that captured geese will be euthanized, processed and donated to local shelters and ZOB.'

SIGNATURE AND TITLE (APHIS Representative), ADDRESS (P.O. Box 130 Massey, VA), and DATE (7/10/11 and 7/8/11).

Henrico Co Master Agreement

UNITED STATES DEPARTMENT OF AGRICULTURE ANIMAL AND PLANT HEALTH INSPECTION SERVICE ANIMAL DAMAGE CONTROL

AGREEMENT FOR CONTROL OF ANIMAL DAMAGE ON NON-PRIVATE PROPERTY

Agreement 329039

Date 07/11/10 MM DD YY

TYPE OF AGREEMENT - "/ " ALL THAT APPLY

- 1. Temporary Agreement, 2. Urban Agreement, 3. Continuation Form, 4. Amendment of an Existing Agreement, 5. Addendum on File, 6. Supplement is not Required, 7. Special Considerations in Section 6

SECTION 1: Name, Address, Common Name, Telephone Number. Includes handwritten 'Richmond VA 23238' and redacted '(b) (6)'.

SECTION 2: A. ADC Employee Name (David Allaba), ADC Code (329), State (57), County (Henrico). B. Land Class table with 1st class marked '1'. C. Adjoining Properties (crossed out). D. Species table with 'Canada' and 'goose' listed.

SECTION 3: Control methods table. Includes handwritten 'hand capture' and 'Loral trap' with corresponding codes.

SECTION 4: Acknowledgment of control methods and hazards.

SECTION 5: Agreement to take precautions and use of toxic materials.

SECTION 6: Special Considerations: 'Please note that captured geese will be euthanized, processed and donated to local shelters and zoos.'

SIGNATURE AND TITLE: Cooperator's Representative (redacted) and APHIS Representative (Duffell, District Supervisor, P.O. Box 130, Mosely, VA). DATE: 7/10/11 and 7/8/11.

Henrico Co Master Agreement

UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE
ANIMAL DAMAGE CONTROL

Agreement **329039**

AGREEMENT FOR CONTROL OF ANIMAL DAMAGE
ON NON-PRIVATE PROPERTY

Date **07/10/11**
MM DD YY

TYPE OF AGREEMENT - "X" ALL THAT APPLY

- 1. Temporary Agreement
- 2. Urban Agreement
- 3. Continuation Form
- 4. Amendment of an Existing Agreement
- 5. Addendum on File
- 6. Supplement is not Required
- 7. Special Considerations in Section 6

PLEASE PRINT CLEARLY

X Name: (b) (6)

X Address: (b) (6) Street, Richmond VA, City/State/Zip Code: 23238

Common Name: _____

Responsible Party Name: _____

Area Code: _____ Telephone Number: _____

SECTION 2

A. ADC Employee Name, ADC Code, State Code, and County Code

David Allaben
ADC Employee Name
ADC Code: **329**
ADC Employee Name: _____
ADC Code: **329**
State: **51**
County: **Henrico**

B. List each Land Class with its Corresponding Acreage

LAND CLASS	ACRES
1st	1
2nd	
3rd	
4th	
Total Acreage Protected	

C. If this is an Adjoining Property Agreement, List the Properties Protected

D. List all Species to be Targeted During Damage Control Activities

SPECIES	CR.
Canada	
goose	

SECTION 3

In consideration of the benefits to be derived from the proper control of damage caused by those species listed in Section 2(D) of the agreement, I the undersigned authorized representative of the above listed cooperator, do hereby give my consent, and concurrence, to the Animal and Plant Health Inspection Service (APHIS), (to include its officials, employees, and agents) to use, upon lands owned, leased, or otherwise controlled by the cooperator I represent, and identified by this agreement, the following methods and devices:

METHOD	CODE	METHOD	CODE	METHOD	CODE	METHOD	CODE
hand capture							
cosual trap							

SECTION 4

I, as representative of the cooperator, have been informed of the methods and the manner in which the control materials and devices listed in Section 3 will be used, and of the possible hazards associated with their use. I understand that APHIS, again to include its officers, employees, and agents will exercise reasonable precautions to safeguard all persons and to prevent injury to animal life other than those listed in Section 2(D) above; guard against the mishandling of control devices and materials; and exercise due caution and proper judgment in all control operations.

SECTION 5

In consideration of these understandings and of the benefits to be derived, the cooperator that I represent, agrees to take reasonable precautions to prevent injury to livestock and other domestic animals; assume responsibility for injury to property owned by the cooperator or under the cooperator's control, when said injury is not the result of negligence on the part of APHIS; assist in maintaining such warning signs as APHIS may place out for the purpose of notifying persons entering onto such lands of the possible hazards associated with animal control measures in use thereon; and to give adequate warning to persons authorized by the cooperator to enter onto such lands, of these possible hazards.

In recognition of the benefits to be derived from the use of the specified methods and devices authorized by this agreement, the cooperator that I represent agrees not to concurrently use or allow to be used upon lands covered by this agreement, any toxic material that might reasonably be expected to take a species listed in the above Section 2(D) unless such use of said toxicant is agreed to by APHIS in writing.

This agreement may be revoked by either party by a 30-day written notice.

SECTION 6

Special Considerations:
Please note that captured geese will be euthanized, processed and donated to local shelters and zoos.

SIGNATURE AND TITLE (Cooperator's Representative) X (b) (6)	ADDRESS	DATE 7/10/11
SIGNATURE AND TITLE (APHIS Representative) Duffek District Supervisor	ADDRESS P.O. Box 130 Massey, VA	DATE 7/18/11

07/08/2011 13:09

8047397738

USDA APHIS WS VA

PAGE 02/02

Henrico Co Master Agreement

UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE
ANIMAL DAMAGE CONTROL

Agreement **329039**

AGREEMENT FOR CONTROL OF ANIMAL DAMAGE
ON NON-PRIVATE PROPERTY

Date **07/09/11**
MM DD YY

TYPE OF AGREEMENT - "/ ALL THAT APPLY

- 1. Temporary Agreement
- 2. Urban Agreement

- 3. Continuation Form
- 4. Amendment of an Existing Agreement

- 5. Addendum on File
- 6. Supplement (not Required)
- 7. Special Consideration in Section 6

PLEASE PRINT CLEARLY

SECTION 1

Cooperator's Name: **(b) (6)**

Cooperator's Address: **(b) (6)** Strip: **(b) (6)** City/State/Zip Code: **Rich, VA 23238**

Common Name: _____

Representative's Name: **(b) (6)** Area Code: **(b) (6)** Telephone Number: **(b) (6)**

Does not belong to HOA

SECTION 2

A. ADC Employee Name, ADC Code, State Code, and County Code

David Allaber
ADC Employee Name
ADC Code: **328**
ADC Employee Name: _____
ADC Code: **328**
State: **51**
County: **Henrico**

B. List each Land Class with its Corresponding Acreage

LAND CLASS	ACRES
1st	1
2nd	
3rd	
4th	
Total Acreage Protected	

C. If this is an Adjoining Property Agreement, List the Properties Protected

D. List all Species to be Targeted During Damage Control Activities

SPECIES	CC	F
Canada		
geese		

SECTION 3

In consideration of the benefits to be derived from the proper control of damage caused by those species listed in Section 2(D) of the agreement, I the undersigned authorized representative of the above listed cooperator, do hereby give my consent, and concurrence, to the Animal and Plant Health Inspection Service (APHIS), (to include its officials, employees, and agents) to use, upon lands owned, leased, or otherwise controlled by the cooperator I represent, and identified by this agreement, the following methods and devices:

METHOD	CODE	METHOD	CODE	METHOD	CODE	METHOD	CODE
honey capture							
conal trap							

SECTION 4

I, as representative of the cooperator, have been informed of the methods and the manner in which the control materials and devices listed in Section 3 will be used, and of the possible hazards associated with their use. I understand that APHIS, again to include its officials, employees, and agents will: exercise reasonable precautions to safeguard all persons and to prevent injury to animal life other than those listed in Section 2(D) above; guard against the mishandling of control devices and materials; and exercise due caution and proper judgment in all control operations.

SECTION 5

In consideration of these understandings and of the benefits to be derived, the cooperator that I represent, agrees to: take reasonable precautions to prevent injury to livestock and other domestic animals; assume responsibility for injury to property owned by the cooperator or under the cooperator's control, when said injury is not the result of negligence on the part of APHIS; assist in maintaining such warning signs as APHIS may place out for the purpose of notifying persons entering onto such lands of the possible hazards associated with animal control measures in use thereon; and to give adequate warning to persons authorized by the cooperator to enter onto such lands, of these possible hazards.

In recognition of the benefits to be derived from the use of the specified methods and devices authorized by this agreement, the cooperator that I represent agrees not to concurrently use or allow to be used upon lands covered by this agreement, any toxic material that might reasonably be expected to take a species listed in the above Section 2(D) unless such use of said material is agreed to by APHIS in writing.

This agreement may be revoked by either party by a 30-day written notice.

SECTION 6

Special Considerations:
Please note that captured geese will be euthanized, processed and donated to local shelters and zoos.

SIGNATURE AND TITLE (Cooperator's Representative): **(b) (6)** ADDRESS: _____ DATE: _____

SIGNATURE AND TITLE (APHIS Representative): **Duffin District Supervisor** ADDRESS: **P.O. Box 130 Mosley, VA 22170** DATE: **7/8/11**

Henrico Co Master Agreement

UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE
ANIMAL DAMAGE CONTROL

AGREEMENT FOR CONTROL OF ANIMAL DAMAGE
ON NON-PRIVATE PROPERTY

Agreement **329039**

Date **07/10/11**
MM DD YY

TYPE OF AGREEMENT - "X" ALL THAT APPLY

- 1. Temporary Agreement
- 2. Urban Agreement
- 3. Continuation Form
- 4. Amendment of an Existing Agreement
- 5. Addendum on File
- 6. Supplement is not Required
- 7. Special Consideration in Section 6

PRINT CLEARLY

SECTION 1

Name: **(b) (6)**

Address: **(b) (6)** Street **Richmond Va 23238** City/State/Zip Code

Common Name: _____

Responsible Name: **(b) (6)** Area Code Telephone Number

SECTION 2

A. ADC Employee Name, ADC Code, State Code, and County Code

David Allaby
ADC Employee Name
ADC Code **329**
ADC Employee Name
ADC Code **329**
State **51**
County **Henrico**

B. List each Land Class with its Corresponding Acreage

LAND CLASS	ACRES
1st	1
2nd	
3rd	
4th	
Total Acreage Protected	

C. If this is an Adjoining Property Agreement, List the Properties Protected

~~_____~~

D. List all Species to be Targeted During Damage Control Activities

SPECIES	CC
Canada	
geese	

SECTION 3

In consideration of the benefits to be derived from the proper control of damage caused by those species listed in Section 2(D) of the agreement, I the undersigned authorized representative of the above listed cooperator, do hereby give my consent, and concurrence, to the Animal and Plant Health Inspection Service (APHIS), (to include its officials, employees, and agents) to use, upon lands owned, leased, or otherwise controlled by the cooperator I represent, and identified by this agreement, the following methods and devices:

METHOD	CODE	METHOD	CODE	METHOD	CODE	METHOD	CODE
honey capture							
conical trap							

SECTION 4

I, as representative of the cooperator, have been informed of the methods and the manner in which the control materials and devices listed in Section 3 will be used, and of the possible hazards associated with their use. I understand that APHIS, again to include its officers, employees, and agents will exercise reasonable precautions to safeguard all persons and to prevent injury to animal life other than those listed in Section 2(D) above; guard against the mishandling of control devices and materials; and exercise due caution and proper judgment in all control operations.

SECTION 5

In consideration of these understandings and of the benefits to be derived, the cooperator that I represent, agrees to: take reasonable precautions to prevent injury to livestock and other domestic animals; assume responsibility for injury to property owned by the cooperator or under the cooperator's control, when said injury is not the result of negligence on the part of APHIS; assist in maintaining such warning signs as APHIS may place out for the purpose of notifying persons entering onto such lands of the possible hazards associated with animal control measures in use thereon; and to give adequate warning to persons authorized by the cooperator to enter onto such lands, of these possible hazards.

In recognition of the benefits to be derived from the use of the specified methods and devices authorized by this agreement, the cooperator that I represent agrees not to concurrently use or allow to be used upon lands covered by this agreement, any toxic material that might reasonably be expected to take a species listed in the above Section 2(D) unless such use of said toxicant is agreed to by APHIS in writing.

This agreement may be revoked by either party by a 30-day written notice.

SECTION 6

Special Considerations:
Please note that captured geese will be euthanized, processed and donated to local shelters and zoos.

(b) (6) SIGNATURE AND TITLE (APHIS Representative) **Rich Va 23238 7/19/11** DATE

3E District Supervisor P.O. Box 130 Moseley, VA 7/18/11 ADDRESS DATE

Henrico Co Master Agreement

UNITED STATES DEPARTMENT OF AGRICULTURE ANIMAL AND PLANT HEALTH INSPECTION SERVICE ANIMAL DAMAGE CONTROL

AGREEMENT FOR CONTROL OF ANIMAL DAMAGE ON NON-PRIVATE PROPERTY

Agreement 329039

Date 07/10/11 MM DD YY

TYPE OF AGREEMENT - "/> ALL THAT APPLY

- 1. Temporary Agreement, 2. Urban Agreement, 3. Continuation Form, 4. Amendment of an Existing Agreement, 5. Addendum on File, 6. Supplement is not Required, 7. Special Consideration in Section 6

SECTION 1: Name, Address, Common Name, Representative Name. Includes redacted areas (b)(6).

SECTION 2: A. ADC Employee Name (David Allaby), B. Land Class and Acres table, C. Adjoining Property, D. Species to be Targeted (Canada, geese).

SECTION 3: Methods and devices table including 'hand capture' and 'cove trap'.

SECTION 4: I, as representative of the cooperator, have been informed of the methods and the manner in which the control materials and devices listed in Section 3 will be used...

SECTION 5: In consideration of these understandings and of the benefits to be derived, the cooperator that I represent, agrees to take reasonable precautions to prevent injury to livestock and other domestic animals...

SECTION 6: Special Considerations: Please note that captured geese will be euthanized, processed and donated to local shelters and zoos.

Signature and Title (APHIS Representative), Address, Date (7/10/11 and 7/8/11).

Henrico Co Master Agreement

UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE
ANIMAL DAMAGE CONTROL

Agreement **329039**

AGREEMENT FOR CONTROL OF ANIMAL DAMAGE
ON NON-PRIVATE PROPERTY

Date **07/10/11**
MM DD YY

TYPE OF AGREEMENT - "/> ALL THAT APPLY

- 1. Temporary Agreement
- 2. Urban Agreement
- 3. Continuation Form
- 4. Amendment of an Existing Agreement
- 5. Addendum on File
- 6. Supplement is not Required
- 7. Special Considerations in Section 6

SECTION 1

Name **(b) (6)**

Address **(b) (6)**

Street _____ City/State/Zip Code _____

Common Name Richmond, VA, 23238

Representative Name **(b) (6)**

SECTION 2

A. ADC Employee Name, ADC Code, State Code, and County Code

David Allaben
ADC Employee Name
ADC Code **329**
ADC Employee Name
ADC Code **329**
State **57**
County _____
Henrico

B. List each Land Class with its Corresponding Acreage

LAND CLASS	ACRES
1st	_____ _____
2nd	_____ _____
3rd	_____ _____
4th	_____ _____
Total Acreage Protected	_____ _____

C. If this is an Adjoining Property Agreement, List the Properties Protected

~~_____ | _____
_____ | _____
_____ | _____
_____ | _____
_____ | _____~~

D. List all Species to be Targeted During Damage Control Activities

SPECIES	C.
<u>Canada</u>	_____ _____
<u>goose</u>	_____ _____
_____	_____ _____
_____	_____ _____

SECTION 3

In consideration of the benefits to be derived from the proper control of damage caused by those species listed in Section 2(D) of the agreement, I the undersigned authorized representative of the above listed cooperator, do hereby give my consent, and concurrence, to the Animal and Plant Health Inspection Service (APHIS), (to include its officials, employees, and agents) to use, upon lands owned, leased, or otherwise controlled by the cooperator I represent, and identified by this agreement, the following methods and devices:

METHOD	CODE	METHOD	CODE	METHOD	CODE	METHOD	CODE
<u>hand capture</u>	_____ _____	_____	_____ _____	_____	_____ _____	_____	_____ _____
<u>lure trap</u>	_____ _____	_____	_____ _____	_____	_____ _____	_____	_____ _____

SECTION 4

I, as representative of the cooperator, have been informed of the methods and the manner in which the control materials and devices listed in Section 3 will be used, and of the possible hazards associated with their use. I understand that APHIS, again to include its officials, employees, and agents will exercise reasonable precautions to safeguard all persons and to prevent injury to animal life other than those listed in Section 2(D) above; guard against the mishandling of control devices and materials; and exercise due caution and proper judgment in all control operations.

SECTION 5

In consideration of these understandings and of the benefits to be derived, the cooperator that I represent, agrees to: take reasonable precautions to prevent injury to livestock and other domestic animals; assume responsibility for injury to property owned by the cooperator or under the cooperator's control, when said injury is not the result of negligence on the part of APHIS; assist in maintaining such warning signs as APHIS may place out for the purpose of notifying persons entering onto such lands of the possible hazards associated with animal control measures in use thereon; and to give adequate warning to persons authorized by the cooperator to enter onto such lands, of these possible hazards.

In recognition of the benefits to be derived from the use of the specified methods and devices authorized by this agreement, the cooperator that I represent agrees not to concurrently use or allow to be used upon lands covered by this agreement, any toxic material that might reasonably be expected to take a species listed in the above Section 2(D) unless such use of said toxicant is agreed to by APHIS in writing.

This agreement may be revoked by either party by a 30-day written notice.

SECTION 6

Special Considerations:
Please note that captured geese will be euthanized, processed and donated to local shelters and zoos.

(b) (6)

SIGNATURE AND TITLE (APHIS Representative) _____ ADDRESS _____ DATE 7/10/11

_____ District Supervisor P.O. Box 130 Mosely, VA DATE 7/8/11

Henrico Co Master Agreement

UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE
ANIMAL DAMAGE CONTROL

Agreement: **329039**

AGREEMENT FOR CONTROL OF ANIMAL DAMAGE ON NON-PRIVATE PROPERTY

Date: **07/09/11**
MM DD YY

TYPE OF AGREEMENT - "/> ALL THAT APPLY

- 1. Temporary Agreement
- 2. Urban Agreement

- 3. Continuation Form
- 4. Amendment of an Existing Agreement

- 5. Addendum on File
- 6. Supplement is not Required
- 7. Special Considerations in Section 6

SECTION 1

Cooperator's Name: **(b) (6)**

Cooperator's Address: **(b) (6)**

City/State/Zip Code: **Rich VA 23238**

Common Name: **(b) (6)**

Representative's Name: **Wake Access**

SECTION 2

A. ADG Employee Name, ADG Code, State Code, and County Code

ADC Employee Name: **David Allaben**

ADC Code: **329**

ADC Employee Name: **329**

ADC Code: **51**

State: **51**

County: **Henrico**

B. List each Land Class with its Corresponding Acreage

LAND CLASS	ACRES
1st	1
2nd	
3rd	
4th	
Total Acreage Protected	

C. If this is an Adjoining Property Agreement, List the Properties Protected

D. List all Species to be Targeted During Damage Control Activities

SPECIES	CODE
Canada	
goose	

SECTION 3

In consideration of the benefits to be derived from the proper control of damage caused by those species listed in Section 2(D) of the agreement, I the undersigned authorized representative of the above listed cooperator, do hereby give my consent, and concurrence, to the Animal and Plant Health Inspection Service (APHIS), (to include its officials, employees, and agents) to use, upon lands owned, leased, or otherwise controlled by the cooperator I represent, and identified by this agreement, the following methods and devices:

METHOD	CODE	METHOD	CODE	METHOD	CODE	METHOD	CODE
hand capture							
lure trap							

SECTION 4

I, as representative of the cooperator, have been informed of the methods and the manner in which the control materials and devices listed in Section 3 will be used, and of the possible hazards associated with their use. I understand that APHIS, again to include its officials, employees, and agents will exercise reasonable precautions to safeguard all persons and to prevent injury to animal life other than those listed in Section 2(D) above; guard against the mishandling of control devices and materials; and exercise due caution and proper judgment in all control operations.

SECTION 5

In consideration of these understandings and of the benefits to be derived, the cooperator that I represent, agrees to: take reasonable precautions to prevent injury to livestock and other domestic animals; assume responsibility for injury to property owned by the cooperator or under the cooperator's control, when said injury is not the result of negligence on the part of APHIS; assist in maintaining such warning signs as APHIS may place out for the purpose of notifying persons entering onto such lands of the possible hazards associated with animal control measures in use thereon; and to give adequate warning to persons authorized by the cooperator to enter onto such lands, of these possible hazards.

In recognition of the benefits to be derived from the use of the specified methods and devices authorized by this agreement, the cooperator that I represent agrees not to concurrently use or allow to be used upon lands covered by this agreement, any toxic material that might reasonably be expected to take a species listed in the above Section 2(D) unless such use of said toxicant is agreed to by APHIS in writing.

This agreement may be revoked by either party by a 30-day written notice.

SECTION 6

Special Considerations:
Please note that captured geese will be euthanized, processed and donated to local shelters and zoos.

(b) (6)

ADDRESS: **(b) (6)** DATE: **7-9-11**

SIGNATURE AND TITLE (APHIS Representative): **Wake Access** ADDRESS: **P.O. Box 130 Moseley, VA** DATE: **7/8/11**

07/08/2011 13:09

8047397738

USDA APHIS WS VA

PAGE 02/02

Henrico Co Master Agreement

UNITED STATES DEPARTMENT OF AGRICULTURE ANIMAL AND PLANT HEALTH INSPECTION SERVICE ANIMAL DAMAGE CONTROL

Agreement 329039

AGREEMENT FOR CONTROL OF ANIMAL DAMAGE ON NON-PRIVATE PROPERTY

Date 07 09 11 MM DD YY

TYPE OF AGREEMENT - "/> ALL THAT APPLY

- 1. Temporary Agreement
2. Urban Agreement

3. Continuation Form

- 5. Addendum on File
6. Supplement is not Required

SECTION 1: Cooperator's Name, Address, Common Name, Representative's Name. Includes redacted areas (b)(6) and handwritten address 'Rockmond VA 23138'.

SECTION 2: A. ADC Employee Name, ADC Code, State Code, and County Code (David Allaben, 329, Henrico). B. List each Land Class with its Corresponding Acreage. C. List the Properties Protected. D. List all Species to be Targeted During Damage Control Activities (Canada, geese).

SECTION 3: In consideration of the benefits to be derived from the proper control of damage caused by those species listed in Section 2(D) of the agreement, I the undersigned authorized representative of the above listed cooperator, do hereby give my consent, and concurrence, to the Animal and Plant Health Inspection Service (APHIS)...

SECTION 4: I, as representative of the cooperator, have been informed of the methods and the manner in which the control materials and devices listed in Section 3 will be used, and of the possible hazards associated with their use.

SECTION 5: In consideration of these understandings and of the benefits to be derived, the cooperator that I represent, agrees to take reasonable precautions to prevent injury to livestock and other domestic animals...

SECTION 6: In recognition of the benefits to be derived from the use of the specified methods and devices authorized by this agreement, the cooperator that I represent agrees not to concurrently use or allow to be used upon lands covered by this agreement, any toxic material that might reasonably be expected to take a species listed in the above Section 2(D) unless such use of said toxicant is agreed to by APHIS in writing.

This agreement may be revoked by either party by a 30-day written notice. Special Considerations: Please note that captured geese will be euthanized, processed and donated to local shelters and zoos.

(b) (6)

SIGNATURE AND TITLE (APHIS Representative), ADDRESS (P.O. Box 130 Mosley, VA), DATE (7/9/11)

<-Bail out of this form and go back to the previous menu

TA Work Task Summary

DAVID ALLABEN in VA on	07/12/2011	<input type="checkbox"/> Edit Work Task	<input type="checkbox"/> Flag? <input type="checkbox"/>
Entry Date:	07/15/2011 <small>New Proj</small>	<input type="checkbox"/> Clone All	
Civil Agreement:	HENRICO COUNTY	<input type="checkbox"/> Clone All for Different Agr	
Property:	HENRICO COUNTY:VA:08700	<input type="checkbox"/> Clone Same Agr/Conflict	
Activity:	PERF CONSULTATION, WRITTEN/TELEPHONE		
Measurement:	15 Mins, 1 Participant		
Conflict & Loss:	GEESE, CANADA DAMAGE THREAT to TURF AND/OR FLOWERS GEESE, CANADA DAMAGE THREAT to RECREATIONAL AREAS (OTHER) ** GEESE, CANADA DAMAGE THREAT to PROPERTY (GENERAL) GEESE, CANADA DAMAGE THREAT to HLTH/SFTY, HUMAN Z-(GENERAL) GEESE, CANADA DAMAGE THREAT to BUILDINGS, RESIDENTIAL		
Recommendations & Cooperator Employed:	Recommended: CHEMICAL APPLICATION Recommended: ELIMINATE WILDLIFE FEEDING Recommended: EXCLUSION/FENCING Recommended: HARASSMENT/HAZING Recommended: HARVEST, LEGAL Recommended: NEST, EGG DESTRUCTION/REMOVAL Recommended: SHOOTING Recommended: TRAP AND EUTHANIZE		
Referral Data:			
Permit Actions:			

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TA Work Task Summary

DAVID ALLABEN in VA on	07/12/2011	Edit Work Task	Flag? <input type="checkbox"/>
Entry Date:	07/15/2011 <small>New Proj</small>	Clone All	
Civil Agreement:	HENRICO COUNTY	Clone All for Different Agr	
Property:	HENRICO COUNTY:VA:08700	Clone Same Agr/Conflict	
Activity:	PERF CONSULTATION,WRITTEN/TELEPHONE		
Measurement:	15 Mins, 1 Participant		
Conflict & Loss:	GEESE, CANADA DAMAGE THREAT to TURF AND/OR FLOWERS GEESE, CANADA DAMAGE THREAT to RECREATIONAL AREAS (OTHER) ** GEESE, CANADA DAMAGE THREAT to PROPERTY (GENERAL) GEESE, CANADA DAMAGE THREAT to HLTH/SFTY, HUMAN Z-(GENERAL) GEESE, CANADA DAMAGE THREAT to BUILDINGS, RESIDENTIAL		
Recommendations & Cooperator Employed:	Recommended: CHEMICAL APPLICATION Recommended: ELIMINATE WILDLIFE FEEDING Recommended: EXCLUSION/FENCING Recommended: HARASSMENT/HAZING Recommended: HARVEST, LEGAL Recommended: NEST, EGG DESTRUCTION/REMOVAL Recommended: SHOOTING Recommended: TRAP AND EUTHANIZE		
Referral Data:			
Permit Actions:			

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- [Assign This Work Task To Another Employee...](#)

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TA Work Task Summary

DAVID ALLABEN in VA on	07/12/2011	Edit Work Task	Flag? <input type="checkbox"/>
Entry Date:	07/15/2011 <small>New Proj</small>	Clone All	
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Property:	HENRICO COUNTY:VA:08700	Clone Same Agr/Conflict	
Activity:	PERF CONSULTATION,WRITTEN/TELEPHONE		
Measurement:	15 Mins, 1 Participant		
Conflict & Loss:	GEESE, CANADA DAMAGE THREAT to BUILDINGS, RESIDENTIAL GEESE, CANADA DAMAGE THREAT to HLTH/SFTY, HUMAN Z-(GENERAL) GEESE, CANADA DAMAGE THREAT to PROPERTY (GENERAL) GEESE, CANADA DAMAGE THREAT to RECREATIONAL AREAS (OTHER) ** GEESE, CANADA DAMAGE THREAT to TURF AND/OR FLOWERS		
Recommendations & Cooperator Employed:	Recommended: CHEMICAL APPLICATION Recommended: ELIMINATE WILDLIFE FEEDING Recommended: EXCLUSION/FENCING Recommended: HARASSMENT/HAZING Recommended: HARVEST, LEGAL Recommended: NEST, EGG DESTRUCTION/REMOVAL Recommended: SHOOTING Recommended: TRAP AND EUTHANIZE		
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TA Work Task Summary

DAVID ALLABEN in VA on	07/12/2011	Edit Work Task	Flag? ▾
Entry Date:	07/15/2011 <small>New Proj</small>	Clone All	
Civil Agreement:	HENRICO COUNTY	Clone All for Different Agr	
Property:	HENRICO COUNTY:VA:08700	Clone Same Agr/Conflict	
Activity:	PERF CONSULTATION, WRITTEN/TELEPHONE		
Measurement:	15 Mins, 1 Participant		
Conflict & Loss:	GEESE, CANADA DAMAGE THREAT to TURF AND/OR FLOWERS GEESE, CANADA DAMAGE THREAT to RECREATIONAL AREAS (OTHER) ** GEESE, CANADA DAMAGE THREAT to PROPERTY (GENERAL) GEESE, CANADA DAMAGE THREAT to HLTH/SFTY, HUMAN Z-(GENERAL) GEESE, CANADA DAMAGE THREAT to BUILDINGS, RESIDENTIAL		
Recommendations & Cooperator Employed:	Recommended: CHEMICAL APPLICATION Recommended: ELIMINATE WILDLIFE FEEDING Recommended: EXCLUSION/FENCING Recommended: HARASSMENT/HAZING Recommended: HARVEST, LEGAL Recommended: NEST, EGG DESTRUCTION/REMOVAL Recommended: SHOOTING Recommended: TRAP AND EUTHANIZE		
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TA Work Task Summary

DAVID ALLABEN in VA on	07/12/2011	<input type="button" value="Edit Work Task"/> <input type="checkbox"/> Flag? <input type="checkbox"/>
Entry Date:	07/15/2011 <small>New Proj</small>	<input type="button" value="Clone All"/>
Civil Agreement:	HENRICO COUNTY	<input type="button" value="Clone All for Different Agr"/>
Property:	HENRICO COUNTY:VA:08700	<input type="button" value="Clone Same Agr/Conflict"/>
Activity:	PERF CONSULTATION, WRITTEN/TELEPHONE	
Measurement:	15 Mins, 1 Participant	
Conflict & Loss:	SWANS, MUTE DAMAGE THREAT to HLTH/SFTY, HUMAN Z-(GENERAL) GEESE, CANADA DAMAGE THREAT to BUILDINGS, RESIDENTIAL GEESE, CANADA DAMAGE THREAT to HLTH/SFTY, HUMAN Z-(GENERAL) GEESE, CANADA DAMAGE THREAT to PROPERTY (GENERAL) GEESE, CANADA DAMAGE THREAT to RECREATIONAL AREAS (OTHER) ** GEESE, CANADA DAMAGE THREAT to TURF AND/OR FLOWERS	
Recommendations & Cooperator Employed:	Recommended: CHEMICAL APPLICATION Recommended: ELIMINATE WILDLIFE FEEDING Recommended: EXCLUSION/FENCING Recommended: HARASSMENT/HAZING Recommended: HARVEST, LEGAL Recommended: NEST, EGG DESTRUCTION/REMOVAL Recommended: SHOOTING Recommended: TRAP AND EUTHANIZE	
Referral Data:		
Permit Actions:		

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TA Work Task Summary

DAVID ALLABEN in VA on	07/12/2011	Edit Work Task	Flag? <input type="checkbox"/>
Entry Date:	07/15/2011 <small>New Proj</small>	Clone All	
Civil Agreement:	HENRICO COUNTY	Clone All for Different Agr	
Property:	HENRICO COUNTY:VA:08700	Clone Same Agr/Conflict	
Activity:	PERF CONSULTATION,WRITTEN/TELEPHONE		
Measurement:	15 Mins, 1 Participant		
Conflict & Loss:	GEESE, CANADA DAMAGE THREAT to TURF AND/OR FLOWERS GEESE, CANADA DAMAGE THREAT to RECREATIONAL AREAS (OTHER) ** GEESE, CANADA DAMAGE THREAT to PROPERTY (GENERAL) GEESE, CANADA DAMAGE THREAT to HLTH/SFTY, HUMAN Z-(GENERAL) GEESE, CANADA DAMAGE THREAT to BUILDINGS, RESIDENTIAL SWANS, MUTE DAMAGE THREAT to HLTH/SFTY, HUMAN Z-(GENERAL)		
Recommendations & Cooperator Employed:	Recommended: CHEMICAL APPLICATION Recommended: ELIMINATE WILDLIFE FEEDING Recommended: EXCLUSION/FENCING Recommended: HARASSMENT/HAZING Recommended: HARVEST, LEGAL Recommended: NEST, EGG DESTRUCTION/REMOVAL Recommended: SHOOTING Recommended: TRAP AND EUTHANIZE		
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Permit Actions:			

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Entry Date:	07/15/2011 <small>New Proj</small>	Clone All	
Civil Agreement:	HENRICO COUNTY	Clone All for Different Agr	
Property:	HENRICO COUNTY:VA:08700	Clone Same Agr/Conflict	
Activity:	PERF CONSULTATION,WRITTEN/TELEPHONE		
Measurement:	15 Mins, 1 Participant		
Conflict & Loss:	GEESE, CANADA DAMAGE THREAT to BUILDINGS, RESIDENTIAL GEESE, CANADA DAMAGE THREAT to HLTH/SFTY, HUMAN Z-(GENERAL) GEESE, CANADA DAMAGE THREAT to PROPERTY (GENERAL) GEESE, CANADA DAMAGE THREAT to RECREATIONAL AREAS (OTHER) ** GEESE, CANADA DAMAGE THREAT to TURF AND/OR FLOWERS		
Recommendations & Cooperator Employed:	Recommended: CHEMICAL APPLICATION Recommended: ELIMINATE WILDLIFE FEEDING Recommended: EXCLUSION/FENCING Recommended: HARASSMENT/HAZING Recommended: HARVEST, LEGAL Recommended: NEST, EGG DESTRUCTION/REMOVAL Recommended: SHOOTING Recommended: TRAP AND EUTHANIZE		
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Permit Actions:			

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TA Work Task Summary

GRAFTON CROMWELL in VA on	07/08/2011	Edit Work Task Flag? <input type="checkbox"/>
Entry Date:	07/08/2011 <small>New Proj</small>	Clone All
Civil Agreement:	HENRICO COUNTY	Clone All for Different Agr
Property:	HENRICO COUNTY:VA:08700	Clone Same Agr/Conflict
Activity:	PERF SITE VISIT	
Measurement:	1 Hr , 3 Participants	
Remarks:	canterbury lake association & (b)(6) round up site visit	
Conflict & Loss:	GEESE, CANADA DAMAGE THREAT to PROPERTY (GENERAL) -> Verified DROPPINGS losses to 1 IN valued at \$0	
Recommendations & Cooperator Employed:	Recommended: HARASSMENT/HAZING Recommended: NEST, EGG DESTRUCTION/REMOVAL Recommended: TRAP AND EUTHANIZE Cooperator Tried: EXCLUSION/FENCING Cooperator Tried: HARASSMENT/HAZING Cooperator Tried: NEST, EGG DESTRUCTION/REMOVAL	
Referral Data:		
Permit Actions:		

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TA Work Task Summary

SCOTT BARRAS in VA on	07/11/2011	Edit Work Task	Flag? <input type="checkbox"/>
Entry Date:	07/18/2011 <small>New Proj</small>	Clone All	
Private Agreement:	HENRICO COUNTY	Clone All for Different Agr	
Property:	HENRICO COUNTY MASTER AGREEMENT	Clone Same Agr/Conflict	
Activity:	PERF RADIO/TV APPEARANCE		
Measurement:	30 Mins, 1 Participant		
Remarks:	Interview on NBC12 WWBT regarding geese at Canterbury Lake.		
Conflict & Loss:	GEESE, CANADA DAMAGE THREAT to HLTH/SFTY, HUMAN Z-(GENERAL) GEESE, CANADA DAMAGE THREAT to TURF AND/OR FLOWERS		
Recommendations & Cooperator Employed:	Recommended: ELIMINATE WILDLIFE FEEDING Recommended: EXCLUSION/FENCING Recommended: HARASSMENT/HAZING Recommended: INSTRUCTIONAL SESSION Recommended: NEST, EGG DESTRUCTION/REMOVAL Recommended: TRAP AND EUTHANIZE Cooperator Tried: EXCLUSION/FENCING Cooperator Tried: HARASSMENT/HAZING		
Referral Data:			
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TA Work Task Summary

SCOTT BARRAS in VA on	07/11/2011	Edit Work Task	Flag? <input type="checkbox"/>
Entry Date:	07/18/2011 <small>New Proj</small>	Clone All	
Private Agreement:	HENRICO COUNTY	Clone All for Different Agr	
Property:	HENRICO COUNTY MASTER AGREEMENT	Clone Same Agr/Conflict	
Activity:	PERF CONSULTATION,WRITTEN/TELEPHONE		
Measurement:	30 Mins, 1 Participant		
Remarks:	Patty Whitaker from NYC called to discuss goose roundups in NY and Virginia.		
Conflict & Loss:	GEESE, CANADA DAMAGE THREAT to HLTH/SFTY, HUMAN Z-(GENERAL) GEESE, CANADA DAMAGE THREAT to TURF AND/OR FLOWERS		
Recommendations & Cooperator Employed:	Recommended: ELIMINATE WILDLIFE FEEDING Recommended: EXCLUSION/FENCING Recommended: HARASSMENT/HAZING Recommended: INSTRUCTIONAL SESSION Recommended: NEST, EGG DESTRUCTION/REMOVAL Recommended: TRAP AND EUTHANIZE Cooperator Tried: EXCLUSION/FENCING Cooperator Tried: HARASSMENT/HAZING		
Referral Data:			
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TA Work Task Summary

SCOTT BARRAS in VA on	07/11/2011	Edit Work Task	Flag? <input type="checkbox"/>
Entry Date:	07/18/2011 <small>New Proj</small>	Clone All	
Private Agreement:	HENRICO COUNTY	Clone All for Different Agr	
Property:	HENRICO COUNTY MASTER AGREEMENT	Clone Same Agr/Conflict	
Activity:	PERF NEWSPAPER/PERIODICAL ARTICLE		
Measurement:	10 Mins, 1 Participant		
Remarks:	Interview with Richmond Times-Dispatch regarding geese at Canterbury Lake.		
Conflict & Loss:	GEESE, CANADA DAMAGE THREAT to TURF AND/OR FLOWERS GEESE, CANADA DAMAGE THREAT to HLTH/SFTY, HUMAN Z-(GENERAL)		
Recommendations & Cooperator Employed:	Recommended: ELIMINATE WILDLIFE FEEDING Recommended: EXCLUSION/FENCING Recommended: HARASSMENT/HAZING Recommended: INSTRUCTIONAL SESSION Recommended: NEST, EGG DESTRUCTION/REMOVAL Recommended: TRAP AND EUTHANIZE Cooperator Tried: EXCLUSION/FENCING Cooperator Tried: HARASSMENT/HAZING		
Referral Data:			
Permit Actions:			

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TA Work Task Summary

SCOTT BARRAS in VA on	07/12/2011	Edit Work Task Flag? <input type="checkbox"/>
Entry Date:	07/18/2011 <small>New Proj</small>	Clone All
Private Agreement:	HENRICO COUNTY	Clone All for Different Agr
Property:	HENRICO COUNTY MASTER AGREEMENT	Clone Same Agr/Conflict
Activity:	Clone Same Agr/Date/Conflict	
Measurement:	PERF CONSULTATION, WRITTEN/TELEPHONE	
Remarks:	30 Mins, 1 Participant	
Conflict & Loss:	Robin Star from Richmond SPCA called to discuss Canterbury Lake goose roundup.	
Recommendations & Cooperator Employed:	Recommended: ELIMINATE WILDLIFE FEEDING Recommended: EXCLUSION/FENCING Recommended: HARASSMENT/HAZING Recommended: INSTRUCTIONAL SESSION Recommended: NEST, EGG DESTRUCTION/REMOVAL Recommended: TRAP AND EUTHANIZE Cooperator Tried: EXCLUSION/FENCING Cooperator Tried: HARASSMENT/HAZING	
Referral Data:		
Permit Actions:		

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TA Work Task Summary

SCOTT BARRAS in VA on	07/14/2011	<input type="button" value="Edit Work Task"/> <input type="checkbox"/> Flag?
Entry Date:	07/18/2011 <small>New Proj</small>	<input type="button" value="Clone All"/>
Civil Agreement:	HENRICO COUNTY	<input type="button" value="Clone All for Different Agr"/>
Property:	HENRICO COUNTY:VA:08700	<input type="button" value="Clone Same Agr/Conflict"/>
Activity:	PERF RADIO/TV APPEARANCE	
Measurement:	20 Mins, 1 Participant	
Remarks:	Answered questions for Kerry Obrien of WRIC Channel 8 regarding geese at Canterbury Lake.	
Conflict & Loss:	GEESE, CANADA DAMAGE THREAT to TURF AND/OR FLOWERS GEESE, CANADA DAMAGE THREAT to HLTH/SFTY, HUMAN Z-(GENERAL)	
Recommendations & Cooperator Employed:	Recommended: ELIMINATE WILDLIFE FEEDING Recommended: EXCLUSION/FENCING Recommended: HARASSMENT/HAZING Recommended: INSTRUCTIONAL SESSION Recommended: NEST, EGG DESTRUCTION/REMOVAL Recommended: TRAP AND EUTHANIZE Cooperator Tried: EXCLUSION/FENCING Cooperator Tried: HARASSMENT/HAZING	
Referral Data:		
Permit Actions:		

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WT Detail Page

WorkTask for: Scott Barras Administrative Edit Clone	
Flag? <input type="checkbox"/>	
Work Date:	07/14/2011 (Entry Date: 07/18/2011)
Agreement:	HENRICO COUNTY
Property:	HENRICO COUNTY MASTER AGREEMENT
Activity:	MISCELLANEOUS DUTIES (PERFORMED)
Activity Measurements:	2 MINUTES
Components & Take:	No Components/Take
Remarks:	(b) (6) left a phone message at 11:30 PM to say she is a Richmond resident and would bring legal action against all parties involved in a Canterbury Lakes goose roundup.
Project:	

[Clone](#)

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[Enter New Admin W/Prop](#)

[Enter New Aerial Task](#)

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Project Assignment: No Current Projects ▼

Now, here you see, it takes all the running you can do, to keep in the same place.
If you want to get somewhere else, you must run at least twice as fast as that!
—Lewis Carroll

06

W E D N E S D A Y

JULY 2011

Thurs before lunch all day Friday

0600-1700

DAILY NOTES

187TH DAY 178 LEFT WEEK 27

Not about Canterbury

Not about Canterbury

1/4 mi. Cannonberry Lake, Heritage Hill WMA - Rainbow Lake



The only immorality is not to do what one has to do when one has to do it.
—Jean Anouilh

16
FRIDAY

JULY 2011

08:50-1700

DAILY NOTES

196TH DAY 169 LEFT WEEK 28

Not about Canterbury

11:30 Left for Canterbury LK for 12/0
geese went into a yard that (b) (6)
Protesters were ready to get in boats to harass geese
when we looked.

1703 (b) (6) - inform me of Shaker Box to disperse
geese, created by a professor to deter sharks
box was worked on arguments to deter geese

RECEIVED JUN 01 2011

WS-ER (11/09)

Agreement No.: 11-7251-8074RA

Accounting Code: 173 7251 102

15768

COOPERATIVE SERVICE AGREEMENT
 between
HENRICO COUNTY, VIRGINIA
 and
UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE (APHIS)
WILDLIFE SERVICES (WS)

ARTICLE 1

The purpose of this Cooperative Service Agreement is to provide wildlife damage management assistance to Henrico County and its citizens, specifically as it applies to managing Canada goose damage and other wildlife damage on County property and eligible private property.

ARTICLE 2

APHIS WS has statutory authority under the Act of March 2, 1931 (46 Stat. 1468; 7 U.S.C.426-426b) as amended, and the Act of December 22, 1987 (101Stat. 1329-331, 7 U.S.C. 426c), to cooperate with States, local jurisdictions, individuals, public and private agencies, organizations, and institutions while conducting a program of wildlife services involving mammal and bird species that are reservoirs for zoonotic diseases, or animal species that are injurious and/or a nuisance to, among other things, agriculture, horticulture, forestry, animal husbandry, wildlife, and human health and safety (the "program").

ARTICLE 3

APHIS-WS and Henrico County mutually agree:

1. The parties' authorized representatives who shall be responsible for carrying out the provisions of this Agreement shall be:

Henrico County: Lt. Shawn Sears
 Henrico County Division of Police, Animal Protection Unit
 10421 Woodman Road, Glen Allen, Virginia 23060

APHIS-WS: State Director, Scott Barras
 USDA, APHIS, WS
 P.O. Box 130
 Moseley, VA 23120

Date 6/9
 Copies to:
 ERO
 ASC
 Mpls
 Files
 Coop
 JS

5/26 0506 rat in ARMS & ACCESS

2. To meet as determined necessary by either party to discuss mutual program interests, accomplishments, needs, technology, and procedures to maintain or amend the Work Plan (Attachment A). Personnel authorized to attend meetings under this Agreement shall be Lt. Shawn Sears or his designee, the State Director or his/her designee, and those additional persons authorized by Lt. Shawn Sears and the State Director.
3. APHIS WS shall perform the services more fully set forth in the Work Plan. The parties may mutually agree in writing, at any time during the term of this Agreement, to amend, modify, add or delete services from the Work Plan.

ARTICLE 4

Henrico County agrees:

1. To authorize APHIS WS to provide technical assistance and educational programs and to conduct direct control activities to reduce human health and safety risks and property damage caused by Canada geese and other wildlife. These activities are defined in the Work Plan.
2. APHIS WS will be considered an invitee on lands controlled by Henrico County. Henrico County will be required to exercise reasonable care to warn APHIS-WS of dangerous conditions or activities in the project areas on County property.
3. To coordinate citizen requests for technical assistance, educational programs, and direct control activities on private property in Henrico County with APHIS USDA as described in the Work Plan.
4. To reimburse APHIS WS for costs of services provided under this Agreement up to but not exceeding the amount specified in the Financial Plan (Attachment B). Henrico County will begin processing for payment invoices submitted by APHIS-WS within 30 days of receipt. Henrico County ensures and certifies that it is not currently debarred or suspended and is free of delinquent Federal debt.
5. To designate to APHIS WS an employee of Henrico County whose responsibilities shall include the coordination and administration of activities conducted under this Agreement.
6. To notify APHIS WS orally or in writing as far in advance as practical of the date and time of any proposed meeting related to the program.
7. APHIS WS shall be responsible for the administration and supervision of the program.

8. All equipment purchased by APHIS for the program is and will remain the property of APHIS WS.
9. To coordinate with APHIS WS before responding to all media requests.

ARTICLE 5

APHIS WS Agrees:

1. To conduct activities in Henrico County as described in the Work Plan and Financial Plan.
2. Designate to Henrico County the authorized APHIS WS individual who shall be responsible for the joint administration of the activities conducted pursuant to this Agreement.
3. To bill Henrico County for actual costs incurred by APHIS WS during the performance of services agreed upon and specified in the Work Plan, including services performed for Henrico County citizens on private property under the circumstances described in the Work Plan. APHIS WS shall keep records and receipts of all reimbursable expenditures incurred under this Agreement for a period of not less than one year from the date of completion of the services provided. Henrico County shall have the right to inspect and audit such records.
4. To coordinate with Henrico County before responding to all media requests.
5. To forward all requests for services received from Henrico County citizens, businesses, and groups, such as homeowner's associations, to the Henrico County employee designated under this Agreement. No services shall be provided under this Agreement until authorized by the County in accordance with the Work Plan.

ARTICLE 6

This Agreement is contingent upon the passage by Congress of an appropriation from which expenditures may be legally met and shall not obligate APHIS WS upon failure of Congress to so appropriate. This Agreement may also be reduced or terminated if Congress only provides APHIS WS funds for a finite period under a Continuing Resolution.

Similarly, this Agreement is contingent upon annual appropriation of the funds specified in the Financial Plan by the Board of Supervisors for Henrico County.

ARTICLE 7

APHIS WS assumes no liability for any actions or activities conducted under this Cooperative Service Agreement except to the extent that recourse or remedies are provided by Congress under the Federal Tort Claims Act (28 U.S.C. 1346(b), 2401(b), and 2671-2680).

ARTICLE 8

Pursuant to Section 22, Title 41, United States Code, no member of or delegate to Congress shall be admitted to any share or part of this Agreement or to any benefit to arise therefrom.

ARTICLE 9

Nothing in this Agreement shall prevent APHIS WS from entering into separate agreements with any other organization or individual for the purpose of providing wildlife damage management services exclusive of those provided for under this Agreement.

ARTICLE 10

Henrico County certifies that APHIS WS has advised Henrico County that there may be private sector service providers available to provide wildlife management services that Henrico County is seeking from APHIS WS.

ARTICLE 11

The performance of wildlife damage management actions by APHIS WS under this Agreement is contingent upon a determination by APHIS WS that such actions are in compliance with the National Environmental Policy Act, Endangered Species Act, and any other applicable environmental statutes. APHIS WS will not make a final decision to conduct requested wildlife damage management actions until it has made the determination of such compliance.

ARTICLE 12

This Cooperative Service Agreement may be amended at any time by mutual agreement of the parties in writing. Also, this Agreement may be terminated at any time by mutual agreement of the parties in writing, or by one party provided that party notifies the other

in writing at least 120 days prior to effecting such action. Further, in the event Henrico County does not provide necessary funds, APHIS WS is relieved of the obligation to provide services under this agreement.

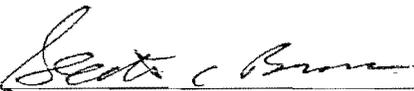
In accordance with the Debt Collection Improvement Act of 1996, the Department of Treasury requires a **Taxpayer Identification Number** for individuals or businesses conducting business with the agency.

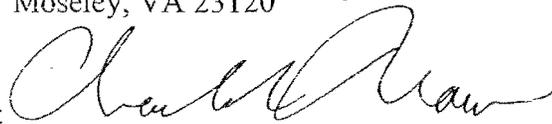
Henrico County Taxpayer Identification Number (TIN) 546001344

Henrico County:

BY:  5/26/11
Virgil R. Hazelett, P.E., County Manager Date
County of Henrico
Post Office Box 90775
Henrico, Virginia 23273-0775

**UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE
WILDLIFE SERVICES**

BY:  5/27/11
Scott Barras, State Director Date
USDA, APHIS, WS
P.O. Box 130
Moseley, VA 23120

BY:  6/7/11
Charles S. Brown Date
Director, Eastern Region
USDA, APHIS, WS
920 Main Campus Drive; Suite 200
Raleigh, NC 27606

APPROVED AS TO FORM

WV 5-25-2011
Asst. COUNTY ATTORNEY

ATTACHMENT A WORK PLAN

Introduction

The U.S. Department of Agriculture (USDA) is authorized to protect American agriculture and other resources from damage associated with wildlife. The primary authority for Wildlife Services (WS) is the Act of March 2, 1931 (46 Stat. 1468; 7 U.S.C.426-426b) as amended, and the Act of December 22, 1987 (101Stat. 1329-331, 7 U.S.C. 426c). Wildlife Services activities are conducted in cooperation with other Federal, State and local agencies; private organizations and individuals.

The WS program uses an Integrated Wildlife Damage Management (IWDM) approach (sometimes referred to as IPM or “Integrated Pest Management”) in which a series of methods may be used or recommended to reduce wildlife damage. IWDM is described in Chapter I, 1-7 of the Animal Damage Control Program Final Environmental Impact Statement (USDA, 1994). These methods include the alteration of cultural practices as well as habitat and behavioral modification to prevent damage. However, controlling wildlife damage may require that the offending animal(s) are killed or that the populations of the offending species be reduced.

Purpose

Waterfowl

The primary objective of the work will be to reduce damage caused by Canada geese and other wildlife in Henrico County, VA, both on private property and property owned by the County. Specifically, nuisance resident Canada geese, due to their excessive fecal droppings in residential neighborhoods and around beaches, picnic areas, and other recreational areas in County parks. The excessive fecal loads to grasslands and waterways may be considered a health risk to County residents and people that visit Henrico County parks. Canada geese are also causing erosion of shorelines by overgrazing the grass to a point of creating bare soil that easily erodes during rain events.

Other wildlife

On an as needed basis, the reduction/removal of other nuisance wildlife causing damage is also included in the objectives of this Agreement. At times, other wildlife species such as beaver, vultures (Black and Turkey), woodchucks, raccoons, and skunks, pose threats to human health and safety through excessive fecal droppings and threats of disease (e.g. Rabies). Addition wildlife damage to private and county properties such as: gnawing of trees, burrowing and flooding damage to roads, pathways, and culverts and the tearing/ripping of roofing shingles and/or other rubberized materials.

Planned USDA, APHIS, Wildlife Services Activities

Waterfowl

Canada goose populations will be managed at acceptable levels. An integrated approach will be used to alleviate damage and will include the following non-lethal and lethal methods: pyrotechnics, capture and euthanasia devices, firearms, immobilizing drugs, egg addling, net guns, rocket nets, and goose roundups during the summer molting period (mid-June through mid-July). This management approach will target the high number of Canada geese creating the damage. In certain situations once the damage has been reduced or stopped, continued management actions will be delayed until it is determined further action is again required. Removal of geese from Henrico County properties will be conducted during hours specified by the County employee designated under this Agreement. All Canada geese captured under this agreement will be euthanized and will not be re-located.

Other wildlife

Other nuisance wildlife situations will be handled as individual projects under this agreement. Lethal methods used to solve each damage situation will vary. All other wildlife work will be fully coordinated as needed with the Henrico County employee designated under this Agreement.

Activities on Private Property

Henrico County will pay for services performed under this Agreement on private property in the County under certain circumstances. Whenever the County receives a request for service from the owners of an eligible property, as determined by the County, the County will forward the request to APHIS WS with a written notification that Henrico County will pay for the cost of the services performed on the property. APHIS WS will bill Henrico County for the expenses and costs of services performed on these properties. APHIS WS will conduct activities on private property within Henrico County only after making the determination described in Article 11 of this Agreement and only after written consent is obtained by WS from the property owner(s) or appropriate homeowner's association.

Effective Dates

This Work Plan shall become effective on June 1, 2011 and shall expire on May 31, 2012. The parties to the Cooperative Services Agreement agree to meet and confer prior to the Work Plan expiration date. Following that meeting, the Work Plan, or an agreed-upon revised Work Plan, may be renewed for additional one-year terms.



United States
Department of
Agriculture

Animal and
Plant Health
Inspection
Service

Wildlife
Services

P.O. Box 130
Mosley, VA 23120
(804) 739-7739 phone
(804)739-7738 fax

BILL FOR COLLECTION

COOPERATOR
Henrico County Division of Police Attn: Lt. Shawn Sears, Animal Protection Unit 10421 Woodman Road Glen Allen, VA 23060
Telephone: 434-973-8342

Bill Number	BD 725111-120
Vendor Code	546001344A
Agreement No.	11-72-51-8074-RA
Billing Date	7/21/2011
Payment Due	8/20/2011

Dates of Service
June 2011

Notice: Due

DESCRIPTION	AMOUNT
110615065	\$1,188.00
110616052	\$1,248.00
110615067	\$1,272.00
110708158	\$1,086.00
110615064 No geese	\$0.00
110629167 No geese	\$0.00
	\$0.00
	\$0.00
	\$0.00

TOTAL DUE:	\$4,794.00
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**PLEASE INCLUDE A
COPY OF THIS BILL WITH
YOUR PAYMENT**

ACCOUNT SUMMARY		
	1737251102 <i>16068</i>	\$4,794.00
	1737251052	\$0.00
For internal use only	1737251025	\$0.00
	1737251024	\$0.00
	Total	\$4,794.00

NEW INFORMATION ABOUT HOW TO PAY

Please remit USDA, APHIS
payment within PO Box 979043
30 days to St. Louis, MO 63197-9000

PAYMENTS MUST INCLUDE A COPY OF THIS BILL

Make checks payable to: USDA-APHIS
Please write your Bill Number on your check.

To pay with a credit card (VISA, MasterCard, American Express, or Discover), please call the Accts. Receivable Helpline at 1-877-777-2128.

For questions concerning this bill, please contact:
Lisa S. Hurst 804-739-7739

In accordance with the Debt Collection Improvement Act of 1996, invoices issued by USDA-APHIS are due and payable within 30 days. Payments not received by the due date are subject to late payment charges assessed at the rate established by the Dept. of Treasury (31 USC 3717).

For overnight delivery, send payment to:
USDA, APHIS
Attn: PO Box 979043
1005 Convention Plaza
St. Louis, MO 63101
Telephone: 314-418-6635

Cooperator Copy
 Remittance Copy
 State Office Copy/Fax ART

Hurst, Lisa S (APHIS)

From: Allaben, David J (APHIS)
Sent: Thursday, July 21, 2011 2:11 PM
To: Sears, Shawn
Cc: Hurst, Lisa S (APHIS)
Subject: Roundup costs to date

Shawn,

This is the breakdown of the goose roundups ONLY.

Authorization # [redacted] not responsive

110708158 Canterbury Lake \$1,086, zero geese =\$1,086
[redacted] not responsive

[redacted] not responsive

Allaben, David J (APHIS)

From: Sears, Shawn [SEA21@co.henrico.va.us]
Sent: Friday, July 15, 2011 7:10 AM
To: Allaben, David J (APHIS)
Subject: RE: Canterbury Lake issue

David,

The Chief called me last night. Please call me as soon as you get in. I will try to call you as well.

Shawn.

From: Allaben, David J (APHIS) [mailto:David.J.Allaben@aphis.usda.gov]
Sent: Thursday, July 14, 2011 4:59 PM
To: Sears, Shawn
Subject: RE: Canterbury Lake issue

Shawn,

We will call tomorrow to explain our approach.

David

From: Sears, Shawn [mailto:SEA21@co.henrico.va.us]
Sent: Thursday, July 14, 2011 4:48 PM
To: Allaben, David J (APHIS)
Subject: RE: Canterbury Lake issue

I think it would be best to call it off for this season. We will pay for other measures, however I would like us to discuss those measures with your office so that I can explain them to the Chief.

Shawn.

From: Allaben, David J (APHIS) [mailto:David.J.Allaben@aphis.usda.gov]
Sent: Thursday, July 14, 2011 4:36 PM
To: Sears, Shawn
Subject: Canterbury Lake issue

Shawn,

After talking to Scott and Jennifer they thought it may be possible to gather the birds on Monday. As per our conversation did you still want to try this coming Monday, or call it off?

The other question I have is if we decide to cancel the roundup, would the county want to pay for an instructional session, or other management options at the lake. The instructional session would assist them in developing a management plan for their problem through one or two community meetings to inform them of their options. Or option two, conducting other controls, like AC and/or egg oiling?

Thanks,
David

Program	REV/	PTD Receivable	PTD	PTD Committed	PTD	PTD Expended	PTD Total
	CCC	Rev/Reimb	Collected Rev/		Unliquidated	Items	Obligations
			Reimb		Obligations		

Begin Budget FY: 2011

Reporting Category: 102

737251102	11	0.00	0.00	0.00	0.00	2,995.98	2,995.98
737251102	12	0.00	0.00	0.00	0.00	1,092.07	1,092.07

Program Total: 737251102	0.00	0.00	0.00	0.00	0.00	4,088.05	4,088.05
Reporting Cat Total: 102	0.00	0.00	0.00	0.00	0.00	4,088.05	4,088.05
Fund Total: 73	0.00	0.00	0.00	0.00	0.00	4,088.05	4,088.05
Begin Budget FY: 2011	0.00	0.00	0.00	0.00	0.00	4,088.05	4,088.05

Search Criteria: Division: 7 Organization: 7251

Begin Budget Fy: 2011

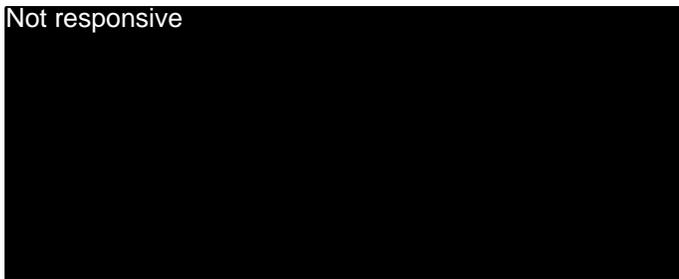
Reporting Org 1: 7200

Fiscal Month: 10

Program: 737251102

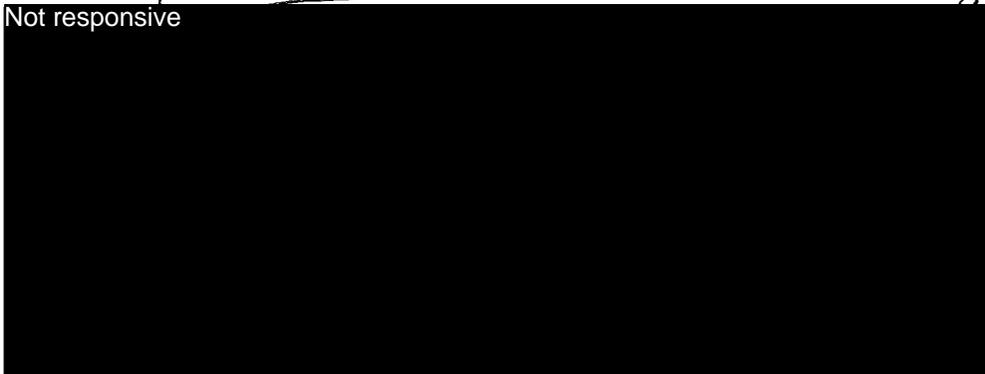
Fund: 73

Not responsive



*38913
 PP 12
 needs to
 be spread
 over 442
 sites*

Canterbury 1086
 Not responsive



Barras, Scott C. (APHIS)

From: bkelley@courts.state.va.us
Sent: Thursday, July 14, 2011 10:23 AM
To: Barras, Scott C. (APHIS)
Subject: RE: Canterbury Geese

see below

-----Forwarded by (b) (6) on 07/14/2011 10:21AM -----

To: (b) (6)@richmond.edu
From: (b) (6)
Date: 07/13/2011 09:21PM
cc: (b) (6)@yahoo.com
Subject: Canterbury Lake Geese

(b) (6)

Our house is not located on the lake, but it is located off of the nearby creek. The geese frequently come up through our back yard into our front yard. Our family enjoy the visits from the geese and their families. Our family has different priorities than those people looking to have the geese killed. I cant say we understand how anyone would think the best option was to kill the geese. We would strongly oppose any such action.

If they are that big of a problem for some folks they might try what is noted in the article below in their yard.

(b) (6)

Mere sight of predator helps keep shore clean



So far, the coyote decoy has kept messy Canada geese away from the Arlington Reservoir's shores, probably because it is moved around the beach periodically. "Nothing has worked as well as this has," said Kenneth Hughes, a reservoir supervisor. (Matthew J. Lee/ Globe Staff)

By [Brian MacQuarrie](#)

Arlington Reservoir has long been a popular destination for heat-beating swimmers and a gaggle of sand-soiling, sandwich-swiping Canada geese. But this summer, thanks to a 4-foot coyote, grateful bathers have the beach all to themselves. The coyote - an on-the-fly amalgamation of twisted chicken wire, hardened foam, and a coat of brownish paint - was put together by Claudia Hughes, a lifelong Arlington resident who saw a cardboard cutout of a coyote on a Cape Cod golf course last summer and figured she could build something better.

"I thought there had to be some way to make those geese go away, so I went online to see what a coyote looks like," said Hughes, an art school graduate. "I guess it's working out pretty good, but it really is pretty ugly if you look at it."

Coyote decoys have been used for about a decade to clear messy Canada geese from parks, ponds, backyards, and public spaces. But the make-believe canines have played to mixed reviews by their human handlers.

"When they first came out, they were very effective," said H.W. Heusmann, a waterfowl biologist for the state Division of Fisheries and Wildlife. "But people being people, they're a little bit lazy, and they leave them in the same place. The geese would get a little closer, and a little closer, and eventually use them for shade."

So far, that has not happened at Reservoir Beach, where the coyote, supported by metal poles, was planted in the sand a few days before the summer season opened in mid-June.

"We used to spend a lot of time cleaning up their mess," said Kenneth Hughes, who is a reservoir supervisor, retired police lieutenant, and husband to the fledgling coyote sculptor. "Nothing has worked as well as this has."

Unlike other places where decoys have been tried and failed, the Arlington Reservoir coyote, which has yet to receive a name, is moved around the beach. The depiction is realistic enough that Joe Connelly, the town recreation director, mistook the decoy for the real thing when Claudia Hughes placed it on a ballfield pitcher's mound as a test.

That is when its creator knew she had a winner. "The reaction was exactly what we had hoped for - fear," Hughes recalled with a chuckle.

Barras, Scott C. (APHIS)

From: Bannerman, Carol A (APHIS)
Sent: Thursday, July 14, 2011 10:45 AM
To: Barras, Scott C. (APHIS)
Cc: Yigzaw, Workabeba (APHIS)
Subject: Re: Channel 8 Caught Up

You're good to go. Send reporter's name when you have time.

From: Barras, Scott C. (APHIS)
Sent: Thursday, July 14, 2011 08:55 AM
To: Bannerman, Carol A (APHIS)
Subject: Channel 8 Caught Up

Hi Carol,

Channel 8 wants to do an on-camera today at 1:30 here at the office about the Canterbury Lakes Goose roundup.

This is the same project where we've already spoken to NBC 12 and Richmond Times-dispatch.

Sound Okay?

Scott

Barras, Scott C. (APHIS)

From: (b) (6) [REDACTED]@richmond.edu]
Sent: Thursday, July 14, 2011 4:17 PM
To: Barras, Scott C. (APHIS)
Subject: The Geese on Canterbury Lake

Hi Scott,

Here it is. Please correct any factual misstatements I have made about the USDA and the program. Also feel free to suggest changes in tone. I anticipate that this will be circulated and possibly sent to the media.

Thanks for your support.

(b) [REDACTED]

To Canterbury Lake Association Members and Everyone Who Has Emailed Me:

Over the last few days, our neighborhood has been the object of a media blitz, several Emailings, and an anonymous flyer taped to mailboxes throughout the neighborhood yesterday. The flyer was one-sided, inflammatory, and misleading.

Let me explain the situation as I see it. The United States Department of Agriculture (USDA) works with Henrico County (and other locales) to assist private property owners whose land suffers damage due to wildlife, in this case, Canadian Geese that no longer migrate. When they receive a call, they make a site visit to assess the type and level of damage as well as the type and level of remedies the property owner has undertaken. As a last resort, they will remove as many of the geese as they can capture on private property to which access has been granted in writing.

Such a complaint was filed by an individual, a site visit was made on Friday July 8, additional people in the immediate vicinity joined in and agreed to allow access through their property. As a result of the site visit, the USDA determined that the damage and lack of success in previous control efforts rose to the level where removal was warranted. *[I'm not sure whether or not to include anything along the following lines: Several of these properties have had occasions with approximately 50 geese in their yard at a single time with geese feeding in their yards several times a day, occasionally staying over an hour. An average adult eats four pounds per day and defecates two pounds.]*

The individuals were advised that written permission would be required from any party whose property would need to be accessed during the removal. That includes the common property owned by the Canterbury Lake Association, LLC (CLA) if that property needs to be accessed. I was contacted as President of the CLA and was told that there was some urgency to the decision because the time frame (molting season) when this is done would soon be over.

The CLA Bylaws give authority to an elected Board to make decisions in what they deem are the best interests of the CLA. Given vacations and short notice, I emailed the Board explaining the situation as I understood it at the time and asked for a vote. One member requested a meeting of whomever could attend on such short notice and one was held on Sunday, July 10th with seven Board members in attendance. The final Board vote was 8 in favor of allowing access and 3 opposed. The CLA Bylaws also stipulate voting rights, one vote per share. Although I have tried to stay removed from the fray, I have heard from a number of CLA members. The tally at this time is 83 shares in favor of the Board action, 40 shares opposed, and 39 shares from whom I have not heard.

The Board and I represent the members of the CLA which was formed to collect money to purchase the lake that was up for auction. I believe that we are doing that. Not everyone on the lake chose to contribute and join the CLA. We do not represent the Canterbury neighborhood; to my knowledge, there is no Canterbury Neighborhood Association.

Sincerely,

(b) (6)

Barras, Scott C. (APHIS)

From: (b) (6) [redacted]@yahoo.com]
Sent: Monday, July 11, 2011 11:39 PM
To: Barras, Scott C. (APHIS)
Subject: resident goose inquiry

Good day Mr Barras,

I watched an informative interview you gave WWBT re: goose control and found your email via a web search. I have noticed some large populations in western Henrico, just to the North of the area you are controlling, that I wanted to bring to your attention as well. I don't envy your often unpopular task, but am also aware that the resident goose is a man-made problem that requires management. The areas are:

- 1) The Short Pump area around Broad and Pouncey Tract. The last couple years geese have been all over, where I have seen none before. There are a couple dozen molting/rearing in a small sediment pond behind the West Broad Wal Mart/Target as well as in sediment ponds by the Short Pump mall as well. It is stunning to see so many living in such small ponds, effectively in parking lots with minimal grazing area.
- 2) I also have noticed a large number in the Pump/Church road areas near the Barrington/Lake Loreine communities. These are larger lakes, so I suppose that is much more expected, but once again it is a case of large populations moving into relatively small spots where I can recall seeing few or none not long ago.

On more than one occasion I have seen the geese standing in busy roads in the area (even on Broad and I-64) so am concerned about obvious safety issues there. They seem to have no fear about stepping out into traffic! Not sure if these present health/safety issues or not, but once again just thought I would bring it up while the subject is at hand.

Thank you.

Barras, Scott C. (APHIS)

From: Barras, Scott C. (APHIS)
Sent: Tuesday, July 12, 2011 9:13 AM
To: Rumbaugh, Jeffrey A (APHIS); Cromwell, Jennifer S (APHIS)
(Jennifer.S.Cromwell@aphis.usda.gov); Allaben, David J (APHIS)
(David.J.Allaben@aphis.usda.gov)
Subject: FW: resident goose inquiry

FYI,

We have some support out there. Jeff, please forward to Lt. Sears.

Scott

From: (b) (6) @yahoo.com]
Sent: Monday, July 11, 2011 11:39 PM
To: Barras, Scott C. (APHIS)
Subject: resident goose inquiry

Good day Mr Barras,

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On more than one occasion I have seen the geese standing in busy roads in the area (even on Broad and I-64) so am concerned about obvious safety issues there. They seem to have no fear about stepping out into traffic! Not sure if these present health/safety issues or not, but once again just thought I would bring it up while the subject is at hand.

Thank you.

Barras, Scott C. (APHIS)

From: (b) (6) [redacted] gmail.com]
Sent: Saturday, July 16, 2011 10:58 AM
To: Barras, Scott C. (APHIS)
Subject: Canterbury Lakes Goose Cull

Mr. Barras,

I urge you to reconsider your decision to euthanize the goose population at Canterbury Lakes in Henrico County. Not only is this an inhumane solution, it is a temporary one.

Organizations such as Geese Peace (<http://www.geesepeace.org/>) offer multi-dimensional, long term, humane solutions to wildlife conflicts involving geese.

Please use your position to seize this opportunity to set a new course for the humane management of wildlife conflicts in suburban communities.

Sincerely,

(b) (6) [redacted]

[redacted signature block]

Barras, Scott C. (APHIS)

From: (b) (6) [REDACTED]@richmond.edu]
Sent: Friday, July 15, 2011 7:44 PM
Subject: The Geese on Canterbury Lake

Importance: High

To Canterbury Lake Association Members and Other Neighbors Who Have Contacted Me:

Over the last few days, our neighborhood has been the object of a media blitz, several e-mailings, and an anonymous flyer taped to mailboxes throughout the neighborhood. I feel the flyer was misleading because it didn't present all the facts.

Let me explain the situation as I see it. The United States Department of Agriculture (USDA) works with Henrico County (and other locales) to assist private property owners whose land suffers damage due to wildlife, in this case, Canada Geese that no longer migrate. When they receive a call, they make a site visit to assess the type and level of damage as well as the type and level of remedies the property owner has undertaken. In some cases, they will remove as many of the geese as they can capture on private property to which access has been granted in writing.

Such a complaint was filed by an individual; a site visit was made on Friday, July 8; and additional people in the immediate vicinity joined in and agreed to allow access through their property. As a result of the site visit, the USDA determined that the damage and lack of success in previous control efforts rose to the level where removal from their property was warranted.

The individuals were advised that written permission would be required from any party whose property would need to be accessed during the removal. That includes the common property owned by the Canterbury Lake Association, LLC (CLA) if that property needs to be accessed. I was contacted as President of the CLA and was told that there was some urgency to the decision because the time frame when this is done (molting season) would soon be over.

The CLA Bylaws give authority to an elected Board to make decisions in what they deem are the best interests of the CLA. Given vacations and short notice, I e-mailed the Board explaining the situation as I understood it at the time and asked for a vote. One member requested a meeting of whomever could attend on such short notice and one was held on Sunday, July 10th with seven Board members in attendance. The final Board vote was 8 in favor of allowing access and 3 opposed. The CLA Bylaws also stipulate voting rights, one vote per share. Although I have tried to stay removed from the fray, I have heard from a number of CLA members. The tally at this time is 83 shares in favor of the Board action, 42 shares opposed, and 37 shares from whom I have not heard.

The Board and I represent the members of the CLA which was formed to collect money to purchase the lake that was up for auction. I believe that we are doing that. Not everyone on the lake chose to contribute and join the CLA. We do not represent the Canterbury neighborhood; to my knowledge, there is no Canterbury Neighborhood Association.

In closing, this e-mail is not intended to sway anyone's opinion in any direction. I understand that there are passionate and heartfelt opinions on both sides. Neither the CLA nor its Board initiated the process. However, a majority of the membership shares and Board have voted to allow the USDA to access its land if necessary.

Sincerely,

(b) (6) [REDACTED]
[REDACTED]

Barras, Scott C. (APHIS)

From: (b) (6) [REDACTED]@aim.com]
Sent: Tuesday, July 12, 2011 12:37 PM
To: Barras, Scott C. (APHIS)
Subject: In relation to geese euthanization

Were the geese not there first? Can't you do anything else but kill the geese? Surely you can relocate them even if it might cost a bit more or take a bit more time. Life is more valued and important. This is wrong.

Barras, Scott C. (APHIS)

From: Taylor, Terry L (APHIS)
Sent: Monday, July 18, 2011 9:46 AM
To: Barras, Scott C. (APHIS)
Subject: FW: Canterbury Lake Geese Kill

From: (b) (6) - Richmond, VA
Sent: Saturday, July 16, 2011 1:42 PM
To: 'terry.taylor@aphis.usda.gov'
Cc: Taylor, Terry L (APHIS)
Subject: FW: Canterbury Lake Geese Kill

Terry, I didn't see you copied on the email below and thought you may have some interest in this subject. Enjoy your weekend. (b) (6)

From: (b) (6) [redacted]@yahoo.com]
Sent: Friday, July 15, 2011 7:47 PM
To: [redacted] (b) (6) [redacted]
VA
Subject: Canterbury Lake Geese Kill

Hey there!

I'm not sure who to write about this issue, so I did write several of you and I hope that I picked the right person in there or that you can at least forward this email on to the right people, please.

I'm writing in concern of the Geese Kill that is planned for Canterbury Lake. I signed a petition against it, but wanted to express an alternative way to handle the issue that doesn't involve killing the geese. Why don't you pay someone to use their dogs to harass the animals?? That's what my dog is best at, and it just so happens that people in other states handled the Geese issue/problem this way, too. It's certainly better than killing them.

Here is a situation where dogs were used to harass geese:

<http://theintelligencer.net/page/content.detail/id/134301/Pressure-from-dogs-helps-chase-away-geese-in-Ohio-.html?isap=1&nav=536>

I'd ask that you please reconsider killing the geese, and using dogs as an alternative instead. It's a more humane method and will help lessen the hostility of those who are angered by using your proposed "kill" method.

Thank you!

Sincerely,

(b) (6)

P.S. If you need to contact me, I can be reached at this email address or at: 836-5974.

A REVIEW OF PATHOGENS OF AGRICULTURAL AND HUMAN HEALTH INTEREST FOUND IN CANADA GEESE

LARRY CLARK, USDA, APHIS, Wildlife Services, National Wildlife Research Center, 4101 LaPorte Ave., Fort Collins, CO 80521, USA

Abstract: The roles that waterfowl in general, and Canada geese in particular, have in the dissemination and transmission of viral and bacterial diseases of human or agricultural importance are covered in this review. In addition to the biological information about the etiology of the disease, economic impacts and zoonotic potential of viral and bacterial pathogens are considered. In most cases existing evidence suggests the importance of waterfowl in disease dissemination and transmission, however, definitive data are often lacking, indicating the need for more directed studies before quantitative risk assessments can be made. Finally, a brief assessment of management options is considered.

Key words: avian influenza, avian pox, bacteria, *Campylobacter*, Canada goose, *E. coli*, exotic Newcastle disease, foot and mouth disease, waterfowl, zoonoses

Proceedings of the 10th Wildlife Damage Management Conference. (K.A. Fagerstone, G.W. Witmer, Eds). 2003

INTRODUCTION

The study of wildlife disease from an animal damage management perspective focuses on four areas: (1) the role that wildlife has in the dissemination and transmission of pathogens with zoonotic potential, (2) the role that wildlife has in the dissemination and transmission of pathogens that affect domesticated animals, e.g., livestock, and poultry, (3) the economic consequences of wildlife disseminated and transmitted diseases, and (4) possible management options to disrupt dissemination and transmission of pathogens. Implicit in this treatment of wildlife disease in the context animal damage management is the process of risk assessment commonly used in epidemiology.

This review is intended as a source of information about common viral and bacterial pathogens of zoonotic and animal health concern. Moreover, this review focuses on

pathogens of concern that have been documented to occur within waterfowl in general, and Canada geese, *Branta canadensis*, in particular. Where the data allow, the review attempts to address the role of waterfowl as host/reservoirs for pathogens of concern, the possibility of transmission to humans, animal stock, or poultry, and the economic or human health consequences of the manifested disease. This review is not intended as a compendium of diseases of geese or waterfowl. That is to say, waterfowl may simply be involved in carriage of the pathogen in some cases. Thus, for the purpose of this review, the etiological agents considered are those that are pathogenic to humans, domestic stock, or poultry, and they may or may not cause disease in the waterfowl or geese.

The special reference to Canada geese is justified because non-migratory Canada

Goose populations have increased eight fold over the past 20 years in North America. One consequence of this population build up has been an increased number of nuisance related complaints due to the geese and their feces. Most people do not come into direct contact with the geese, but they more often encounter Canada Goose feces which had been lying on the ground. Many complaints frequently focus on public health concerns regarding fecal contamination of parks and waterways, and to a lesser extent the problem they may pose to agriculture.

VIRUSES

Avian Influenza

Avian Influenza (AI) is caused by type A viruses belonging to the Orthomyxovirus group (Easterday et al. 1997). Viruses within this group vary considerably in their virulence. The H5 and H7 strains are extremely virulent and are also highly contagious. Commercially, chickens and turkeys are at risk, with the animal health and economic consequences of outbreaks being considerable (Hahn and Clark 2002). During 1983-84 an outbreak of AI in the poultry flocks of Pennsylvania, Virginia, and Maryland resulted in the destruction of over 17 million birds. This outbreak resulted in costs to producers of \$55 million in direct losses, with an additional \$8 million in associated clean-up costs. Of the total \$63 million in costs, 40 million of those dollars eventually came at taxpayer expense in the form of indemnification to the producers. Direct costs to the consumer, reflected in increased retail prices of poultry food products after the outbreak, were estimated to be \$349 million over a 6 month period.

Waterfowl surveys within the Atlantic flyway during the 1983-84 epizootic found 24 strains, including the highly pathogenic H5N2 strain isolated from poultry farms in PA,

indicating a spillover from waterfowl to chickens or *vice versa* (Deibel et al. 1985). Regardless, the detection of virulent AI in migratory waterfowl implicates them as a risk factor in pathogen dissemination.

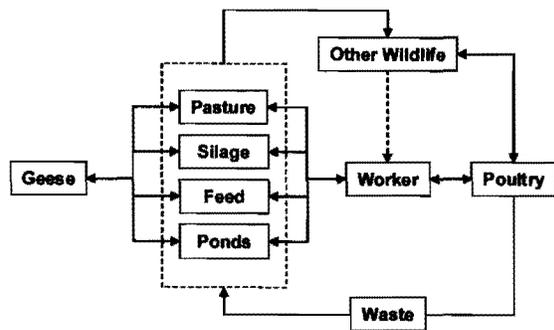
AI viruses occur widely in wild birds, especially waterfowl, and most strains are characterized by low pathogenicity (Bahl et al. 1977, Alexander 2000). For example, antigenically related H5N2 viruses from geese, replicated in chickens but did not produce disease (Hinshaw et al. 1986). However, even AI viruses of low pathogenicity have the potential to become virulent through mutation and reassortment. This high reassortment capacity for interspecies transmission to terrestrial poultry and mammals and the ability to transform to a virulent form is of concern from a health and economic standpoint (Guan et al. 2002a, 2002b). During 1996-1997 non-pathogenic strains were detected in egg-layer flocks in Lancaster, PA. Because of concern of the virus mutating to a virulent form, 9 flocks were destroyed and a quarantine was imposed by the state (Hahn and Clark 2002). Similarly, a low virulent strain of AI virus was isolated in Virginia in March 2002. The control and containment efforts cost \$13 million in destruction of flocks, \$50 million in paid indemnities, and an overall cost of \$129 million to the industry in an effort to minimize the trade impacts (Hahn and Clark 2002).

AI viruses are not only of concern to the poultry industry, but of some concern to human health as well. In 1997, an outbreak of avian flu in humans caused 18 illnesses and 6 deaths. The outbreak was traced to the H5N1 strain whose origin was from a goose at a live bird market in Hong Kong. In 2003, during an outbreak of a virulent strain of AI (H7N7) in the Netherlands, there were 82 confirmed cases of human H7N7 influenza and a veterinarian treating affected flocks died from acute respiratory disease syndrome traced to

the H7N7 strain (Fouchier 2003). More alarming was the observation that there were 3 cases of secondary infection, i.e., from poultry workers to their immediate family, raising concern for pandemic potential.

Waterfowl are an important reservoir for AI viruses (Deibel et al. 1985). Canada geese show variability in the prevalence of AI, but can be considered an important reservoir as well (Easterday et al. 1968, Winkler et al. 1972, Boudreault et al. 1980). Given their capacity for migratory travel and utilization of agricultural areas (pastures and water sources), transmission by direct contact, fecal contact, or indirect contact via farm workers exposed to environmental contamination poses a serious level of risk to human health and the poultry industry (Figure 1, Webster 1998, Webster et al. 2002).

Figure 1. Possible routes of exposure and dissemination of pathogens between geese and poultry.



Newcastle Disease

Newcastle disease virus (NDV) is single stranded RNA virus belonging to the genus *Paramyxovirus*. Virions are highly contagious and cause respiratory disease in birds (Alexander 2000). The most virulent strains (i.e., velogenic strains, e.g. OIE List A avian paramyxovirus serotype 1 (APMV-1) will cause 100% mortality in chicken flocks and is of critical concern to the poultry

industry. Moderately virulent strains (i.e., mesogenic strains) will result in less mortality but severely depress egg production in commercial chickens. The least virulent strains (i.e., lentogenic strains, e.g., APMV-2 to APMV-9 strains) cause little mortality except in young birds, but will result in decreased egg production. Thus, lentogenic strains are of commercial concern for layer hens, but do not represent a significant risk for broilers.

Over 250 species of domestic and wild birds have been infected with various strains of NDV, suggesting that most birds are susceptible to the disease (Kaleta and Baldouf 1988). As stated above, the consequences of infection varies with the strain of virus and the host species. Transmission occurs through the respiratory route via aerosols. The virus also may be fecally shed and acquired via ingestion (Burrige et al. 1975). There is no evidence of vertical transmission.

Some investigators believe that the risk of transmission from waterfowl to poultry is low. Bolte et al. (2001) showed that domestic geese do not readily excrete NDV=s. Because wild geese are unlikely to come in direct contact with poultry operations and little shedding may occur, the authors conclude that wild geese do not play a major role in the epidemiology of Newcastle disease for poultry. Moreover, waterfowl, including Canada geese, are reservoirs of low pathogenic (lentogenic: APMV-2 to APMV-9) strains of virus (Rosenberger et al. 1974, 1975; Ito et al. 1995; Graves 1996), which are generally of lower concern to poultry producers. However, virulent strains (APMV-2) have been isolated from migratory waterfowl and these isolates have been experimentally transmitted to domestic poultry that showed evidence of pathogenicity acquired during passage in the infected chicken population (Takakuwa et al. 1998). Given the high to moderate prevalence of the

viral strains in a variety of waterfowl species (Pearson and McCann 1975, Spalatin and Hanson 1975, Bahl et al. 1977, Deibel et al. 1985, Graves 1996, Takakuwa et al. 1998), vigilance regarding their role in dissemination over long distances and into agricultural situations should be maintained (Pearson and McCann 1975, Hlinak et al. 1998). Finally, the likelihood of mechanical transmission is high. The virus is easily transported by farm workers into poultry flocks (Burridge et al. 1975). Thus, direct contact between waterfowl and poultry may not be needed for waterfowl to be a significant risk factor in disease dissemination and transmission (Figure 1).

There is only minor concern relative to the zoonotic potential of Newcastle disease (Deng et al. 1997). Affected individuals tend to be farm workers in association with poultry houses, and the disease is manifested in the form of mild conjunctivitis.

The poultry industry practices an aggressive vaccination program to control NDV. However, the vaccines are not effective against all strains of NDV. In particular exotic strains have been particularly resistant to vaccination and can severely impact the poultry industry. In 1971, a major outbreak of a APMV-1 velogenic strain (exotic Newcastle disease, END) occurred in California. The outbreak affected over 1,300 flocks and resulted in the destruction of 12 million birds. Eradication efforts cost \$56 million, with \$275 million (in 1971 \$) in clean-up costs. Eradication and clean-up took four years (Hahn and Clark 2002). Adjusting for inflation the control and clean up costs total \$1.16 billion in 2003 dollars. These costs do not consider the costs of lost markets, trade embargos, and increased prices to consumers. Using the range of cost ratios (i.e., control:market effect costs) calculated for the avian influenza outbreaks in Pennsylvania and Virginia in 1983 and 1997, the total cost of

the 1971 END outbreak is estimated to be \$6.4 billion in 2003 dollars. In 2002 and 2003, several outbreaks of END were reported throughout the United States. In California, 22 commercial operations were affected and 3.5 million birds were slaughtered at a cost of \$10-15 million. Outbreaks in Nevada, Arizona, New Mexico, and Texas were of limited scope, yet they raised fears about the economic consequences if the containment operations were to have failed.

Foot and Mouth Disease

Foot and mouth disease (FMD) is a viral disease of Picorniviridae Aphthoviruses with over 7 immunological serotypes and over 60 subtypes. FMD is an economically important disease affecting over 70 mammal species, primarily cloven hoofed domestic mammals. Reptiles and birds are generally resistant, however, birds, including geese, have been experimentally infected (Kaleta 2002). Birds may serve as mechanical vectors for short distances, carrying the virus on plumage or on their feet, thus setting the potential for long distance dissemination (Kaleta 2002). However, the Scottish Executive Rural Affairs Department has considered geese to be very unlikely agents in the dissemination of the virus (Lamont 2001). FMD has low zoonotic potential.

Avian Pox

Avian pox is caused by several strains of *Avipoxvirus*. The virus causes warty growths on the feet, legs, base of beak, eye margins, and internal epithelial tissues. This can lead to difficulty breathing, feeding, or perching. Transmission can occur with ingestion of contaminated food or water, contact with contaminated surfaces, or via mechanical vectors such as mosquitoes. Waterfowl are not considered a major reservoir or vector for this disease, though Canada geese have been documented as being

infected. The strain of avian pox virus isolated from the infected Canada geese was successfully transmitted to domestic geese, but not to leghorn chickens or domestic ducks (Cox 1980). Avian pox is not known to be zoonotic. Thus, avian pox from geese does not seem to pose a risk to domestic stock or human health.

BACTERIA

Campylobacter

Infections by *Campylobacter* spp. are leading causes of human enteritis (Meade 2000). Food animals are the major reservoir for organisms with human infection occurring after consumption of contaminated food. However, up to 20% of *Campylobacter* enteritis cases are attributable to infections via exposure to environmental contaminants (Meade et al. 1999), for which domestic and wild animals are implicated as the source of the pathogen. Migratory waterfowl, and in particular Canada geese, should be considered high risk species for environmental contamination by *Campylobacter* (Pacha et al. 1988, Aydin et al. 2001). However, the prevalence for *Campylobacter* spp. found in goose feces varies widely among studies. Converse et al. (2001) did not isolate *Campylobacter* in fecal samples from Massachusetts, New Jersey, and Virginia, while two studies centered in Ohio obtained 52.0 and 38.9% prevalences (Fallacara et al. 2001). In a national survey for the prevalence of *Campylobacter* in Canada goose feces, Clark et al. (unpublished data) found the following: California (15.4% in spring and 58.3% in fall); Colorado (11.1% in spring), New York (11.5% in spring), Oregon (0% in spring and fall), Washington (8% in spring), Wisconsin (20% in spring), where the sample sizes for each season and state were, n = 25, and spring samples were taken in April-May, while the fall samples were collected in

September - November.

The contribution of wildlife to the carriage and transmission of drug resistant strains of bacteria also is of concern for disease management in agricultural settings. All strains of *C. jejuni* (n=12) isolated from domestic free-ranging geese were resistant to penicillin G and cephalothin; 92% were resistant to sodium deoxycholate, and 67% were resistant to cloxacillin, ampicillin, and colistin sulphate; 25% were resistant to tetracycline, and 8% were resistant to sulfamethoxazole/trimethoprim and kanamycin (Aydin et al. 2001).

Campylobacter does not survive well in the environment. Thus, human health risks associated with contact with feces, or contamination of turf, are presumed to be low. Nonetheless, our surveillance shows that *Campylobacter* survival is adequate in fecal samples up to 24 hrs post deposition, suggesting some moderate level of environmental risk exposure may occur.

Coliform bacteria

Coliform bacteria are often benign, but some strains may adversely affect disease and mortality risks. In the public health arena, coliform counts in water supplies and food samples are used as a correlative index for human health risk. Hussong et al. (1979) examined the impact of migratory geese and swans on the water quality of the Chesapeake Bay. They found that overwintering migrants were a source of human pathogenic *E. coli* and caused increased coliform counts in the estuarine waters. In London parks, the prevalence of human pathogenic strains of *E. coli* in Canada goose feces was 55% (Feare et al. 1999). More detailed studies of *E. coli* in Canada goose feces by Kullas et al. (2002) showed that the prevalence of human pathogenic serogroups was 25% in Colorado: 12% of the strains were consistent with Enterotoxigenic human pathogenic serogroups;

6% were consistent with Enterohemorrhagic human pathogenic serogroups; 5% of the strains were consistent with Enteroaggregative human pathogenic serogroups, and; the remaining 2% were consistent with other human pathogenic serogroups of *E. coli*. In their national survey, Clark et al. (unpublished data) showed the prevalence for the virulence determinants Sta, Stb, and K1 capsular antigen to range between 2 and 4% of fecal samples. Neither Kullas et al. (2002) nor Clark et al. (unpublished data) found evidence for the human virulence determinants: *eae*, *Hly-A*, shiga-like toxins 1 or 2, or cell necrotic factors 1 or 2. No study has isolated the highly virulent strain O157:H7 from goose feces (Converse et al. 2001, Feare et al. 1999, Roscoe 2001, Fallacara et al. 2001).

At the present time there is no direct epidemiological evidence to link human or livestock illness to *E. coli* derived from waterfowl. However, increasingly studies are documenting the virulence determinants that waterfowl may carry that will allow a quantitative risk assessment. Such assessments will determine whether management policies should also include human health

Salmonella

Although *Salmonella* infection of domestic poultry is widespread, prevalence in Canada geese, as indicated by fecal sampling is low. No *Salmonella* spp. were isolated by Hussong et al. (1979), Roscoe (2001), and Fallacara et al. (2001), while prevalences of 2.5%, 0.4%, and 1.0%, were found by Feare et al. (1999), Converse et al. (2001), and Kullas et al. (2002), respectively. However, *Salmonella* infection of cattle, which can cause abortion, has been linked to a variety of management practices such as contact of wild geese with cattle or their feed (Warnick et al. 2001).

Other bacteria

The role wild waterfowl play in the carriage and transmission of other pathogenic bacteria has not been systematically documented. In their surveys of goose feces ($n > 6,000$), Clark et al. (unpublished data) found several isolates of *Aeromonas hydrophila* and *Vibrio tubiashi*, both are of concern for the health and production of the shellfish industry and can have human health consequences. Feare et al. (1999) found higher prevalences of *A. hydrophila* (12%), underscoring the observation that geese may largely reflect local environmental contamination as well as acting as disseminators of pathogenic agents. Other investigators have also isolated various *Vibrio* species from goose feces (Buck 1990, Schlater et al. 1981).

Bordetella avium causes respiratory disease of poultry. Three strains of *B. avium* have been isolated from Canada geese, two of which were indistinguishable from clinical specimens isolated from domesticated turkeys (Raffel et al. 2002). Thus, Canada geese can act as carriers, and possibly reservoirs for this pathogen. These findings underscore the need to ensure that farm biosecurity measures include physical and procedural barriers between pastures, where geese may be present, to poultry houses.

Legionella pneumophila is a serious pathogen for respiratory illness. In one study, *L. pneumophila* was isolated from 6-23% of geese (Liu et al. 1989). Thus, geese may be of general epidemiological concern as a source of environmental contamination.

Toxoplasmosis is a serious disease of the respiratory system caused by *Toxoplasma gondii*. Sixl et al (1978) found an epidemiological risk association for pregnant women who had been exposed to waterfowl.

SUMMARY

Populations of Canada goose (*Branta*

canadensis) have dramatically increased in North America over the past 40 years (Sauer et al. 2001). Increasingly, these geese are utilizing urban parks, recreation areas, and corporate and residential lawns to the point that they frequently are classified as nuisance animals. Because geese produce prodigious quantities of feces (Bedard 1986) there has been concern that the geese may pose human health risks (Conover and Chasko 1985, Cooper and Keefe 1997). While no direct link between contact with goose feces and human illness has been made, there is increasing evidence that human virulence determinants are present in goose feces. Despite the growing concern about the role Canada geese and their feces may play in human health risks, the data on prevalence of disease organisms are few. More studies are needed in order to better assess what risks and exposures the public encounters when using landscapes inhabited by geese.

Similar observations apply to the agricultural landscape. Here the issues revolve around the role of waterfowl as host/reservoir species for pathogens of agricultural concern, the patterns and use of pastures and farm ponds by waterfowl, the degree of environmental contamination by pathogens, and how those pathogens might make their way to livestock and poultry. This review illustrates that geese and other waterfowl have the potential to act as reservoirs and carriers of agricultural diseases. What is needed at this point is a risk assessment for how important these wildlife species are to the transmission of pathogens to animal stock and poultry.

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Prevalence of *Escherichia coli* serogroups and human virulence factors in faeces of urban Canada geese (*Branta canadensis*)

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This was the first study to exhaustively characterize the prevalence of *Escherichia coli* sero-groups in any wildlife species. Faecal samples from Canada geese (*Branta canadensis*) were collected over a single year in Fort Collins, Colorado, USA. The overall prevalence for *E. coli* ranged from 2% during the coldest time of the year to 94% during the warmest months of the year. During the time of year when nonmigratory geese dominated the local goose population (March–July) the prevalence of enterotoxigenic (ETEC) forms of *E. coli* was 13.0%. The prevalence of enterohemorrhagic (EHEC) forms was 6.0%, while prevalence for enteroinvasive (EIEC) and enteroagglomerative (EAEC) forms was 4.6 and 1.3%, respectively, during the same period. We also examined all samples positive for *E. coli* for genes coding for virulence factors, including: SLT-I, SLT-II, *eae*, *hly-A*, K1, LT, STa, STb, CNF1, and CNF2. Three isolates were positive for human virulence factors, representing a 2% prevalence for faeces containing potential human toxins. Genes for STa were isolated from ETEC strains O-8 and O-167, while the gene for K1 was isolated from an O-8 (ETEC) serogroup. These data will prove useful in focusing attention on the risks that increasing populations of urban Canada geese pose to public health.

Introduction

Increasingly, large numbers of Canada geese (*Branta canadensis*) occur in urban parks, recreation areas, and corporate and residential lawns. While few of the public ever come in direct contact with these geese, they frequently come into contact with goose faeces and faecally contaminated water and lawns. As a consequence, the public and health officials have questioned what human health risks are associated with this faecal contamination (Conover and Chasko 1985; Cooper and Keefe 1997).

In this study we described the prevalence of *Escherichia coli* in Canada goose faeces collected over an 11-month period in Fort Collins, Colorado. Although *E. coli* is part of a normal gut flora of vertebrates, virulent forms do exist (Hussong *et al.* 1979). It is the potential presence of these virulent forms of *E. coli*, as well as other zoonoses (e.g., Converse *et al.* 2001; Roscoe *et al.* 2001), that are of interest to health officials in assessing whether the faecal contamination of parks represents a human health risk factor.

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E. coli that cause human diarrheal illness are classified into groups based upon their virulence properties, mechanisms of pathogenicity, clinical symptoms, and distinct O:H sero-types (Nataro and Kaper 1998). Although surveys for the prevalence of *E. coli* in avian species have been published (Brittingham 1988; Harris 1991; Aguirre 1992; Feare *et al.* 1999; Alderisio and DeLuca 1999), the specific strains of *E. coli* generally have not been characterized as to their serotype or virulence factors.

We undertook this study with the following objectives: (i) to quantify the magnitude of Canada goose faecal load from urban landscapes as an index of human exposure to goose faeces, and as an index of goose population density for a given study site; (ii) to determine whether there was a relationship between faecal load and prevalence of *E. coli*; (iii) to determine whether there were any seasonal patterns for the prevalence of *E. coli*; (iv) to characterize *E. coli* as to their serogroup, and; (v) to characterize *E. coli* for the presence of genes responsible for the production of various human virulence factors.

Methods

Study site description and sampling schedule

Four sites within Fort Collins, Colorado, USA, were selected based on preliminary surveys as being representative of locations with high and low goose activity. Faecal accumulation on fixed sample transects was used as an index of this activity (Mason and Clark 1995, 1996). Each site was characterized as a corporate or residential lawn of approximately 2 acres composed of Kentucky Blue Grass and included the presence of open water. Within each site, three transects (0.6 × 30.5 m each) were established by marking the lawn with spray paint. Once a week for three consecutive weeks the transects were raked to clear away accumulated faeces. Three transects were used to minimize bias estimates on the degree to which geese used areas of turf within the site. On the fourth week all of the faeces occurring within the transect were collected, stored in a zip-lock freezer bag, and transported to the laboratory for analysis. In the laboratory, aggregate samples from each transect were dried to constant weight in ovens (60°C) ~ 48 h, and then weighed. The resulting dry weight served as an index of usage of the site by geese and incorporates information about the amount of time geese spent on a site as well as population size (Mason and Clark 1995, 1996). Higher accumulated dry weights can also be used to infer higher probabilities of humans coming in contact with goose faeces.

During the same period when aggregate faecal samples were collected, we also collected fresh Canada goose faecal samples adjacent to the transect. Goose faeces are readily distinguishable from other waterfowl, bird and mammal faeces. That the faeces were produced by Canada geese was assured because random visits to the sites indicated that Canada goose were the only goose species to visit the sites. Fresh faeces were identified as being firm but moist relative to concurrently available faecal material. No attempt was made to collect liquidy faeces indicative of diarrhea. Care was taken to collect the fresh faeces over a large area adjacent to the transects where the aggregate faecal samples were collected. This procedure minimized the possibility that we over sampled faeces derived from individual geese. We made no effort to obtain cloacal cultures because the principal risk to the public, if any, is not with contact from geese. Rather, the potential health risk to the public is with contact with faeces. The issue of whether variously aged faeces contain viable human pathogens is the subject of another study. This study focused on fresh faecal material only. Fresh faecal material was placed into sterile whirl-packs using aseptic techniques and transported to the laboratory for culture within one to three hours of collection.

Bioassays

Standard culture procedures were used for culture and isolation of *E. coli* (Nataro and Kaper 1998). Faeces were smashed and stirred within the sample bag and a small sub-sample was extracted with an inoculating loop and directly smeared onto MacConkey agar plates and incubated at 37°C for 24 h. Positive and negative controls were analyzed concurrently. Well isolated dark pink colonies indicative of strong lactose fermenters were subcultured onto blood agar plates and inoculated at 37°C for 24 h. Well defined isolated colonies that were light tan to grey were suspected *E. coli* and subjected to three biochemical confirmation tests: KOH, oxidase, and indole. For each test, suitable positive and negative controls were included. Colonies yielding a putative identification for *E. coli* from the biochemical and blood agar tests were subcultured onto MacConkey with sorbitol agar plates which is a selective media for *E. coli* O157:H7 (Isenberg 1992). These cultures were incubated at 37°C for another 24 h. In addition, AP120E strips were used to provide putative identifications of all isolates.

Sixty-two isolates tested positive for *E. coli* and were collected in March, and May through July 1999. These isolates were stored in 3 µl of tryptic soy broth and 3 µl of glycerol at -70°C for subsequent further characterization. Isolates were recultured by inoculation onto nutrient agar slants and submitted to the Penn State Gastro-enteric Wiley Laboratory for serogrouping and toxin assays. Details of the procedures and quality assurance of antisera are posted on the Wiley Lab's web site (<http://ecoli.cas.psu.edu>). Isolates were screened in a presumptive assay using monovalent rabbit antisera reactive with 181 O sero-groups, with positive reactions confirmed by microtitration assays. Antisera were checked and assured for quality in August 2001. Faecal samples were then classified as being positive and containing serogroups belonging to one of the following sero-groups: enterotoxigenic (ETEC), enteropathogenic (EPEC), enteroinvasive (EIEC), enterohemorrhagic (EHEC), enteroaggregative (EAEC), or World Health Organizations (WHO) standard strains of *E. coli*.

O serogroup screening as described above for each isolate consisted of adding 20 µl of each of 181 O antisera into V-bottom 96-well culture plates. To the wells, 180 µl of diluted antigen were added and the plates were incubated at 50°C for 24 h. Agglutination was evaluated with the aid of a micotiter plate viewer, with negative reactions appearing as white buttons at the bottom of the plate and positive reactions as being cloudy to clear. Confirmation for each positively reacting isolate consisted of placing 10 µl of antiserum into the first well of a row on a V-bottom 96-well plate to which was added 190 µl of phenol saline (6 g NaCl, 6 ml phenol brought to 1 l with distilled water). To the remaining wells in the row were added 100 µl of phenol saline. The first well was mixed and 100 µl were transferred to the second well in the row. The process was repeated, thus serially diluting the antiserum for each well ($n = 7$) with the exception that the last well in the row was not diluted. The final titers in wells 1-7 ranged from 1:80 to 1:51. Plates were incubated overnight in a humidity chamber at 50°C. Reactions were scored as described above.

The presence for cytotoxic factor 1 and 2 (CNF1, CNF2), heat-labile enterotoxin (LT), heat-stable enterotoxin a and b (STa, STb), Shiga-like toxin I and II (ST-I, ST-II), *eae*, K1, and *hly-A* genes was determined by a polymerase chain reaction test (PCR) for all positive *E. coli* isolates under contract to the Wiley *E. coli* Reference Center, Pennsylvania State University, State College, Pennsylvania. This method uses repeated cycles of oligonucleotide-directed DNA synthesis to perform in vitro replication of targeted nucleic acid sequence (<http://ecoli.cas.psu.edu>, Ehrlich and Greenberg 1993). The oligonucleotide primers selected for amplification of the various toxin genes were appropriate for Canada-geese. Strains for positive controls were as follows: LT and STb (strain 80.2575, sero-typed O157:K88:H13), STa (strain B41M,

sero-typed O101:NM), K1 (strain U9-41, sero-typed O2:K1:H4). Negative control strains used were: *E. coli* K12 and C600, and water.

Results

We collected 397 Canada goose faecal samples from the four study sites from October 1998 to August 1999. *E. coli* were present in 147 of the samples (37.0%). There was no relationship between the faecal load at each site and the overall prevalence of *E. coli* (Fig. 1, $r^2 = 0$, $P = 1.0$). However, there was a pronounced positive correlation between ambient temperature and

Table 1. Mean temperature compared to the prevalence of *Escherichia coli* throughout the study in Fort Collins, Colorado

Mean temperature (°C) ^a	Mean (g) ^b	± SE	No. of samples ^c	Prevalence (%)	Month
10.72	70.5	20.73	13	46	October
3.17	41.73	9.44	20	30	November
8.45	93.29	44.63	32	9	December
-0.51	49.65	1.13	40	8	January
3.68	63.85	13.75	52	2	February
8.88	54.04	3.46	48	25	March
8.05	17.45	34.9	36	19	April
9.32	6.29	46.61	52	39	May
16.18	42.31	8.82	25	80	June
22.41	23.62	28.43	26	77	July
22.53	95.33	46.77	52	94	August

^aThe mean air temperature in Fort Collins.

^bThe mean dry weight of faeces collected per transect (18.3 m²), $n = 12$. Means were calculated by averaging over the four sampling locations, with each location consisting of three transects.

^cThe total number of fresh faecal samples taken from the four sites.

Table 2. Prevalence of *E. coli* O-serogroups classified by associated pathology grouping isolated from Canada goose faeces in Fort Collins, CO as a function of time

Associated Pathology	March (N = 48)		May (N = 52)		June (N = 25)		July (N = 26)		Total (N = 151)	
	n	%	n	%	n	%	n	%	n	%
Standard WHO Strain	4	6.3	7	13.5	4	16.0	10	36.5	25	16.6
ETEC	4	6.3	7	13.5	5	20.0	3	11.5	19	13.0
EIEC	3	6.3	0	0	2	8.0	2	7.7	7	4.6
EHEC	0	0	4	7.7	3	12.0	2	7.7	9	6.0
EAEC	0	0	0	0	2	8.0	0	0	2	1.3

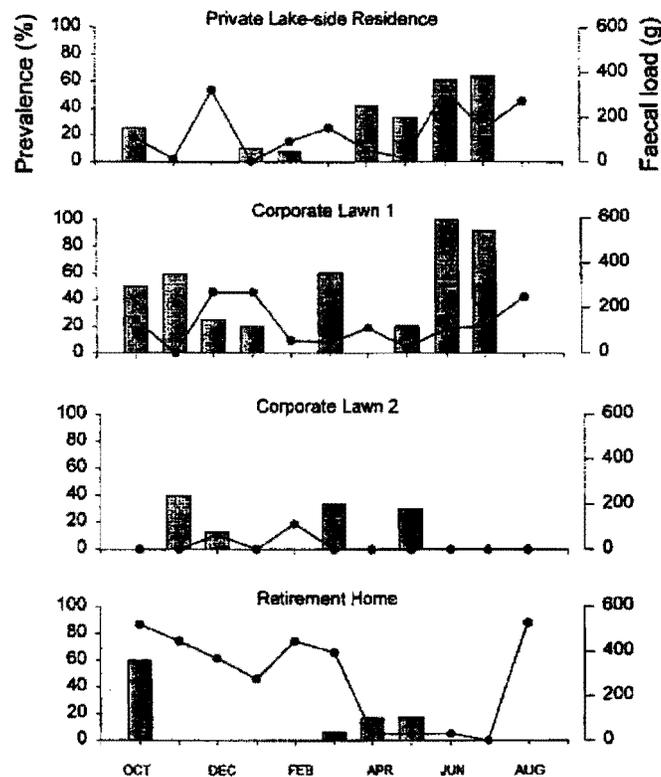


Fig. 1. Profiles of prevalence for *E. coli* (shaded bars) derived from faecal samples and the total dry weight of goose faeces (point and lines) collected during a 7-day period for each of the four study sites as function of time of year.

prevalence for *E. coli* in faeces ($r^2 = 0.823$, $df\ 1,9$, $F = 41.983$, $P < 0.001$). Overall, prevalence for *E. coli* ranged from 2% during the colder months to 94% during the warmest months (Table 1). However, local conditions were also important for how geese used sites and for the prevalence patterns for *E. coli* (Fig. 1).

We characterized the faecal samples in greater detail between March and July. Of the 151 faecal samples collected during this period, 62 (41.1%) were positive for *E. coli* (Table 2). Generally, we isolated only one dominant strain of *E. coli* per faecal sample. Standard O strains (World Health Organization definition) were found in 16.4% of the faecal samples. No one WHO standard strain was found throughout the samples (Table 3). *E. coli* strains consistent with those associated with human illness were isolated from 24.5% of the faecal samples. Serogroups associated with enteropathogenicity were most commonly isolated from faeces (13.0%), with O-8 being the most prevalent ETEC strain (Table 3). Two ETEC isolates tested positive for the presence of genes for heat stable toxin a (STa). These were found in single isolates belonging to the O8 and O167 sero-groups. One ETEC isolate belonging to the O8 serogroup showed the presence of gene sequences for K1, which is related to meningitis and avian respiratory disorders. These isolates were not confined to a single site. Rather they were isolated from faeces at discrete locations within Fort Collins: a corporate lawn, a private

Table 3. Identity and frequency of *E. coli* O-serogroups classified by associated pathology grouping isolated from Canada goose faeces in Fort Collins, CO

Standard WHO Strain		ETEC		EHEC		EIEC		EAEC	
Sero-group	n	Sero-group	n	Sero-group	n	Sero-group	n	Sero-group	n
9	1	6	1	5	1	28	2	3	1
13	2	8	16	18	2	152	1	86	1
36	1	15	1	x25	1	159	4		
54	2	167	1	118	1				
56	1			91	3				
65	1			146	1				
74	1								
79	1								
83	1								
88	1								
102	2								
105	2								
106	1								
113	1								
116	1								
123	1								
132	1								
141	1								
16/89/162*	3								

* Weak reaction positive identification not possible.

lake-side residence, and a retirement home. No O157:H7 isolations were identified, although 6.0% of the samples were classified as EHEC strains. All isolates were negative for the following toxin genes: CNF1, CNF2, *eae*, *hly A*, LT, SLT1, SLT2, and STb. Approximately 4.6% of the strains belonged to sero-groups associated with EIEC forms of *E. coli*, while 1.3% belonged to strains associated with EAEC.

Discussion

The overall prevalence pattern described for *E. coli* in this study is similar to the patterns found in other studies. Feare *et al.* (1999) found *E. coli* in approximately 50% of cloacal and faecal samples derived from Canada geese in London parks. Hussong *et al.* (1979) reported enterotoxigenic bacteria from waterfowl without specification. Converse *et al.* (2001) failed to find *E. coli* O157:H7 in a survey of Canada geese in the eastern United States. However, they did not assay for other hemorrhagic forms of *E. coli*. There remains the possibility that O157:H7 might be detected in goose faeces during other times of the year, such as during the migration and overwintering periods. These migratory populations frequently travel between urban sites and rural settings where they might come into contact with stock pastures and faeces, and hence be exposed to environmental sources of pathogenic *E. coli* (Kudva *et al.* 1998). We do not

believe this to be the case in this study. Geese do move from the urban to rural environment during the fall and winter. However, the rural fields visited around Fort Collins tend to be harvested grains and have not been subjected to fertilization with manure at that time of year. Also, being an arid environment, free-ranging dairy herds are not common.

This is the first study to exhaustively characterize *E. coli* sero-groups derived from faeces of any wildlife species. While sero-grouping does not provide information about the presence or absence of specific human virulence factors, it has been an historically reliable correlate indicating association with specific disease states (Sears and Kaper 1996; Nataro and Kaper 1998; Chattopadhyay *et al.* 2001). Moreover, we identified human virulence factors, specifically two isolates for STa and one for K1 for a combined prevalence of 2% of faecal samples. The low prevalence of human virulence factors and the absence of clusters of human diarrhea cases in Fort Collins may suggest that Canada goose faeces does not pose a significant human health risk. However, we argue that such a dismissal may be unwarranted. Because geese and their faeces are distributed across urban landscapes it may be more difficult to identify disease clusters should they occur. Should clinical cases be reported, data characterizing *E. coli* sero-groups from urban goose populations may prove useful in identifying potential risk factor sources. For example, a higher than expected frequency of O-8 sero-groups identified in clinical evaluations might occur. By itself this information would certainly not be conclusive. However, it could direct officials to investigate the possibility of geese as a source of infection.

The mere presence of large numbers of geese on lawns, and by association, large quantities of faeces, have raised the public's concern about the safety of parks, sports fields, and golf courses (Feare *et al.* 1999; Fallacara *et al.* 2001). Yet little is known about what real health risks these geese might pose to the public. Ideally inferences of health risk of goose faeces to humans should be based upon the probability of encounter rate with virulent forms of *E. coli*. However, we often lack the detailed information about the prevalence for virulence factors that is necessary to make park and goose management decisions (Feare *et al.* 1999). Information about seasonal goose behavior, faecal distribution patterns, environmental conditions, prevalence of virulent strains of bacteria, and recreational use patterns of parks by humans are needed to estimate the probabilities for which humans may encounter virulent strains of bacteria.

Based on the observations obtained in this study we illustrate a scenario for a possible encounter rate of an individual taking a 1-mile walk in a park. That individual would take approximately 3,500 strides, and with an average imprint of 0.03 m² per stride, the individual would come in contact with approximately 106 m² of turf. The hiker's encounter rate with faeces will vary, depending upon location and time of year. Using dry faecal weights per transect (Table 1) and the average dry faecal weight of an individual piece of faeces (1.34 g ± 0.10 SEM, *n* = 50), the hiker might encounter from none to four pieces of faeces per meter during a walk. For example, based on values in Table 1, there was an average of 95 g of faeces per transect in August. Dividing by 1.34 g per individual piece of faeces yields 71 faeces per transect. Each transect is 18.3 m², thus, the density of faeces would be approximately 4 m⁻¹. Multiplying this value by the total area of contact by the hiker's shoe (106 m²) yields an estimated faecal encounter rate of 424 pieces per walk. At a 2% prevalence the hiker is likely to come into contact with eight pieces of faeces containing virulent strains of *E. coli*. The likelihood of infection of course would depend upon additional factors, such as the hiker's natural resistance to challenge, and the behavior and hygiene practices of the hiker after they remove their shoes.

We emphasize that this scenario is an illustration of how an estimate of risk can be assessed for public lawns. It is not intended to provide a unitary definitive value for the calculation of risk to human health that Canada geese pose. However, as more details about seasonal variations in

prevalence and local goose abundance are acquired, this information could be used in the development of cogent wildlife management and public health plans. If the level of human health risk is perceived to be too high, public health officials could post alerts in areas of goose use indicating to the public that sanitary precautions should be taken. These precautions would include recommendations that contact with turf and faeces should be minimized, that shoes should be removed before entering homes, and hands should be washed thoroughly with antibacterial soaps. Alternatively, wildlife managers could act to reduce local goose populations such that the estimated faecal encounter rate is reduced to an acceptably low level.

As mentioned, several factors will affect the prevalence of virulent strains of *E. coli* found in goose faeces, with survivability of the bacterial strains being the most obvious factor. Warmer temperatures will promote growth and survivorship better than colder temperatures, as evidenced in Table 1. Humidity and precipitation (natural and irrigation) will affect desiccation rates of faeces. Moister faeces provide for a more favorable environment for bacterial growth and survivorship. For example, *E. coli* O157:H7 were able to grow and proliferate for up to 2 days in fresh chicken manure at 20°C, with increases of 1–2 log units in cfu. Thereafter increasing free ammonia concentrations in the faeces lowered survivorship. Survivorship was also lowered by drying the manure (Himathongkham and Riemann 1999). While the longevity of *E. coli* in goose faeces held under environmentally fluctuating conditions is unknown, studies on *E. coli* O157:H7 survivorship in ovine and bovine manure yielded longevities from 47 to 630 days (Kudva *et al.* 1998).

The overall prevalence for all strains of *E. coli* in Fort Collins did not correlate to faecal density, and by implication extant goose numbers. Rather, it was positively related to prevailing warmer seasonal temperatures, being higher in the spring and summer and lower during the fall and winter. Besides these obvious environmental correlates to overall prevalence the behavior of geese may also have contributed to the prevalence patterns. During the fall and winter, despite there being large populations of migratory and nonmigratory geese present, the daily movement patterns of the birds largely are concentrated onto dry upland harvested grain fields outside of town and on turf within the town. These birds are not likely to come in contact with habitats contaminated with mammalian sources of *E. coli*. In contrast, during the spring and summer the goose population consists of nonmigratory birds. These birds do not move far from their nests during breeding. Moreover, the habitat consists of small water impoundments and littoral zones that easily become fouled. When the birds do range from their nest area they are more likely to visit outlying agricultural areas that are surface-treated with manure from local feedlots and dairies. Several studies have shown that environmental contamination from pathogenic and nonpathogenic strains of *E. coli* occurs with this practice of manure spreading (Kudva *et al.* 1998; Gagliardi and Karns 2000; Ogden *et al.* 2001). Thus, it is arguable that resident birds may be (1) exposed to greater levels of environmental *E. coli*, (2) that these birds will tend to concentrate any potential bacterial contamination over a smaller area because of their decreased mobility, and (3) that the survivorship of *E. coli* in faeces is longer because of optimal growth conditions. Together these events may translate to cause for concern for the health and well being of the public utilizing public lawns and parks. Should the concern warrant action is a matter of public debate relative to the costs and benefits that wildlife provide. Actions may consist simply of public health advisories, harassment of geese to reduce numbers, lethal removal of geese, or treatment of the turf with agents that lessen growth and survivorship of potentially pathogenic bacteria. For example, carbonate anion has been used to kill *E. coli* in dairy cattle manure (Arthurs *et al.* 2001; Jarvis *et al.* 2001), and may provide a means to manage lawn contamination from *E. coli* in goose faeces in public parks.

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