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# Do you want to rehab RVS?

An introduction to  
rehabilitating RVS



USFWS

# An Introduction to Rehabilitating RVS

## Topics covered:

- Understanding rabies
- Obtaining the permit
- Protecting yourself and others
- Meeting species needs
- Dealing with the public
- Pros and Cons on becoming an RVS rehabilitator
- Rehabilitator responsibilities

**TYPE OF PERMIT/LICENSE:**  
Rabies Species

**SPECIES AUTHORIZED:**

- Birds, Raptors
- Mammal, White-tailed deer (Fawn)
- Rabies Species (Bat, Raccoon, Skunk, Fox, Bobcat)

Captivity License for Wildlife Rehabilitation		AUTHORITY
North Carolina Wildlife Resources Commission Regulated Activities Permits Section 1707 Mail Service Center Raleigh, NC 27699-1700		GS 272.5
Phone: (866) 248-6834 Fax: (919) 707-0292		RULES 15A NCAC 10H .1401-.1406
PERMITTEE/LICENSEE [REDACTED]		Page 1 of 2 PERMIT NUMBER [REDACTED]
TYPE OF PERMIT/LICENSE: Rabies Species		EFFECTIVE 01/09/2020
SPECIES AUTHORIZED: - Birds, Raptors - Mammal, White-tailed deer (Fawn) - Rabies Species (Bat, Raccoon, Skunk, Fox, Bobcat)		EXPIRES 12/31/2020
AUTHORIZED LOCATION(S): [REDACTED]		COUNTY DISTRICT
<b>CONDITIONS AND AUTHORIZATIONS:</b> This license authorizes the possession of injured, crippled, or orphaned, native wild animals or wild birds, depending on the categories listed under "Species Authorized", for the purpose of providing short term care and eventual release in to the animal's natural habitat. This license does not authorize holding any wild animals or wild birds other than those animals in the process of being rehabilitated for release. Wild animals or wild birds held under the authority of this license are authorized to be held for rehabilitation purposes only and may not be held as pets or for education, exhibition, or scientific purposes. Rehabilitation activities authorized under this license shall be conducted at the authorized location designated on this license. The licensee shall meet the minimum standards set forth in 15A NCAC 10H .1402(g)(1). All wild animals and wild birds undergoing rehabilitation shall be kept separated from pets, domestic animals, livestock, and non-native animals. All wild animals shall be kept in separate enclosures by species. Handling of animals shall be for treatment only. Wild animals and wild birds undergoing rehabilitation may remain in a rehabilitation facility for no longer than 180 days. If a longer rehabilitation period is needed, the licensee shall notify the Commission in writing. Wild animals and wild birds shall not be released on property owned by another unless the rehabilitator has written permission dated within the last 12 months from the landowner. A permit is also required from the U.S. Fish and Wildlife Service for the rehabilitation of injured and orphaned migratory birds. For federal permit information, contact the U.S. Fish and Wildlife Service, Migratory Bird Permit Office, 1675 Century Blvd., NE, Atlanta, GA 30345. Rabies Species: All rabies species shall be considered potentially infected with the rabies virus. If any human or domestic animal has been scratched, bitten, or exposed to saliva, the fluid that surrounds the brain and spinal cord, or brain and spinal cord material from any rabies species, the licensee holder shall contact the local health department immediately to report the incident. Rabies Species: Facilities housing rabies species shall be separate from facilities housing non-rabies species. Enclosures within the facility shall prevent escape of the animal and exposure to people, pets, livestock, and other captive or free-ranging wildlife. Exterior caging shall be locked.		

# Rabies

- Virus
- All warm-blooded animals susceptible
- Fatal in wildlife
- Transmitted when saliva introduced into a wound or cut



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# Rabies

- Virus moves to spinal chord and brain
- Symptoms include behavioral changes and signs of neurological disorder
- Testing requires brain tissue



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# Rabies

- Variant strains adapted to certain species



Blanton et al. 2010

# Rabies

- RVS in NC – bat, raccoon, skunk, fox, bobcat

Fox



Creative Commons – Mike Birds



Creative Commons – Susan Young

Bobcat



Creative Commons – James Abbott

Skunk



Creative commons - Rohloff

Raccoon



Creative Commons - Stein

Bat



Creative Commons - Kovacs

# Rabies

Rabies, the Disease,  
Testing, and Immunization

Dr. Carl Williams

10:10 – 12:00

# Permit Application Requirements

- Hold active rehab license for at least previous 3 years
- 12 hours of RVS training
- Licensed vet agreeing to provide treatment

## RVS Training

### Rabies the Disease

*Dr. Erica Best, Department of Health*

Rabies, vectors, vaccination, titers, testing procedures, and more are covered in this session.

### Wildlife Rehabilitation RVS Regulations

*Daron Barnes, NCIFRC*

RVS regulations, permit application requirements and procedures, rehabilitator responsibilities, care restrictions, release restrictions, and transport protocols are covered in this session.

### Raccoon Rehab

*Barbara Ray*

Handling, housing and care of raccoons

### Bats 101: Anatomy and Species ID

*Linda Bowen*

Learn the unique anatomy of our only flying mammal along with specific, often time subtle features, that will be used to identify the 17 species of bats found in NC (*RVS Rehabilitators, General, Vet Tech CE*)

### Bats 101: Adult Husbandry

*Linda Bowen*

Housing, care and handling of healthy adult bats.

### Bats 101: Injuries and Illness

*Linda Bowen*

How to identify, stabilize and treat common injuries and illnesses found in bats

### Bats 101: Raising Bat Pups

*Linda Bowen* Techniques for raising orphaned pups for release into the wild. From formula to flight cage training.

### Skunk Rehab

*Elisa Fosco*

Handling, housing and care of skunks

### Fox Rehab

*Elisa Fosco*

Handling, housing and care of foxes

### Bobcat Rehab

12 credit hours



# Permit Application Requirements (cont.)

- Up-to-date rabies immunization
- Notification to local animal control and health department

RAPID FLUORESCENT FOCUS INHIBITION TEST - ENDPOINT  
K-STATE RABIES LABORATORY  
MANHATTAN/K-STATE INNOVATION CENTER  
2005 RESEARCH PARK CIRCLE  
MANHATTAN KS 66502  
(785) 532-4483

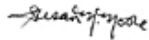
Received Date: 10/25/19  
Report Date: 11/01/19  
Date of Report Print: 11/15/19

SUBMITTED BY  
TIDEWATER REHABILITATION AND ENVIRONMENTAL EDUCATION  
943 MORGAN TRAIL  
VIRGINIA BEACH VA 23464

RFFIT #	Patient	Date of Draw	Rabies Titer-Response IU/mL
R19-050304-7	Jane Doe	10/19/19	0.1 IU/mL

Reportable range is 0.1 to 15.0 IU/mL  
LESS THAN 0.1 IU/mL: Below detection limit

A result of 0.5 or higher is considered acceptable

RABIES NEUTRALIZING ANTIBODY TITRATION (RFFIT) RESULT VERIFIED BY:  
  
Susan M. Moore, Director  
Rabies Lab KSVDL

In humans, a result of 0.5 IU/mL, or higher is considered an acceptable response to rabies vaccination according to the World Health Organization (WHO) guidelines; see WHO and Advisory Committee on Immunization Practices documents for additional guidance. Also, there is more information at [www.vet.ksu.edu/rabies](http://www.vet.ksu.edu/rabies). (Note: the symbol ">" means "greater than" and ">=" means "greater than or equal to")

Results are confidential personal health information. All disclosures must be in accordance with HIPAA.

0.1

# Permit Application Requirements (cont.)

- Caging meets minimum standards (3<sup>rd</sup> edition)
- Caging prevents escape and exposure
- Caging includes double fencing or solid wall barrier

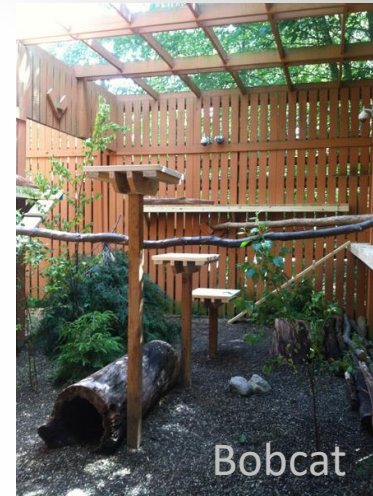


Photo courtesy of Lake Metroparks Wildlife Center



Photo by Linda Bowen



Photo by Barbara Ray

# Housing Requirements

- Minimum standards (WxLxH)

	<u>For Single</u>	
– Raccoons	6'x8'x6'	30 square feet per animal
– Skunks	6'x8'x6'	
– Foxes	4'x4'x8'	
– Bobcat	8'x8'x6'	
– Bats (varies by species)		
	6'x8'x8' for Little Brown	
	8'x12'x8' for Evening	
	10'x20'x8' for Big Brown	

\*Minimum Standards for Wildlife Rehabilitation, 3rd edition

# Regulations

- Coordinate for euthanasia and testing
- Report exposure to local Health Department
- Keep and submit records



The screenshot shows the NCDHHS website with a navigation menu and a sidebar. The main content area is titled "County Health Departments" and lists several counties with their addresses and phone numbers. The sidebar on the right contains a "Public Health" section with various links.

**NCDHHS** Search All DHHS Websites... NC.GOV AGENCIES JOBS SERVICES

Home Assistance Divisions Documents Providers News About Contact

NCDHHS > Divisions > Public Health > County Health Departments

## County Health Departments

[Alamance](#) : 319 N. Graham-Hopedale Rd, Burlington, NC 27217; (336)227-0101

[Alexander](#) : 338 1st Ave, S.W. Taylorsville, NC 28681; (828)632-9704

[Alleghany](#) : 157 Health Services Rd, Sparta, NC 28675; (336)372-5641

[Anson](#) : 110 Ashe St, Wadesboro, NC 28170; (704)694-5188

[Ashe](#) : 413 McConnell St, Jefferson, NC 28640; (336)246-9449

[Avery](#) : 545 Schultz St, Newland, NC 28657; (828)733-6031

[Beaufort](#) : 1436 Highland Dr, Washington, NC 27889; (252)946-1902

[Bertie](#) : 102 Rhodes Ave, Windsor, NC 27983; (252)794-5322

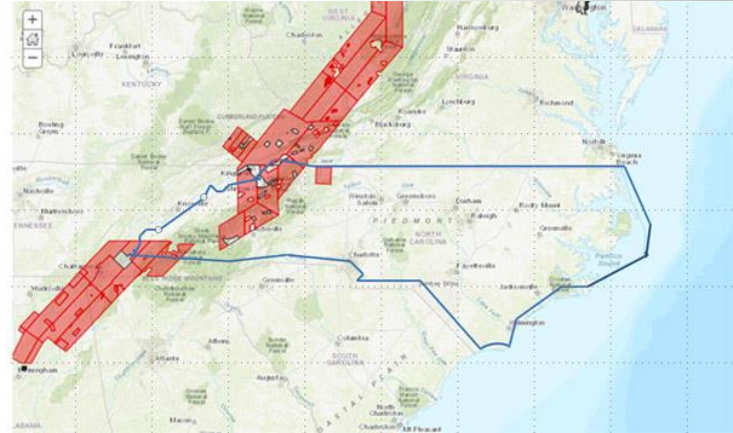
**Public Health**

- Safety Net Dental Clinics
- Benton\_Mark
- Child\_Service\_Coordination
- Cornell\_P\_Wright
- County Health Departments**
- Ebola Information
- Hepatitis C Testing
- Know Your Sickle Cell Trait
- North Carolina Safer Syringe Initiative



# Regulations

- Only healthy released,  
Non-releasables euthanized
- Released only where rehabilitated or found
- Release not authorized in ORV program counties



# Protecting Yourself & Others

- Only permitted may handle RVS
- Litters housed separately
- Gloves worn for all handling including feeding



NPS

# Regulations

RVS Regulations

Daron Barnes

1:00 – 2:50

# Meeting Species Needs

## Raccoons

Cages used for raccoons should not be used for other species.

Do you know why?



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# Meeting Species Needs

## Foxes

Gray foxes can climb trees. Red foxes can not.



Creative Commons – Mike Birds



Creative Commons – Susan Young

# Meeting Species Needs

## Skunks

Ambitious diggers

What does that mean  
for housing?



Creative Commons

# Meeting Species Needs

## Bobcats

Distinctive markings on their front limbs



Photo courtesy of Lake Metroparks Wildlife Center

# Meeting Species Needs

## Bats



NPS

A mammal that flies and eats frogs, fish, nectar, insects, fruit and even blood



# Meeting Species Needs

## Raccoons

Barbara Ray

Saturday 3:10 – 5:00

Sunday 8:30 – 10:20

## Bats

Linda Bowen

Sunday 10:40 – 12:30

Sunday 1:30 – 3:20

## Skunks

Elisa Fosco

Saturday 9:00 – 9:50

## Bobcats

Traci Keller

Saturday 3:10 – 5:00

## Foxes

Elisa Fosco

Sunday 10:40 – 11:30

# Dealing with the Public

- Determine if there has been exposure
- Elicit truthful and reliable information
- Discourage handling
- Arrange safe transport



# Dealing with the Public

- Do not give medical advice
- Refer exposed to health department or physician
- Ensure animals are tested



# Why Rehabilitate RVS

## Pros

- Raccoons/Skunks/Foxes/Bats
  - To provide a safe place for orphans to be rehabilitated
  - Prevent exposures
  - Opportunity to identify exposures
- Bats
  - White-nose-syndrome
  - They are threatened and need help

# Why Rehabilitate RVS

## Cons

- Expense
  - Cost of vaccines and titer checks
  - Liability and insurance costs
  - Animal vaccinations and vet expenses
  - Housing for larger animals
  - Housing security



# Why Rehabilitate RVS

## Cons (cont.)

- Transporter issues (vaccinated and covered by your insurance)
- Time commitment for training orphans
  - Live prey testing
- Finding release sites

# Rehabilitator Responsibilities

- Limiting exposure (Health Department fear)
- Limiting disease transmission (NCWRC fear)

We worked hard to be allowed to do RVS in NC. NC could lose the privilege to rehab RVS if we all don't act responsibly.

# Training Record

- Keep record of training
  - Record stamped at end of each class
  - Board member to sign
- Submit sheet with permit application

Make sure to record class attendance with stamp on form!

18<sup>th</sup> Annual Wildlife Rehabilitators of North Carolina (WRNC) Symposium  
January 25-26, 2020 – NC State College of Veterinary Medicine, Raleigh, NC

## RVS Training Sessions Record Sheet

Date	Title of Session	Speaker	# of Hours	WRNC Verification
1/25/20	Introduction to RVS	Toni O'Neil	1	
1/25/20	Captive Rearing & Rehabilitation of Striped Skunks	Elsa Fosco	1	
1/25/20	RVS, the Disease and Vaccinations	Dr. Carl Williams	2	
1/25/20	RVS Regulations	Daron Barnes	2	
1/25/20	Raccoon Rehab	Barbara Ray	2	
1/25/20	Bobcat Rehab	Traci Keller	2	
1/26/20	Raccoon Rehab (continued)	Barbara Ray	2	
1/26/20	Captive Rearing & Rehabilitation of Northern American Foxes	Elsa Fosco	1	
1/26/20	Bat Rehab	Linda Bowen	2	
1/26/20	Bat Rehab (continued)	Linda Bowen	2	
TOTAL RVS HOURS ATTENDED				

Signature of Registrant \_\_\_\_\_

Address/City/State/Zip Code \_\_\_\_\_

WRNC Staff Signature (for states where required) \_\_\_\_\_

# Questions?

Wildlife Rehabilitators of North Carolina