

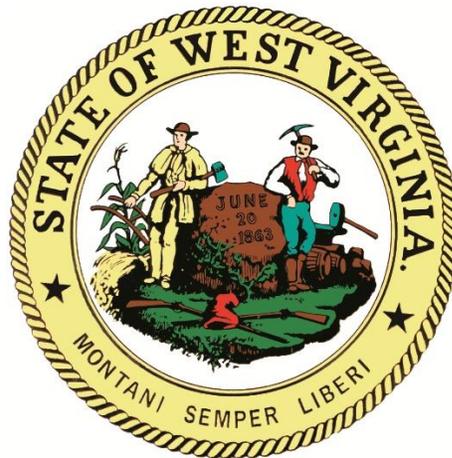
# STATE OF WEST VIRGINIA DEPARTMENT OF HEALTH

## Rabies Surveillance, Management and Control Manual

Office of Epidemiology & Prevention Services and  
Office of Environmental Health Services Procedures Manual

MEMORANDUM DISEASE CONTROL-FOUR

2026



**WV DEPARTMENT OF HEALTH**  
**Office of Epidemiology & Prevention Services and**  
**Office of Environmental Health Services Program Manual**

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**RABIES SURVEILLANCE MANAGEMENT AND CONTROL MANUAL**

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**RABIES SURVEILLANCE MANAGEMENT and CONTROL GUIDE**

**West Virginia Department of Health /Bureau for Public Health/Office of Epidemiology and  
Prevention Services**

**West Virginia Department of Health & Human Resources/Bureau for Public Health/Office of  
Environmental Health Services**

**West Virginia Department of Health & Human Resources/Bureau for Public Health/Office of  
Laboratory Services**

**United States Department of Agriculture/Animal & Plant Health Inspection Service/Wildlife  
Services**

**West Virginia Division of Natural Resources**

**West Virginia Department of Agriculture**

**Berkeley-Morgan County Health Department**

**Cabell-Huntington Health Department**

**I. Background**

Human rabies in the U.S. is a rare disease. Of 14 individuals dying of rabies in the United States between 2014 and 2023, 9 (64.3%) had bat strain rabies, 3 (21.4%) had dog strain rabies, 1 (7.1%) had eastern raccoon strain rabies, and 1 (7.1%) had mongoose strain rabies. All individuals with dog strain and mongoose strain rabies were exposed overseas. The source of exposure was unknown for the individual with raccoon strain rabies.

Rabies virus is widely distributed throughout every continent in the world. It is estimated that more than 59,000 people in the world die of rabies every year, usually after the bite of an infected dog. Ninety-five percent of rabies deaths occur in Africa or Asia.

Rabies is a viral disease that affects the central nervous system of mammals and causes encephalitis. The rabies virus is transmitted from an infected animal to another animal by a bite or contamination of an open cut, wound or mucous membranes with saliva or central nervous system (CNS) tissue containing rabies virus. The virus invades the mucous membranes or central nervous system by way of nerve pathways. After local proliferation of the virus, the infection progresses along peripheral nerves to the brain.

Unvaccinated dogs and cats create serious problems by carrying rabies from wildlife into proximity with human populations. Even though rabies is relatively rare among dogs and cats, the control of stray, ownerless dogs and cats should be a major consideration in any rabies control and management program.

In the continental boundaries of the U.S., the chief vectors of this disease, in order of incidence, include bats, raccoons, skunks, and cats. In West Virginia, raccoons represent the major wildlife reservoir of rabies virus with spill over into other wildlife and domestic animals. Each year cats are found positive for rabies in West Virginia and, more uncommonly, dogs. Cats are the domestic animal species most commonly diagnosed with rabies in West Virginia. Between 2001 and 2014, 124 cats were detected with rabies in West Virginia. Livestock including horses, cows and goats are on occasion also found to be rabies positive, particularly in areas of the state that are endemic for raccoon-strain rabies. In addition to these terrestrial reservoirs, several species of insectivorous bats are reservoirs for rabies.

The incubation period is the time from exposure to onset of clinical disease. The incubation period may vary from a few days to several years but is typically one to three months. The virus can infect and remain localized at the inoculation (bite) site for several months. Once the virus reaches the brain it multiplies rapidly and invades the salivary glands. During this period of cerebral infection, the classic behavioral changes associated with rabies develop. The virus can be found in saliva and neural tissues but not blood, nor feces nor the spray of a skunk. Not all brain infections are caused by the rabies virus. Therefore, it takes careful observation and diagnostic procedures by physicians and veterinarians to make accurate clinical diagnosis. The final diagnosis of rabies is based on laboratory examinations.

## **II. Definitions/Explanations**

### **Vector Species**

Vector species include bats or terrestrial mammals, especially carnivores. Wild species known to be reservoirs of rabies include, but are not limited, to raccoons, skunks, foxes, coyotes, bobcats, wolves or any hybrids between these wild species and domestic dogs and cats. Domestic species include, but are not limited, to dogs, cats, and ferrets.

Small rodents such as mice, rats, gerbils, hamsters, squirrels, chipmunks, etc. are almost never found to be rabid. Groundhogs are occasionally found to be rabid in areas where raccoon strain rabies is enzootic.

### **Human Exposure**

Human exposure is defined as any bite or scratch from a vector species or the introduction of saliva or central nervous system (CNS) tissue from a vector species into an open, fresh wound or mucous membrane (eye, mouth, or nose) of a human being. The touching or handling of a vector species or another animal or inanimate object that had contact with a vector species does not constitute an exposure unless wet saliva or CNS material from the animal entered a fresh, open wound or had contact with a mucous membrane. A fresh wound is defined as a break in the skin that has bled within the last 24 hours.

### **Animal Exposure**

Animal exposure is defined as a bite or scratch from a vector species, or the introduction of saliva or CNS tissue from a vector species into a break in the skin or mucous membranes of a domestic animal. Witnessing a bite or attack by a vector species is not required in order for an exposure to have occurred.

Any vector species which has exposed a domestic animal and is not available for laboratory testing should be presumed to be rabid. Domestic animals that bite other domestic animals are not usually considered as rabies suspects unless they show signs compatible with the disease.

When a female dog, cat or ferret or any of her litter of offspring are exposed to a rabid animal the entire family group should be treated as the exposed unit. Disposition, either confinement or euthanasia, should be recommended for the entire group.

### **Surveillance**

Surveillance is “the continued watchfulness over the distribution and trends of incidence [of a disease] through the systematic collection, consolidation, and evaluation of morbidity and mortality reports and other relevant data.” [Alexander Langmuir] Passive surveillance for rabies

includes monitoring of animals involved in exposure, receiving rabies reports and data, and reporting rabies post-exposure prophylaxis (PEP). Active surveillance testing of road kills, sick animals, and animals with other clinical signs of rabies. Active surveillance activities may occur when new cases of rabies are detected in an area that has not had previously detected cases. In West Virginia, active surveillance has been performed in counties on either side of the leading edge of raccoon strain rabies epizootic for correct placement of the oral rabies vaccine barrier.

### **Confinement**

The animal is housed in a building, pen or by some other suitable escape-proof method or enclosure. Tying the animal in an open yard is not adequate confinement. The animal cannot be removed from confinement unless on a leash and under the immediate control of a responsible adult. The animal may not be moved from the premises unless permission is obtained from the local health department. Under no circumstances should the animal be permitted to run at large during the confinement. If an animal shows any sign of illness, the owner or custodian must immediately notify the local health department and ensure the animal is examined by a veterinarian. If rabies is suspected, the animal should be immediately euthanized and the brain submitted for rabies testing. To avoid misunderstanding, such instructions should be provided to the owner or custodian in writing. There are no established observation and confinement periods for any animals other than dogs, cats or ferrets.

### **Strict Isolation**

Strict isolation is defined as a kennel in a veterinary hospital, animal control facility, commercial boarding establishment, or a pen at home (see Appendix A) that prevents direct contact between the animal and any human or other animal, but allows for observation, feeding, watering and sanitation. The local sanitarian is responsible for approving the adequacy of the isolation unit.

### **Currently Immunized Against Rabies**

A domestic animal is currently immunized against rabies if a certificate of vaccination is available that describes the animal adequately and documents that the animal received a rabies vaccine approved by the United States Department of Agriculture (USDA) from a licensed veterinarian. The duration of immunity must be adequate for the animal species and age as described on the USDA's approved vaccine label. In lieu of a vaccination certificate, the records of the attending veterinarian may suffice. A current list of licensed rabies vaccines marketed in the U.S. including recommended booster intervals are available in the National Association of State Public Health Veterinarians (NASPHV)'s Compendium of Animal Rabies Prevention and Control. (<http://www.nasphv.org/Documents/NASPHVRabiesCompendium.pdf>).

## **Signs of Rabies in Domestic Animals**

Signs of rabies in domesticated animals are varied. Two characteristic clinical conditions are noted when domestic animals are infected with rabies virus. These are usually evident as a change in “expected” behavior. 1) Paralytic (dumb) form of rabies, the animal may become unusually shy or hide and become very approachable. This may be followed by sluggishness, confusion and depression. 2) Furious (encephalitic) form of rabies, the animal may become excitable, irritable and aggressive. At times it may seem confused and calm, then suddenly attack when approached. It may lose all caution for natural enemies. Other signs may include staggering, weakness and paralysis, a change in the sound of the animal’s voice, inability to eat or drink, drooling, convulsions (seizures), paralysis, coma and frothing at the mouth. The virus is lethal and animals with these signs usually die within a matter of days.

## **Signs of Rabies in Wildlife**

An animal may be infected with the rabies virus for a long time before it shows clinical signs. This period may range from weeks to years; most commonly weeks to months, depending on the location of the bite, severity of bite, amount and strain of virus introduced from a rabid animal and other variables. Wild animals may show signs which include aggression, unusual friendliness, disorientation, paralysis, whining, drooling, choking and frothing at the mouth. Rabid wildlife will attack inanimate objects (e.g. a ground hog attacking a shovel left outside).

### **III. Management of Human Exposures**

#### **A. Legal Citations:**

[§19-20-9a](#). Dogs, cats, etc.; rabies observation. (West Virginia State Code, WV Department of Agriculture)

(a) Any person who owns or harbors any dog, cat or other domesticated animal, whether licensed or unlicensed, which bites any person, shall forthwith confine and quarantine the animal for a period of ten days for rabies observation.

(c) If the animal is not confined and quarantined as directed in subsections (a) ... of this section, the humane officer, dog warden or sheriff may cause the animal to be placed in the custody and care of a licensed veterinarian for that purpose at the owner's expense. The penalty for any violation of this section is a fine of fifty dollars or confinement in the county or regional jail for a period of no less than two nor more than three days.

[64 CSR7-5.3](#). (Legislative rule, WVDH) If the animal is a domestic dog, cat or ferret, the local health officer shall make a reasonable attempt to determine the animal's owner, and, if successful, shall direct the owner to confine the animal for a period of ten days. The owner of the dog cat or ferret, county humane officer, dog warden or sheriff shall notify the local health officer immediately if the animal shows symptoms compatible with rabies or dies, and the local health officer, county humane officer, dog warden or sheriff shall arrange for appropriate examination of the animal's brain at the Office of Laboratory Services.

[64 CSR7-5.4](#). If the local health officer cannot determine the owner of the domestic dog cat or ferret, he or she shall direct the county humane officer, dog warden or sheriff to pick up the suspect dog cat or ferret that has bitten a person and confine it in isolation for a period of ten days. If the animal shows symptoms compatible with rabies, including if the animal bit someone without provocation, or if the animal demonstrates aggressive behavior toward human beings such that the animal may pose a continuing risk to other people, the local health officer shall direct the county humane officer, dog warden, sheriff, or other designee to humanely destroy the animal and arrange for appropriate examination of the animal's brain. If the animal dies, the local health officer shall arrange for appropriate examination of the animal's brain at the office of laboratory services.

[65 CSR7-5.5](#). If a person is reported bitten by any animal having or suspected of having rabies other than a domestic dog cat or ferret, especially a wild mammal or hybrid, the local health officer may direct the county humane officer, dog warden, sheriff, or other designee to have the animal humanely destroyed immediately and to arrange for appropriate examination of the animal's brain at the office of laboratory services.

[65 CSR7-5.6](#). Any person who becomes aware of the existence of an animal apparently afflicted with rabies shall report the existence of the animal, the place where it was last seen, the owner's name, if known, and the symptoms suggesting rabies to the local health officer immediately.

B. Owned Companion Animals (dogs, cats or ferrets):

Any person who owns or harbors any dog, cat or ferret, whether licensed or unlicensed, which bites any person, shall ... confine ... the animal for a period of 10 days for rabies observation ([§19-20-9a](#)). A Notice of Animal Quarantine, Form [SG-59](#) (see Appendix H) shall be issued by the local health officer or his designee ([64CSR7](#)).

In some situations, immediate euthanasia and testing of the animal(s) may be preferable including when: a) there is a severe bite on the head, face, neck or hands, b) there are severe bites resulting in hospitalization or death, or c) the animal has a past history of biting.

The animal shall not be killed, sold, released or given away during the quarantine period. Administration of the rabies vaccine is not recommended during the observation period. Any illness in the animal should be reported immediately to the local health department. If signs suggestive of rabies develop, the animal should be euthanized and its head submitted for rabies examination to the Office of Laboratory Services (OLS).

If the suspect animal is not confined as directed, the humane officer, dog warden or sheriff may cause the animal to be placed in the custody and care of a licensed veterinarian for that purpose at the owner(s) expense and can fine/imprison the owner ([§19-20-9a](#)).

C. Stray Dogs, Cats or Ferrets:

If the dog, cat or ferret responsible for the bite and/or exposure has no known owner (i.e., no one in the community who harbors or maintains the animal), the local health officer shall direct the county humane officer, dog warden or sheriff to confine the suspect animal for a period of 10 days for rabies observation. A Notice of Animal Quarantine, Form [SG-59](#) (Appendix H) shall be issued by the local health officer or his designee. If symptoms of rabies develop, the animal shall be humanely euthanized and tested. If the animal dies its head should be immediately submitted for testing at OLS ([64CSR7-5.4](#)).

In some situations, immediate euthanasia and testing of the animal may be preferable, especially when: a) there is a severe bite on the head, face, neck or hands; b) there are severe bites resulting in hospitalization or death; c) the animal has a past history of biting; or d) the animal will not have an owner at the end of the 10-day quarantine period.

If the animal is not available for either quarantine or laboratory testing, the attending physician (as necessary, with the assistance from the local or state health departments) should evaluate the level and type of animal exposure in determining the need for rabies post exposure prophylaxis (PEP). The decision to start any immunization regimen rests between the physician and the patient.

D. Other Mammals Owned and Kept as Pets (e.g., hamsters, gerbils, rats, mice, rabbits, guinea pigs, etc.):

An approved rabies vaccine is not available for small rodents, and they are generally considered low risk for rabies transmission. These animals are not considered a risk unless acting abnormally and/or housed in a manner allowing potential contact with mammalian wildlife; especially established wildlife rabies vectors. Ordinarily, persons bitten by small rodents should be counseled that risk is low. If the bite victim is anxious about the risk, testing is available through the Office of Laboratory Services, but it is not necessary. There is no observation period for small rodents.

Other classes of owned animals kept as pets (e.g., birds, reptiles, amphibians, fish and invertebrates) present no risk for rabies transmission.

E. Exotic Pets

There is no established rabies observation period for any animal other than a dog, cat or ferret. When a person is bitten by an exotic pet, many factors should be considered. These include apparent health status of the animal, type of pet, whether it is a rare or zoological collection mammal, whether its behavior is normal, history of exposure and whether the area is endemic or not for rabies. These circumstances should be handled on a case-by-case situation and Office of Epidemiology & Prevention Services (OEPS) and West Virginia Department of Agriculture (WVDA) should be consulted for guidance.

F. Monkeys

Monkeys by nature are dangerous and even seasoned handlers and menagerie owners are often bitten by animals that have been maintained in captivity for years. Monkeys which have been housed indoors for long periods and have no known exposure to rabies vector species are unlikely to have the rabies virus. Animals housed outdoors or otherwise have intermittent access to the outside have increased likelihood of exposure to rabies vector species. Hence, consideration for rabies post exposure treatment and/or testing of captive monkeys should take into account historical husbandry conditions.

If rabies is a concern the monkey should be euthanized and tested. There is no rabies observation period for monkeys. If the owner declines testing and rabies is a concern, PEP should be recommended.

A separate danger of monkey bites is B virus (*Cercopithecine herpesvirus 1*) infection. B virus may result in encephalomyelitis in humans with a case fatality rate approaching 80 percent. This is a relatively rare infection in humans and is commonly found among more than 19 species of macaque monkeys. A confirmed bite or scratch or exposure to saliva or genital secretions of a macaque monkey should prompt an immediate consultation to OEPS. See appendix K for the management algorithm.

Keeping monkeys as pets, including macaques, should be discouraged. Only experienced and trained caretakers with proper personal protective equipment and training should care for monkeys for research and other medical settings.

#### G. Livestock

Livestock such as cattle, horses, sheep, goats and pigs, are not at high risk for transmitting rabies. When a person is bitten by livestock, many factors should be considered. If the animal is healthy, its behavior is normal, there is no history of exposure, and the area is not endemic for rabies, it may be reasonable to keep the animal under 10 – 14 days observation (although the shedding period of virus in the saliva is unknown in livestock) ([§19-20-9a](#)). Otherwise, euthanasia and testing of the animal or PEP of the person should be considered.

West Virginia Agriculture Code [§19-9-28](#) provides “any animal infected with rabies may be euthanized by the owner or any person authorized to do so without an agreement or appraisal...” West Virginia Agriculture Code §19-9-2(h) states it shall be the duty of the commissioner, and he shall have authority to cause the destruction of diseased animals, when such animals are deemed diseased as a result of physical examination or an approved test, and of infected personal property, and to regulate and prohibit the moving or transportation of such animals or property from one place to another in this State.

#### H. Mammalian Wildlife (e.g., raccoons, foxes, skunks, coyotes, bobcats, bats and other)

If a human is exposed (see definition above) to a wild mammal or hybrid offspring of wild animals crossbred to domestic animals or exotic animals, the local health department shall be notified as soon as possible. Animals in these categories should be euthanized immediately, and the head should be submitted to the Office of Laboratory Services for rabies examination ([64CSR7-5.5](#)).

Because of the risk of rabies among wild animals, such as raccoons, skunks, bobcats, foxes and coyotes, the [American Veterinary Medical Association \(AVMA\)](#), [National Association of State Public Health Veterinarians \(NASPHV\)](#), and the [Council of State and Territorial Epidemiologists \(CSTE\)](#) strongly recommend enactment of state laws prohibiting the importation, distribution, relocation, or keeping of wild animals or hybrids as pets. The incubation period and number of days the rabies virus is shed in the saliva, prior to onset of clinical signs, are unknown for wild and exotic animals. Infected animals can transmit the rabies virus not only while clinically sick

but also for an indeterminate number of days before clinical signs become apparent. It is never appropriate to confine and observe wild or exotic animals that are involved in a human bite and/or exposure incident.

When responding to citizen inquiries or situations regarding wild animals, the sanitarian, law enforcement officer or wildlife biologist should determine, to the extent possible, if there has been human, pet or livestock exposure. Road kills or wild animals having no known contact with humans, pets or livestock should be buried or incinerated, except within counties participating in active rabies surveillance. In these counties brainstems should be submitted for testing.

Note: Persons involved with the head removal should follow the self- protection guidelines in Appendix B, which includes pre-exposure rabies vaccination.

#### I. Bats

A bat that is active by day, is found in a place where bats are not usually seen (for example, in a room in your home or on the lawn) or is unable to fly is far more likely than others to be rabid. Such bats are often easily approached. Therefore, it is best never to handle any bat. If you are bitten or scratched by a bat or if infectious material (saliva) from a bat contacts your eyes, nose, mouth or a fresh wound; wash the affected area thoroughly and get medical advice immediately. Whenever possible, the bat should be captured without further risk of human exposure and submitted for rabies testing. Rabies can only be confirmed in a laboratory. Most bats are not rabid and they fill an important part of the ecosystem through consumption of insects.

People usually know when they have been bitten or scratched by a bat. However, since bats have small teeth which may leave marks that are not easily seen, there are situations in which medical advice should be sought even in the absence of an obvious wound. Examples may include awakening and finding a bat in your room, seeing a bat in the room with an unattended child or seeing a bat near a mentally impaired or intoxicated person.

People cannot get rabies just from seeing a bat in an attic, in a cave or at a distance. In addition, persons cannot get rabies from having contact with bat guano (feces), blood or urine or from touching a bat on its fur.

More than 11 million people enjoy camping each year in the U.S. and few individuals will ever be exposed to a rabies-suspect animal, including bats or need medical intervention due to a potential exposure while camping. To date, no human rabies cases due to bats in the U.S. have implicated camping as a risk factor for an unrecognized exposure. In many camp situations, the mere presence or sighting of bats is common and normal. If bats were present while campers were sleeping, careful assessment by local or state public health professionals of the potential for rabies exposure on a case-by-case basis should occur. Campers who may have been bitten by a bat or had direct contact with a bat need to be identified for appropriate evaluation, and if needed, vaccinated to prevent rabies.

#### **IV. Management of Animal Exposures (See Definitions)**

**Any animal bitten or scratched by a wild, carnivorous mammal (or a bat) which is not available for testing should be regarded as having been exposed to rabies.**

##### A. Legal Citation:

[§19-20-9a](#). Dogs, cats, etc.; rabies observation....

(b) If any unvaccinated domesticated animal is bitten by a rabid animal, the owner shall confine the bitten animal for a period of six months. The animal shall be vaccinated or revaccinated after five months.

(c) If the animal is not confined and quarantined as directed in subsections ... (b) of this section, the humane officer, dog warden or sheriff may cause the animal to be placed in the custody and care of a licensed veterinarian for that purpose at the owner's expense. The penalty for any violation of this section is a fine of fifty dollars or confinement in the county or regional jail for a period of no less than two nor more than three days.

##### B. Vaccinated Dogs, Cats and Ferrets

Any healthy, vaccinated dog, cat or ferret that is exposed to a proven or suspected rabid animal should be re-vaccinated (booster vaccine) immediately by a licensed veterinarian, confined, and observed for 45 days (<http://www.nasphv.org/Documents/NASPHVRabiesCompendium.pdf>). Any sign of illness should be immediately evaluated by a veterinarian. If signs of rabies develop, the animal should be humanely euthanized and tested. If the animal dies, its head should be immediately submitted for testing at OLS.

##### C. Unvaccinated Dogs, Cats or Ferrets

Any unvaccinated dog, cat or ferret that is exposed to a proven or suspected rabid animal should be euthanized immediately, unless the exposing animal tests negative for rabies. If the owner of an exposed dog, cat or ferret is unwilling to euthanize it, the animal shall be placed in strict isolation (see definitions) for six months and vaccinated one month prior to release ([§19-20-9a](#)). Any sign of illness should be immediately evaluated by a veterinarian. If symptoms of rabies develop, the animal should be humanely euthanized and tested, or if the animal dies, its head should be immediately submitted for testing at OLS.

##### D. Dogs, Cats or Ferrets with Expired Vaccinations

Any dog, cat or ferret overdue for a booster vaccination needs to be evaluated on a case by case basis taking into account the severity of exposure, time elapsed since last vaccination, number of previous vaccinations, current health status, and local rabies epidemiology. Questions should be discussed with the epidemiologists at the WVDH Office of Epidemiology & Prevention Services.

#### E. Livestock

All species of livestock are susceptible to rabies; cattle and horses are among the most frequently infected. A legal quarantine requires coordination with the West Virginia Department of Agriculture, Division of Animal Health at (304) 558-2214. West Virginia Agriculture Law Code [§19-9-28](#) provides “any animal infected with rabies may be euthanized by the owner or any person authorized to do so without an agreement or appraisal...” West Virginia Agriculture law states, “It shall be the duty of the Commissioner and he shall have the authority to cause destruction of diseased animals.” ref. [§19-9-2](#) (for slaughter).

#### F. Vaccinated Livestock

Livestock currently vaccinated with a vaccine approved by the USDA for that species, exposed to a rabid animal, should be re-vaccinated immediately, confined (in a manner routine for that species) and observed for signs of rabies for 45 days, see [Compendium of Animal Rabies Prevention](#) for details. Multiple rabid animals in a herd or herbivore-to-herbivore transmission are uncommon; therefore, restricting the rest of the herd if a single animal has been exposed to or infected by rabies is usually not necessary.

#### G. Unvaccinated Livestock

Unvaccinated livestock should be slaughtered immediately. If the owner is unwilling to comply, the animal should be confined and kept under close observation for six months and the animal shall be vaccinated after five months. Refer [§19-20-9a](#) for slaughter.

If an exposed animal is to be slaughtered for consumption, it should be done immediately after exposure, and all tissues should be cooked thoroughly. Persons handling exposed animals should use barrier precautions. Federal meat inspectors will reject for slaughter any animal known to have been exposed to rabies within the previous 8 months.

Neither tissues nor milk from a rabid animal should be used for human or animal consumption. However, since pasteurization temperatures inactivate the rabies virus, drinking pasteurized milk or eating adequately cooked meat does not constitute a rabies exposure.

Having more than one rabid animal in a herd or having herbivore to herbivore transmission of rabies is uncommon; therefore, restricting the rest of the herd if a single animal has been exposed to or infected by rabies is usually not necessary.

#### H. Livestock with Expired Vaccinations

Livestock overdue for a booster vaccination should be evaluated on a case-by-case basis, taking into consideration factors such as severity of exposure, time elapsed since last vaccination, number of previous vaccinations, current health status, and local rabies epidemiology to determine need for euthanasia or immediate booster vaccination followed by observation or strict isolation.

#### I. Wild or Exotic Animals

The efficacy of injectable rabies vaccination of wildlife and hybrids (the offspring of wild animals' crossbred to domestic animals) has not been established, and no such vaccine is licensed for these animals. Wild or exotic animals bitten by a rabid animal should be euthanized immediately. Zoos or research institutions may establish vaccination programs which attempt to protect valuable animals, but these should not replace appropriate public health activities to protect humans from rabies exposures. Employees who work with animals at such facilities, or at wildlife rehabilitation facilities, should receive pre-exposure rabies immunization and have routine titer checks in accordance with CDC guidelines. The use of pre- and post-exposure rabies vaccinations for employees who work with animals at such facilities might reduce the need for euthanasia of captive animals.

## **V. Human Exposure Records**

### **A. Reporting by Physicians**

Every person bitten or scratched by any animal (including bats) should consult a physician and be guided by their advice. If indicated, the physician may treat the patient to prevent:

1. wound infection,
2. septicemia (blood infection),
3. tetanus (lock jaw) or
4. rabies.

The physician or medical staff attending the victim of an animal bite or exposure must contact the local health officer within 24 hours in accordance with [64CSR7-5](#) and submit an [Animal Encounter Report](#) (see Appendix G) so that the local health department (LHD) can investigate and take proper measures to protect others in the community. Alternatively, the physician may submit the [provider](#) (yellow) section of the WVEDSS form.

### **B. Use of WVEDSS for Reporting Potential Rabies**

The local health department should use the West Virginia Electronic Disease Surveillance System (WVEDSS) to document case record of each potential human rabies exposure ([64CSR7-5](#)). If a resident of another state is exposed to a potentially rabid animal in West Virginia, the local health department shall notify the resident's state or local public health department (or notify OEPS for interstate notification). Do not report in WVEDSS.

### **C. Case Definition:**

Before entering a potential rabies exposure in WVEDSS, determine if the case definition for exposure is met:

#### **Human Exposure**

A bite or scratch from a vector species or the introduction of saliva or central nervous system (CNS) tissue from a vector species into an open, fresh wound or mucous membrane (eye, mouth, or nose) of a human being.

#### **Vector Species**

Species include bats or terrestrial mammals, especially carnivores. *Wild species* known to be reservoirs of rabies include, but are not limited to, raccoons, skunks, foxes, coyotes, bobcats, wolves, or any hybrids between these wild species and domestic dogs and cats.

Domestic species include, but are not limited to, dogs, cats, and ferrets.

### Case Classification

Confirmed: Human exposure from a vector species as defined above.

### Comment

Touching or handling a potentially rabid animal or another animal or inanimate object that had contact with a rabid animal does not constitute an exposure unless wet saliva or CNS material from the rabid animal was introduced into a fresh, open wound or had contact with a mucous membrane of a human being.

Bats have small teeth which may leave marks that are not easily seen; so, any contact with a bat in which a bite cannot be ruled out, is considered a potential exposure to rabies. A person sleeping in a room with a bat or finding a bat in the room with an unattended child, mentally impaired or intoxicated person, are examples of possible exposures.

### D. Reporting Requirements in WVEDSS: Document the following:

1. Identification data for the victim:
  - a. Name
  - b. Date of birth
  - c. Sex
  - d. Address
  - e. Phone number
2. Provider with Further Patient Information:
  - a. Name of provider
  - b. Contact information for the provider
3. Circumstances of Bite / Exposure.
  - a. Date of Bite / Exposure
  - b. Type of Exposure. Indicate bite, scratch, mucous membrane exposure, etc. Animal encounters that are not exposures (e.g., touching the fur of an animal) should not be reported in WVEDSS.
  - c. Location of Bite / Exposure (body part)
  - d. Rabies Post-Exposure Prophylaxis (PEP)
    1. Date PEP initiated
    2. Number of PEP doses
    3. Date PEP dose was completed
  - e. Species of animal. Indicate the species such as dog, cat, bat, raccoon, etc. Exposures to non-mammalian species should not be reported in WVEDSS.
  - f. Pet, stray or wild
  - g. Was the bite? (provoked or unprovoked)
    1. Was the animal behaving? (normally, abnormally)
    2. Was the patient hospitalized for the bite?
    3. How long before wound(s) cleansed with soap and water?

4. Public Health Investigation and Public Health Action Taken: Document public health management of the animal and counseling and recommendation offered to the victim:

If the animal is confined, document:

1. Final status of animal after 10 day confinement
2. Date completed and checked.
3. If the animal escapes or is lost to follow-up or is not healthy 10 days after the exposure, document action taken, including counseling offered to the bite victim and recommendations regarding post-exposure vaccination, if appropriate.

If the animal is tested, document:

1. Test results and date
2. If the test result is positive, unsatisfactory or non-diagnostic, document action taken, including counseling offered to the victim and recommendations regarding post-exposure vaccination, if appropriate.

If the animal encounter is considered low risk, and neither testing nor confinement is performed, document:

1. Reasons animal encounter is considered low risk, and
2. Counseling / education offered to the victim

Patient's Post-Exposure Vaccination

All attempts to contact the bite victim should be recorded.

5. Review Process: Once the case is completed in WVEDSS, it must be forwarded to the Regional Epidemiologist for review prior to sending it to the OEPS for review and approval.

E. Cases that Should Not be Reported in WVEDSS:

The following types of cases should not be reported in WVEDSS:

1. Exposure of a human to non-mammalian species (reptile, bird, amphibian, etc.).
2. Animal to animal exposure.
3. Non-exposures, such as touching an animal's fur, picking up an animal, or contact with blood or feces of an animal.

## **VI. Animal Exposure Records**

Local Health Departments should maintain written records of animal exposures according to local agency policies and procedures. Questions about management of animal exposures may be referred to OEPS. Rabies exposures of animals should not be reported in WVEDSS.

## **VII. Animal Bites and Rabies Prevention**

It is required by law in the State of West Virginia to have every owned, kept or harbored dog and cat immunized against rabies at least every three years with an approved rabies virus vaccine (§19-20A-2). For puppies and kittens the first vaccination must be completed by six months of age, with a booster dose administered within one year following the first dose.

People should avoid stray, wild or dangerous animals. State and local ordinances have been developed to restrict the free movement of dogs and cats. In West Virginia, the owner of a dog who permits his dog to run at large is liable for personal and property damages inflicted while the dog was running around at large ([§19-20-13](#)). Unless a dog is licensed for protection, a humane officer has the authority to kill vicious dogs ([§19-20-20](#), [§19-20-21](#)). Except for wild animals lawfully acquired or lawfully permitted, no person may possess any wildlife captured during closed seasons ([§20-2-4](#), [§20-2-51](#)) or dangerous wild animals ([§19-34](#)). Wild/domestic crossbreeds (ex. dog/wolf) should not be kept as pets.

Clinical personnel should use standard precautions when providing care to people suspected of having clinical rabies, including wearing gowns, goggles, masks, and gloves, particularly during procedures that might result in splashes or sprays from body fluids.

Veterinarians and veterinary support staff, who are frequently at risk for rabies exposures, should obtain pre-exposure rabies vaccinations, followed by periodic titer checks and rabies vaccine boosters. People traveling to a country with endemic animal rabies should also obtain pre-exposure rabies vaccinations.

People bitten, scratched, or unsure about potential rabies exposure should talk to a healthcare provider about the need for rabies postexposure prophylaxis. Prompt wound care and administration of rabies immune globulin (RIG) and vaccine are highly effective in preventing rabies following exposure.

### **VIII. Laboratory Analysis of Rabies Specimens**

Wild animal specimens should only be submitted for analysis to West Virginia OLS when humans, pets or livestock have been exposed. For domesticated animals, it is recommended that head removal be accomplished by a licensed veterinarian. In the case of large animals (cows, horses, sheep, pigs, etc.) the brain must be removed by a veterinarian when the head of the animal is too large to ship. If the services of a veterinarian are not available, persons involved with the head removal should follow self-protection guidelines associated with any infectious disease and should be pre-immunized against rabies.

If ectoparasites are evident (including fly larvae) on an animal head prior to the health department receiving it, it is suggested that prior to packaging the specimen, it should be sprayed with insecticide. Consult with laboratory staff for other unusual circumstances when dealing with specimens. Previously buried animals are not allowed for rabies testing. (Consult Appendix F: WVDH OLS Policy of Acceptance for Rabies Specimens).

Care must be taken in the preparation and handling of all suspect specimens for shipping to the Office of Laboratory Services. Ideally, specimens should NOT be frozen and should be maintained at refrigerated temperatures. Freezing of a specimen does not necessarily exclude it from rabies testing. See Appendix D: Rabies Testing Guidance Document. If the only specimen available is frozen, ship the specimen without ice packs to allow thawing before arrival at OLS. It is possible that frozen samples may take an extra day for testing if not completely thawed upon arrival.

NOTE: Specimens stored in automatic defrost freezers are more susceptible to degradation because of multiple freeze-thaw cycles. If a specimen must be frozen, store it in a manual defrost freezer such as a chest freezer. Contact OLS at (304) 558-3530 extension 20135 if specimen handling and quality issues are not addressed in the appendices.

## **IX. References & Resources**

1. CDC. [Rabies](#).
2. NASPHV. [Compendium of Animal Rabies Prevention and Control, 2016](#).
3. WVDH. [West Virginia Animal Bite / Potential Rabies Exposure Surveillance and Investigation Protocol](#).

## **Appendices**

- A. Isolation Pen for Unvaccinated Dogs and Cats Exposed to Rabies
- B. Self-Protection Guidelines
- C. Resources for Obtaining Rabies Immune Titers
- D. WVDH OLS Rabies Specimen Submission Instructions
- E. OLS Rabies Laboratory Submission Form
- F. WVDH OLS Policy for Acceptance of Rabies Specimens
- G. Animal Encounter Report (SG-58)
- H. Notice of Animal Quarantine (SG-59)
- I. Government Agency Regulations
  - I-1 WV Department of Health (Reporting of Animal Bites)
  - I-2 WV Department of Agriculture (Chapter 19, Article 9: Diseases Among Domestic Animals)
  - I-3 WV Department of Agriculture (Chapter 19, Article 20: Dogs and Cats)
  - I-4 WV Department of Agriculture (Chapter 19, Article 34: Dangerous Wild Animals Act)
  - I-5 Chapter 20 Natural Resources
  - I-6 Chapter 58 Natural Resources
- J. Agency Roles and Responsibilities and Contact Information
  - J-1 Local Health Department
  - J-2 OEHS Public Health Sanitation Division
  - J-3 WVDA
  - J-4 WVDH
  - J-5 USDA-APHIS-Wildlife Services
  - J-6 County Sheriff
  - J-7 WVDNR
- K. Assessment of Herpes B Transmission Risk from a Monkey Bite

## Appendix A

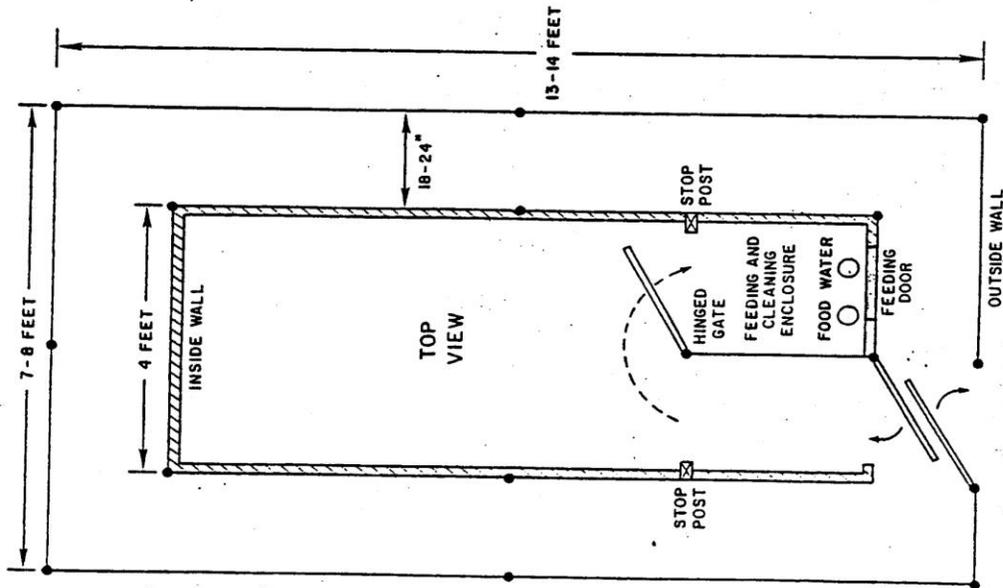
### ISOLATION PEN FOR UNVACCINATED DOGS AND CATS EXPOSED TO RABIES Minimum Construction Detail adapted 8/89 from original by Douglas Hubbard

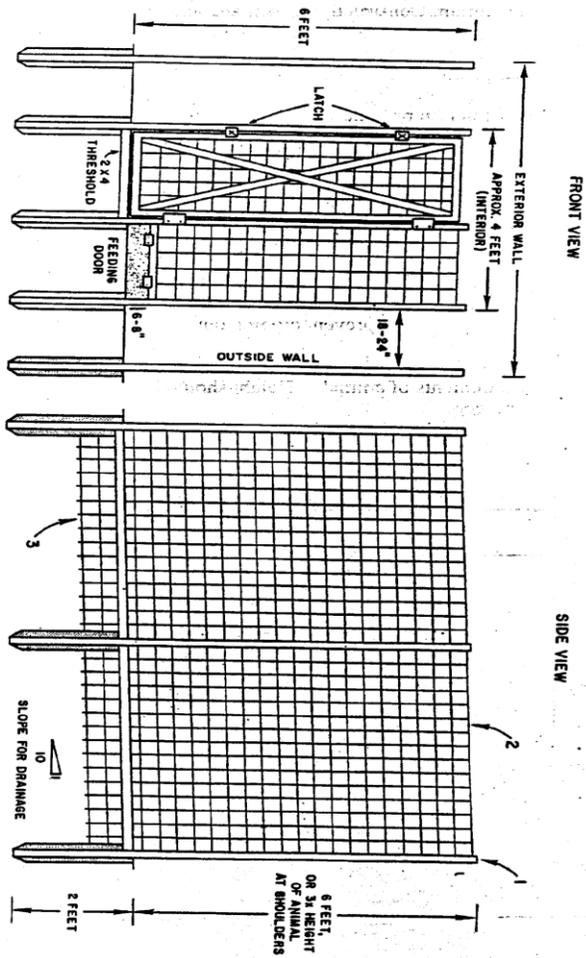
Scale 1:20

Construction provides:

- A. Double enclosure to prevent escape and direct contact with people or other animals.
- B. Feeding enclosure and door to allow for feeding without direct contact of animal and handler and to provide confinement of animal during cleaning.
- C. L-shaped metal plates or extension of wire fencing buried to prevent digging out.

Overall length and width are approximate and may vary depending on requirements of animal. Height should be 3x the height of the animal at the shoulders.





Scale: 1:20

- 1 = 4" X 4" posts, pressure treated or equivalent, driven or set in concrete.
- 2 = Wire, chain link, 2" X 2" hardware cloth (welded) or
- 3 = L-shaped metal plates or wire bent at 90° angle for 12-18" and buried 4-6" below surface of ground to prevent digging out.

## **Appendix B**

### **Self-Protection Guidelines**

Avoid direct skin or mucous membrane contact with the suspected animal and its body fluids before, during, and after removal of the head.

To minimize contact use the following Universal Protection Precautions:

- A. Avoid splattering blood, etc.; wear a plastic apron or other suitable removable outer garment such as coveralls; wear rubber gloves and a face mask and safety goggles or face shield.
- B. All instruments and tools coming in contact with the suspected animal should be disinfected with bleach immediately after use.
- C. Protective clothing and gloves should be discarded in a plastic bag or other enclosed container or washed in a 10% bleach solution or other suitable disinfectant.
- D. The surface area used for the head removal should be disinfected immediately using a 10% bleach solution or other suitable disinfectant.
- E. If a self-inflicted cut or wound occurs during the removal of the head, the wound should be cleaned with soap and water and a physician consulted as soon as possible.

Sanitarians who will be removing animal heads or doing brainstem extractions should have pre-exposure vaccination. Thereafter, their rabies titers should be checked every 2 years (see Appendix D) and re-booster as necessary.

## Appendix C

### Resources for Obtaining Rabies Immune Titers

#### Atlantic Health Associates

**Services offered:** Rabies Neutralizing Antibody Testing using the Rapid Fluorescent Focus Inhibition Test (RFFIT) for both human and animal specimens.

#### Contact Information:

Atlanta Health Associates  
Phone: (770) 205-9091  
Toll Free: (800) 717-5612  
Fax: (770) 205-9021  
Email: [rnewhouse@atlantahealth.net](mailto:rnewhouse@atlantahealth.net)

Mailing Address:  
Atlanta Health Associates, Inc.  
309 Pirkle Ferry Road, Suite D300  
Cumming, Georgia 30040

<http://www.atlantahealth.net>

#### Kansas State Veterinary Diagnostic Laboratory

**Services offered:** Serologic testing of humans, serologic testing of animals for export to rabies free countries.

#### Contact Information:

Diagnostic Laboratory Office  
Phone: (866) 512-5650  
Fax: (785) 532-4481  
Email: [dlaboffice@vet.k-state.edu](mailto:dlaboffice@vet.k-state.edu)

Mailing Address:  
Kansas State Veterinary Diagnostic Laboratory  
1800 Denison Avenue  
Manhattan, KS 66506-5606

<http://www.vet.ksu.edu/depts/dmp/service/rabies/index.htm>

## Appendix D

### WEST VIRGINIA OFFICE OF LABORATORY SERVICES RABIES TESTING GUIDANCE DOCUMENT

#### TYPES OF SPECIMENS

**PLEASE NOTE: BURIED ANIMALS WILL NOT BE ACCEPTED FOR TESTING.**

OLS will accept the following specimen types for Rabies testing:

- Small animals such as bats or small rodents.

*NOTE: For the safety of the staff, the sender must ensure that smaller animals are deceased before shipping the specimen to the OLS Rabies Unit.*

- **Severed head of moderate-sized animal such as cat, dog, or raccoon.**
- Brain only (cerebellum and brainstem are REQUIRED) of larger size animals such as a cow, horse, or deer.

OLS recommends the services of a veterinarian or county health official be used to sever the heads or to remove the brains of suspect animals. Private citizens should not attempt to remove animal heads.

#### SPECIMEN SUBMISSION REQUIREMENTS

- Notify the OLS Rabies Unit at (304) 558-3530 extension 20135 in advance regarding submission of specimens. It is important to inform the technician what type of exposure was involved (human or pet).
- **Only the head of the animal will be accepted for testing.**
- Specimens MUST be received within 7 days of animal death.
- More than one specimen can be shipped in the same box. Each specimen MUST be packaged separately so that leakage does not occur. Each specimen MUST be labeled with a unique identification. Make sure to note the unique ID on the submission form.
- Complete all the required information LEGIBLY on the Rabies Test Request/Specimen Submission Form.
- No living animals will be accepted for Rabies testing.
- **Specimens brought to the OLS after work hours can be placed in the refrigerator located in the building outside the back parking lot. The Rabies Unit MUST be notified to receive further instructions. (SEE RABIES CONTACT INFORMATION)**

## **RABIES SPECIMEN COLLECTION KITS**

OLS offers two sizes of specimen mailing boxes with our collection kits. These kits are provided to County Health Departments, veterinarian clinics, WV Department of Natural Resources, and other approved submitters. Each collection kit contains the following:

1. **PLASTIC BAGS (2)**: Specimens should be placed in a plastic bag and then placed in the second bag to ensure that no fluids will contaminate the box or leak out of the container.
2. **VINYL ZIPPER BAG**: Double bagged specimens should be placed in the zipper bag to serve as added to protection against any leaks.
3. **ICE PACKS (2)**: Two refrigerants or ice packs should be placed in a zipper bag near the specimen. Placing the ice packs in the zipper bag will ensure that any leakage will be contained if the refrigerants were to rupture. DO NOT use regular wet ice!
4. **TEST REQUEST/SUBMISSION FORM**: Please provide all information requested on the Test Request/Specimen Submission form. When completed, the form should be placed on the lid of the styrofoam mailing box, away from the specimen.
5. **OUTER MAILING BOX**: The outer box has a white label which states: PROPERTY OF THE OFFICE OF LABORATORY SERVICES/167 11<sup>th</sup> AVENUE/SOUTH CHARLESTON, WV 25303.
6. **PRE-ADDRESSED LABEL**: After the specimen is properly packaged. The box should be taped closed and the pre-addressed label should be affixed to the outside of the box.
7. **UN3373 LABEL**: Affix the 'UN3373 Biological Substance, Category B' specimen label to the outside of the box.

***NOTE:** Newspaper or other absorbent material may be used to prevent smaller samples from shifting inside the container. **DO NOT USE STYROFOAM PEANUTS OR SHREDDED PAPER TO PACK SPECIMEN.** In the event of a specimen leak, the peanuts or shredded paper would pose a larger contamination threat to the staff.*

## **SHIPPING**

Rabies specimens are considered 'Category B' and are to be shipped following IATA Packing Instruction 650. All specimens packaged as directed in the provided Rabies Mailing Box can be sent by FedEx, the United States Postal Service (USPS), or United Parcel Services (UPS). The shipper is responsible for shipping costs. Please note that biohazard labels must NOT be placed on the outside of the shipping box.

**OLS DOES NOT ACCEPT WEEKEND OR HOLIDAY DELIVERIES FROM FEDEX, UPS OR USPS.**

**VACCINATION RECOMMENDATIONS**

For any questions regarding vaccination recommendations for humans, please contact the DIVISION OF COMMUNICABLE DISEASE EPIDEMIOLOGY at (304) 558-5358 -or- 1-800-423-1271 (In West Virginia only).

## RABIES SPECIMEN PACKING INSTRUCTIONS



1. Kit Contents: (1) Vinyl Zipper Bag, (1) History Form, (1) Return Address Label, (2) Plastic Bags, (2) Ice Packs. **2. Animal Head is Double Bagged.**
3. Place a double bagged specimen in a Vinyl **Zipper Bag.**
4. Place 2 frozen ice packs around the Double Bagged specimen. **DO NOT PLACE ICE PACKS IN CONTACT WITH SPECIMEN.**
5. Place “zipped” Vinyl Zipper Bag in Rabies Box with the History Form placed on top of the box; away from the contained specimen
6. Place completed Return Address Label and ship regular mail, UPS, FEDEX to the OLS, Rabies Unit.

**GLOVES SHOULD ALWAYS BE WORN WHEN HANDLING SPECIMEN. HANDS SHOULD BE WASHED THOROUGHLY AFTER PACKAGING AND AREA DECONTAMINATED WITH 10% BLEACH.**

All specimens **MUST** have the head removed before shipping. Exceptions: Bats and small rodents.

Specimens too large for shipping **MUST** have their brains removed before submission. Examples: cow, pig, horse, deer, goat, sheep, and etc. The OLS does not have the means of discarding large animal specimens.

History Form should be filled out as complete as possible. The form should contain **AT LEAST** the following information for analysis:

- Species
- County
- Human exposure/ Name if exposed/ Type of exposure
- Address for mailing results **INCLUDING** Submitter's Telephone number

Notify the Rabies Unit before submitting a sample.

### **RABIES UNIT CONTACT INFORMATION**

*Address* | 167 11<sup>th</sup> Avenue  
South Charleston, WV 25303

*Work Hours* | Monday through Friday from 8:00am to 4:30pm  
(*OLS observes all State and Federal holidays*)

*Phone* | 304-558-3530 extension 20135

#### **After Hours**

*Cell Phone* | 304-550-9882 (**NOTE: This number is only valid during weekends and holidays.**)

*Fax* | 304-558-6210

*Web* | <https://dhhr.wv.gov/ols/labs/Pages/Rabies.aspx>

# Appendix E



**OFFICE OF LABORATORY SERVICES**  
 167 11<sup>th</sup> Avenue | South Charleston, WV 25303  
 Phone (304) 558-3530 | Fax (304) 558-2006

PLACE BARCODE HERE  
  
 OLS USE ONLY

## RABIES LABORATORY SPECIMEN SUBMISSION FORM

**SUBMITTER INFORMATION**

FACILITY NAME	MAILING ADDRESS		
COUNTY	CITY	STATE	ZIP
ATTENTION TO	BUSINESS HOURS PHONE NO.		
FAX NO.	AFTER HOURS PHONE NO.		

Species	If a domestic animal, what is current vaccination status? <input type="checkbox"/> Current <input type="checkbox"/> None <input type="checkbox"/> Expired <input type="checkbox"/> Unknown	DATE COLLECTED
Date of Animal Death	How did animal die?	Was the animal buried before brain removal? <input type="checkbox"/> Yes <input type="checkbox"/> No
Animal Wild or Owned? <input type="checkbox"/> Not Owned/Wild/Stray <input type="checkbox"/> Owned (Name of Owner _____)		Phone # of Owner
Address Where Found	City	State      Zip
County Where Found	GIS Coordinates Latitude _____ Longitude _____	
Name of Person Sample Received From		Telephone
Occupation (check ONE only): <input type="checkbox"/> Animal Control Officer <input type="checkbox"/> Veterinarian <input type="checkbox"/> Police <input type="checkbox"/> Wildlife Officer <input type="checkbox"/> Private Citizen <input type="checkbox"/> County Health Official <input type="checkbox"/> Other _____		
Reason for Testing (Check ALL That Apply): <input type="checkbox"/> Human Exposure <input type="checkbox"/> Other _____      Surveillance: <input type="checkbox"/> Pet/Domestic Animal Exposure (Specify: _____) <input type="checkbox"/> Found Dead/Roadkill <input type="checkbox"/> Odd Behavior		
<b>HUMAN EXPOSURE</b> <input type="checkbox"/> No <input type="checkbox"/> Yes (If yes, please complete the following:)		
Name of Exposed	Address of Exposed	Date of Human Exposure
Exposure Type <input type="checkbox"/> Bite <input type="checkbox"/> Scratch <input type="checkbox"/> Contact Saliva <input type="checkbox"/> Unknown <input type="checkbox"/> Other _____	Location of Wound	Post-Exposure Prophylaxis Started? <input type="checkbox"/> Yes <input type="checkbox"/> No
<b>PET/DOMESTIC ANIMAL EXPOSURE</b> <input type="checkbox"/> No <input type="checkbox"/> Yes (If yes, please complete the following:)		
Type of Animal Exposed <input type="checkbox"/> Dog <input type="checkbox"/> Cat <input type="checkbox"/> Livestock <input type="checkbox"/> Other _____		Vaccination Status of Exposed Animal <input type="checkbox"/> Current <input type="checkbox"/> Expired <input type="checkbox"/> None <input type="checkbox"/> Unknown

COMMENTS:

<b>OLS USE ONLY</b>	ACC:
<input type="checkbox"/> UNSAT	DE:
Reason/ID:	CKD:

FAILURE TO COMPLETE THIS FORM IN ITS ENTIRETY MAY RESULT IN DELAYED TEST RESULTS

Rev. 07/2013

## **Appendix F**

### **Office of Laboratory Services Policy for Acceptance of Rabies Specimens**

#### **1.0 PURPOSE**

The purpose of this policy is to set forth policy updates for the acceptance of specimens (animal) to the Rabies Unit of the Microbiology Section of the OLS.

#### **2.0 SCOPE**

This policy applies to all specimens (animal) received at OLS.

#### **3.0 APPLICABLE DOCUMENTS/MATERIAL**

- 3.1 Rabies Procedure Manual, OLS.
- 3.2 Protocol for Postmortem Diagnosis of Rabies in Animal, CDC.

#### **4.0 RESPONSIBILITY/REQUIREMENTS**

- 4.1 Acceptable Specimens
  - 4.1.1 Severed heads of animals, so long as the head fits within the specimen collection box provided by OLS.
  - 4.1.2 Whole animals such as bats and small rodents.
  - 4.1.3 Brain only of large animals such as cow, horse, etc.
- 4.2 Unacceptable Specimens
  - 4.2.1 Large, whole animals such as raccoons, skunks, etc.
  - 4.2.2 Animals that have been buried.
  - 4.2.3 Animals dead longer than 7 days.
  - 4.2.4 Animals with extensive, severe head trauma.
- 4.3 Animals That Have Been Shot in the Head
  - 4.3.1 OLS will accept animals that have been shot in the head.
  - 4.3.2 Animals which have significant head trauma and those which are bleeding from the ears should not be submitted for testing.
  - 4.3.3 It is at the sole discretion of the Rabies Unit technologists to determine whether or not the animal head is acceptable for testing.

- 4.4 Acceptance Timeline
  - 4.4.1 Animals which have been dead for less than 5 days are suitable for testing submission.
  - 4.4.2 Animals which have been dead for 5 to 7 days are questionable for testing submission. It is at the sole discretion of the Rabies Unit technologist to determine whether or not the animal head is acceptable for testing.
- 4.5 Maintaining Policies
  - 4.5.1 OLS/Microbiology Section is responsible for posting and maintaining this policy.
  - 4.5.2 Approved policies remain in effect and are only replaced at the issuance of a new or modified policy.
  - 4.5.3 Any modified or temporary policy that materially affects the usage rights or responsibilities of employees will be communicated to employees by e-mail.
  - 4.5.4 Employees must also sign an acknowledgement for which can be found at the end of this policy.
- 4.6 Access and Distribution
  - 4.6.1 This policy is available in the Policy Manual located in the Microbiology Office and in the Rabies Procedure Manual.
  - 4.6.2 This policy will be distributed to Rabies Unit employees via e-mail distribution.

## 5.0 DEFINITIONS

- 5.1 Employee: Individuals employed on a temporary or permanent basis by DHHR, BPH, OLS, as well as contractor's employees, volunteers, and individuals who are determined by the Bureau or Office to be subject to this policy. For the purposes of this policy, this refers to anyone working in the Rabies Unit of the Microbiology Section of the OLS.

## Rabies After Hours Drop-Off Instructions

The Office of Laboratory Services offers a specimen drop-off location for after hours deliveries. The instructions for an after hours drop-off can be found below.

**NOTE: Please notify the Rabies Lab if your facility plans on utilizing this service.**

### After Hours Specimen Drop Off

1. Samples must be packaged in the provided OLS shipping system, per the instructions for packaging, when utilizing the after hours drop-off.
2. OLS has a small building/shed, near the back, employee parking lot that contains a refrigerator for specimen drop off after hours.
3. Persons should pull up to the employee parking lot entrance at the rear of the building.
  - A. This outbuilding can be found at the intersection of E Street and 11th Avenue.
  - B. It is located with yellow pillars surrounding the entrance.
4. Persons must call **DHHR Security at (304) 558-7911.**
5. Persons must inform security that they are here to drop off specimens for rabies testing.
6. DHHR security will unlock the small building and the person can enter.
  - A. The door is sticky.
  - B. The person may have to slightly push in the door before pulling open.
- 7. Specimens must be placed in the refrigerator just inside the building.**
- 8. Please, triple check the refrigerator door is completely closed before leaving.**
9. When exiting the building, triple check that the outer door is securely closed.
- 10. Prior to leaving the premises, please call the Rabies After Hours Phone at (304) 550-9882 to alert a member of our staff that a drop off has been placed in the building.**

### NOTES:

- Please, do not ship specimens on Friday.
- OLS does not get regular weekend deliveries and cannot pick up UPS, FedEx or USPS on Saturday.
- OLS cannot receive FedEx, UPS, or USPS on Sundays.
- OLS, at this time, does not offer a courier service.



*Should you have any questions or need any additional information, please contact the Rabies Lab at (304) 558-3530 extensions: 20135 or 20136.*



**INVESTIGATION SUMMARY**

Local Health Department (Jurisdiction): \_\_\_\_\_ Entered in WVEDSS?  Yes  No  Unk  
 Investigation Start Date: \_\_/\_\_/\_\_\_\_ Case Classification:  
 Earliest date reported to LHD: \_\_/\_\_/\_\_\_\_  Confirmed  Probable  Suspect  
 Earliest date reported to state: \_\_/\_\_/\_\_\_\_  Not a case  Unknown  
 Was owner contacted?  Yes  No Date Notified: \_\_/\_\_/\_\_\_\_ By:  Phone  Letter  Visit

**Rabies Vaccination Status of Animal:**

If pet or livestock, were rabies vaccinations up-to-date\*?  Yes (Date: \_\_/\_\_/\_\_\_\_)  No  Unknown  
\*For cats, dogs and ferrets: 1<sup>st</sup> Dose @3mo, Booster @ 1yr; Booster every 1-3 yrs (depending on manufacturer)  
 Veterinarian: \_\_\_\_\_ Phone: \_\_\_\_\_

**EXPOSURE INFORMATION**

**Y N U**  
   Occupational exposure If yes, indicate occupation: \_\_\_\_\_  
   Exposure occurred outside the United States (if yes, please call DCDE immediately for consult)  
   Exposure occurred in a county with a history of animal rabies activity  
 Where did exposure occur? County: \_\_\_\_\_ State: \_\_\_\_\_ Country: \_\_\_\_\_

**OBSERVATION TIMELINE**

*Instructions: enter exposure date in grey box. Count forward 10 days to determine observation period*

Observation* Period	
+0 days (Exposure date)	+10 days (Check Date)
Calendar dates: <u>  </u> / <u>  </u> / <u>  </u>	<u>  </u> / <u>  </u> / <u>  </u>
<small>MM/DD/YYYY</small>	<small>MM/DD/YYYY</small>

\*Period of observation for cats, dogs and ferrets is 10 days. For livestock, 14 days are recommended. Confinement of other species not appropriate.

**ANIMAL FOLLOW UP INFORMATION**

**Y N U**  
   Animal involved in exposure was able to be confined  
 if yes, indicate # days (from exposure to final check): \_\_\_ and final status:  Healthy  Died  Lost  Other: \_\_\_\_\_  
 If yes, indicate where animal confined:  Home  Animal Shelter  Veterinarian  Other: \_\_\_\_\_  
   Animal confinement not possible, but animal was able to be observed following the exposure  
 (if yes, indicate # days (from exposure to observation): \_\_\_ and final status:  Healthy  Died  Lost  Other: \_\_\_\_\_)  
   Other Animals Have Been Exposed (if yes, explain: \_\_\_\_\_)  
   If livestock involved, has Ag been contacted (304-558-2214)

**LABORATORY INFORMATION**

**Y N U**  
   Animal involved in exposure was submitted for rabies testing (If yes, date: \_\_/\_\_/\_\_\_\_ and Lab ID#: \_\_\_\_\_)  
   Rabies virus detected in exposing animal via direct fluorescent antibodies (DFA) (if yes, date: \_\_/\_\_/\_\_\_\_)  
   Patient notified of results (if applicable) (If yes, date: \_\_/\_\_/\_\_\_\_)

**PUBLIC HEALTH ISSUES**

**Y N U**  
   Human exposure to an animal that was lost-to-follow-up  
   Human exposure to an animal that was euthanized or killed and not available for testing  
   Other:

**PUBLIC HEALTH ACTIONS**

**Y N U**  
   Rabies education provided to patient  
   Patient referred to healthcare provider  
   Rabies PEP recommended to patient  
   Referred patient to national indigent rabies vaccine program  
   National B Virus Resource Center contacted to assist with exposure management (for exposures involving primates only)  
   Responsible pet ownership education provided to animal (i.e., spay/neuter, rabies vaccine, caution w/young children)  
   Outreach provided to employer to reduce employee risk (for occupationally-related exposures)  
   Patient lost to follow-up  
   Other:

**NOTES**

\_\_\_\_\_

**Appendix H**  
**Notice of Animal Quarantine**

SG-59  
11-2025

\_\_\_\_\_ COUNTY HEALTH DEPARTMENT  
STATE OF WEST VIRGINIA

**NOTICE OF ANIMAL QUARANTINE**

**Issued To:**

Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_  
State, Zip Code: \_\_\_\_\_  
Telephone: \_\_\_\_\_

**Animal To Be Quarantined:**

Species: \_\_\_\_\_  
Breed: \_\_\_\_\_  
Sex: \_\_\_\_\_  
Color: \_\_\_\_\_  
Descriptive features: \_\_\_\_\_

**You are hereby ordered to quarantine the animal identified above for ten (10) days for rabies observation. Quarantine is necessary to determine whether or not the person(s) bitten by the animal requires treatment. This order is issued in accordance with West Virginia Division of Health legislative rules on "Reportable Diseases," 64CSR7.**

**INSTRUCTIONS**

1. Quarantine the animal for ten (10) days beginning:    Date: \_\_\_\_\_ Time: \_\_\_\_\_  
The ten (10) day quarantine ends at:                      Date: \_\_\_\_\_ Time: \_\_\_\_\_
2. Isolate the animal away from other animals and human contact in a manner that will prevent its escape and permit daily observation. Tying the animal in an open yard is not adequate confinement.
3. Do not kill, sell, release, give, or vaccinate the animal away during the quarantine period.
4. Give the animal proper care and make sure it is well fed and watered. Every effort should be made to keep the animal alive.
5. At the end of the quarantine period, contact the health department at the phone number listed below to report the animal's condition.
6. If the **animal dies** or shows any **signs of sickness** during the quarantine period **contact the health department immediately**. Avoid exposure to the animal's saliva and do not contact, damage, or destroy the animal's head or brain tissue. Laboratory examination of the animal's brain tissue may be necessary to determine if the animal has rabies.
7. If the animal is required to be updated on rabies vaccinations, do not do this during the quarantine time. Once the animal has been released from quarantine you will have 10 days from release to the vaccination to be completed.

Sanitarian: \_\_\_\_\_  
\_\_\_\_\_ Health Department  
Address: \_\_\_\_\_  
Telephone Number: \_\_\_\_\_

Date \_\_\_\_\_

Received by: \_\_\_\_\_

Date: \_\_\_\_\_

**Appendix I-1**  
**Reportable Disease Rule**  
**(WVDH)**

**[§64-7-5. Other Reportable Events: Potentially Rabid Animal Bites, Rabid Animals, Rabies Pre-Exposure Vaccinations and Post-Exposure Prophylaxis](#)**

**Appendix I-2**  
**Chapter 19, Article 9 Excerpts**  
**Diseases Among Domestic Animals**  
**West Virginia Department of Agriculture**

**[§19-9. Diseases Among Domestic Animals](#)**

**Appendix I-3**  
**Chapter 19, Article 20**  
**Dogs and Cats**  
**West Virginia Department of Agriculture**

**§19-20. Dogs and Cats**

**§19-20A-1. Vaccination of Dogs and Cats for Rabies**

**§19-20D-1. Private Cause of Action for the Humane Destruction of a Dog**

**Appendix I-4**  
**Chapter 19, Article 34**  
**Dangerous Wild Animals Act**  
**West Virginia Department of Agriculture**

**[§19-34. Dangerous Wild Animals Act](#)**

**Appendix I-5**  
**Chapter 20, Natural Resources**

§20-1-1. Purposes and objects of chapter; how chapter cited.

This chapter is enacted to provide a comprehensive program for the exploration, conservation, development, protection, enjoyment and use of the natural resources of the state of West Virginia and may be cited as the State Natural Resources Law.

**§20.2.4 Possession of Wildlife**

**§20.2.11 Sale of Wildlife; Transportation of Same**

**§20.2.12. Transportation of Wildlife Out of State; Penalties**

**§20.2.13. Importation of Wildlife; Certification and Inspection of Imported Wildlife**

**§20.2.14. Propagation of Wildlife for Commercial Purposes**

**§20.2.50a. Wildlife Damage Control Agents; Licensing**

**§20.2.51. Permit for Keeping Pets**

**§20.2.52. Permits for Roadside Menageries**

**§20.2D. Wildlife Rehabilitation**

**Appendix I-6**  
**Chapter 58, Natural Resources**

[§58CSR41 Wildlife Damage Control Agents](#)

[§58CSR63 Commercial Sale of Wildlife](#)

[§58CSR64 Miscellaneous Permits & Licenses](#)

## **Appendix J-1**

### **Local Health Department (LHD)** **ROLES AND RESPONSIBILITIES**

#### **(West Virginia Animal Bite / Potential Rabies Exposure Surveillance and Investigation Protocol)**

- The LHDs should regularly assure that providers and other partners are aware of reporting requirements and have current reporting forms available. Partners may include emergency room personnel, local physician offices, 911 centers, hospital infection control personnel, animal control officers and Sheriff's Department personnel.
- Upon receiving an animal encounter report, the local sanitarian or designee should determine the circumstances of the bite or encounter.
- Upon determining the circumstances of the bite or encounter, the LHD sanitarian must identify the owner of the animal or if it is a wild or a stray animal. If the animal is in another county the sanitarian must notify the LHD of the county to evaluate / confine / test the animal in question.
- The county Health Officer or designee must assure the confinement of the animal that has caused the encounter. During the rabies observation period ask the animal owner to contact LHD if there is a change in animal condition. After the rabies observation period, the owner must notify the LHD of the animal's outcome. If the animal has been killed or has died, the county Health Officer or designee will assure the animal is tested for rabies at the Office of Laboratory Services.
- The LHD designee will discuss exposure management with the victim or their legal guardian. Difficult questions can be referred to the Regional Epidemiologist or the OEPS Epidemiologist on call 24/7/365 at 1-800-423-1271. If the healthcare provider's recommendations regarding PEP appear questionable or inadequate, the LHD will contact the provider to discuss. The local health officer or OEPS can assist in the consult with the provider.
- The LHD will enter the animal encounter data in the West Virginia Electronic Disease Surveillance System (WVEDSS) in the county which the animal encounter victim resides, using the Animal Bites and Other Potential Rabies Exposures reporting form.
- The LHD Health Officer or designee in which the animal resides will follow up on the animal confinement and inquire about the animal health immediately after the confinement period.
- The LHD designee will follow up with the victim after the confinement or after the laboratory results are known. The LHD designee will enter this additional information into WVEDSS and send follow-up report for Regional Review.
- LHD must assure that a veterinarian or other trained and vaccinated individual is available seven days a week to remove an animal's head when needed for rabies testing.

- The LHD should establish and follow written standards for documenting when an animal or a bite victim is lost to follow up. It is recommended that written standards be reviewed by legal counsel. Lost to follow up should be clearly documented according to written standards.
- The LHD should contact the West Virginia Department of Agriculture when there is a rabies case or potential exposure in livestock. Local health department personnel should observe appropriate biosecurity as specified by agriculture when visiting a farm.
- WV-DNR and WV-USDA-APHIS (only in rabies active surveillance counties) should be consulted about any issues involving unusual or problematic wildlife rabies cases or potential exposures.

## **Appendix J-2**

### **OEHS Public Health Sanitation Division** **ROLES AND RESPONSIBILITIES**

1 Davis Square, Suite 200  
Washington & Capitol Streets  
Charleston, WV 25301-1798  
(304) 558-2981  
Fax: (304) 558-1071  
<https://www.wvdhhr.org/phs>

The Public Health Sanitation Division of the Office of Environmental Health Services has a two-fold role in rabies prevention and response. The main office in Charleston is responsible for providing technical assistance to local health department sanitarians which includes the following:

- Coordinate and conduct the 8-week Sanitarian training course.
- Assist with development of agendas and provide instructors for District In-Service meetings and two annual meetings sponsored by the WV Association of Sanitarians.
- Maintain the environmental health procedures manual.
- Create and revise or assist in the creation and revision of environmental health procedures memoranda.
- Maintain official environmental health forms and create and revise them as necessary.

From sanitarians from five district offices (Wheeling, Fairmont, Kearneysville, St. Albans, and Beckley) provide hands-on assistance and guidance to LHD sanitarians. District sanitarians serve as back up and provide coverage for LHD sanitarians.

Office of Environmental Health Services  
Public Health Sanitation Division  
<http://www.wvdhhr.org/phs>

**Agency Contact Information**

**Central Office** (304) 558-2981 Fax: (304) 558-1071  
1 Davis Square, Suite 200  
Washington & Capitol Streets  
Charleston, WV 25301-1798

**Beckley District Office** (304) 256-6666 Fax: (304) 256-6672  
100 East Prince Street  
Beckley, WV 25801  
Greenbrier, Fayette, Logan, Mercer, McDowell, Mingo, Monroe, Nicholas, Pocahontas,  
Raleigh, Summers, Webster, Wyoming

**Fairmont District Office** (304) 367-2751 Fax: (304) 367-2755  
109 Adams Street, Room 501  
Fairmont, WV 26554  
Barbour, Braxton, Doddridge, Gilmer, Harrison, Lewis, Marion, Monongalia, Preston,  
Randolph, Taylor, Tucker, Upshur

**Kearneysville District Office** (304) 725-0348 Fax: (304) 725-3108  
1948 Wiltshire Road  
Kearneysville, WV 25430  
Berkeley, Grant, Hampshire, Hardy, Jefferson, Mineral, Morgan, Pendleton

**Saint Albans District Office** (304) 722-0611 Fax: (304) 722-0615  
808 B Street, Suite G  
Saint Albans, WV 25177  
Boone, Cabell, Clay, Jackson, Kanawha, Lincoln, Mason, Putnam, Wayne

**Wheeling District Office** (304) 238-1001 Fax: (304) 238-1002  
1060 Chapline Street, Room 117  
Wheeling, WV 26003  
Brooke, Calhoun, Hancock, Marshall, Ohio, Pleasants, Ritchie, Roane, Tyler, Wetzel,  
Wirt, Wood

**Appendix J-3**

**WV Department of Agriculture**  
**ROLES AND RESPONSIBILITIES**

**(National Association of State Public Health Veterinarians Compendium of Animal Rabies Prevention and Control, §19-9)**

1900 Kanawha Boulevard, East  
State Capitol, Room E-28  
Charleston, WV 25305-0170  
(304) 558-2214  
<https://agriculture.wv.gov>

The West Virginia Department of Agriculture shall cause the destruction of suspected diseased livestock when such animals are deemed diseased as a result of physical examination or an approved test. The WVDA shall regulate and prohibit the moving or transportation of such animals from one place to another in the state. A legal quarantine for livestock requires coordination with the WVDA Division of Animal Health at 304-558-2214.

## **Appendix J-4**

### **WV Department of Health** **Office of Epidemiology & Prevention Services** **ROLES AND RESPONSIBILITIES**

**(West Virginia Animal Bite / Potential Rabies Exposure Surveillance and Investigation Protocol)**

350 Capitol Street, Room 125,  
Charleston, WV 25301-3715  
(304) 558-5358 (800) 423-1271  
FAX: (304) 558-6335

<https://oepe.wv.gov/Pages/default.aspx>

The Office of Epidemiology & Prevention Services works with local health departments in the management of animal rabies through:

- Drafting policies and procedures for management of animal bites and potential rabies exposures
- Coordination with other agencies involved in animal bite and rabies management
- Collection, analysis and reporting of animal bite and rabies surveillance data
- Consultation on routine and difficult exposure management and post rabies exposure prophylaxis issues (24/7/365)
- Training and education of local health and other personnel in rabies and animal bite management, public health aspects of the oral rabies vaccination (ORV) project, and rabies surveillance.
- Public education regarding rabies and animal bites.

## **Appendix J-5**

### **USDA-APHIS-Wildlife Services**

#### **ROLES AND RESPONSIBILITIES**

**(USDA Wildlife Services National Rabies Management Plan)**

730 Yocum St  
Elkins, WV 26241  
(304) 636-1785  
FAX: (304) 636-5397

<https://www.aphis.usda.gov/>

USDA APHIS Wildlife Services administers the Oral Rabies Vaccination Program in conjunction with State and local government partners. Specifically, Wildlife Services conducts enhanced surveillance within all or portions of 44 counties in West Virginia. These counties include: Hancock, Brooke, Ohio, Marshall, Tyler, Pleasants, Ritchie, Doddridge, Wetzel, Monongalia, Marion, Preston, Taylor, Harrison, Barbour, Tucker, Randolph, Upshur, Lewis, Gilmer, Webster, Braxton, Calhoun, Roane, Wirt, Wood, Jackson, Mason, Putnam, Cabell, Wayne, Kanawha, Clay, Nicholas, Fayette, Raleigh, Lincoln, Boone, Logan, Mingo, Wyoming, Mercer, Summers and McDowell. These counties may vary from year to year depending on strategic management decisions.

Wildlife Services Biologists and Specialists collect road kill and sick acting rabies vector species (raccoon, fox, bobcat, skunk, and coyote). Wildlife Services staff are available to collect pet and human exposure specimens at the request of the local health departments. All non-exposure samples collected by Wildlife Services will be tested at the USDA lab using the Direct Rapid Immunohistochemistry Test (DRIT). Any pet and human exposures will be sent to the WVDH for testing. Wildlife Services provides a summary of monthly test results to the WVDH and WVDNR. Additionally, Wildlife Services provides immediate notification to these agencies of positive rabies specimens tested in the USDA lab.

Wildlife Services provides information and education to partnering agencies and the public throughout West Virginia concerning ORV activities. Wildlife Services also provides training on brainstem extraction at the request of the WVDH for local and county officials.

**Appendix J-6**

**County Sheriff**

**ROLES AND RESPONSIBILITIES**

(§19-20-9a, 64CSR7-5.3, 64CSR7-5.4)

Telephone: '911'

The County Sheriff is responsible for enforcement of local and state regulations as they apply to animal restraints or endangerment of human life or property from dogs or cats within their respective jurisdictional boundaries. The Sheriff may assign a deputy or a number of deputies or a designated Humane Officer to assist with enforcement obligations.

**Appendix J-7**

**West Virginia Division of Natural Resources (DNR)**

**ROLES AND RESPONSIBILITIES**

(West Virginia Natural Resources General Order 35: Rabid Animal Complaints)

West Virginia DNR, Headquarters

112 California Avenue  
Charleston, WV 25305  
Phone: (304) 558-6200  
<https://wvdnr.gov/>

Wildlife Disease Specialist

West Virginia DNR  
1 Depot Street  
Romney, WV 26757  
Phone: (304) 822-3551

<b>District 1 Headquarters</b> 1110 Railroad Street Farmington, WV 26571 Phone: (304) 825-6787	<b>District 2 Headquarters</b> 1 Depot Street Romney, WV 26757 Phone: (304) 822-3551
<b>District 3 Headquarters</b> 163 Wildlife Road French Creek, WV 26218 Phone: (304) 924-6211	<b>District 4 Headquarters</b> 2006 Robert C. Byrd Drive Beckley, WV 25801 Phone: (304) 256-6945
<b>District 5 Headquarters</b> 480 Forks of Coal Way Alum Creek, WV 25003 Phone: (304) 756-1023	<b>District 6 Headquarters</b> 76 Conservation Way Parkersburg, WV 26104 Phone: (304) 420-4550

The West Virginia DNR conducts limited testing for rabies in non-exposure (e.g., human, domestic animal, livestock) cases of interest for certain wildlife, generally as a rule-out in a wildlife mortality investigation and cooperates with USDA-Wildlife Services in securing non-exposure wildlife rabies surveillance specimens. The agency's Wildlife Resources Section may respond to reports of sick wildlife, dispatch sick wildlife, collect tissue samples as appropriate, and dispose of carcasses on a case-by-case basis. The West Virginia Natural Resources Police have a General Order relating to rabid animal complaint response, which includes securing the area and attempting to contact the county Health Department, animal control or humane officer, USDA-Wildlife Services, and/or the WV DNR Wildlife Resources Section for assistance. Officers follow Health Department-recommended procedures in the instance handling or carcass disposal is necessary; officers do not collect tissue samples in the field but may facilitate the collection of an animal by the county Health Department.

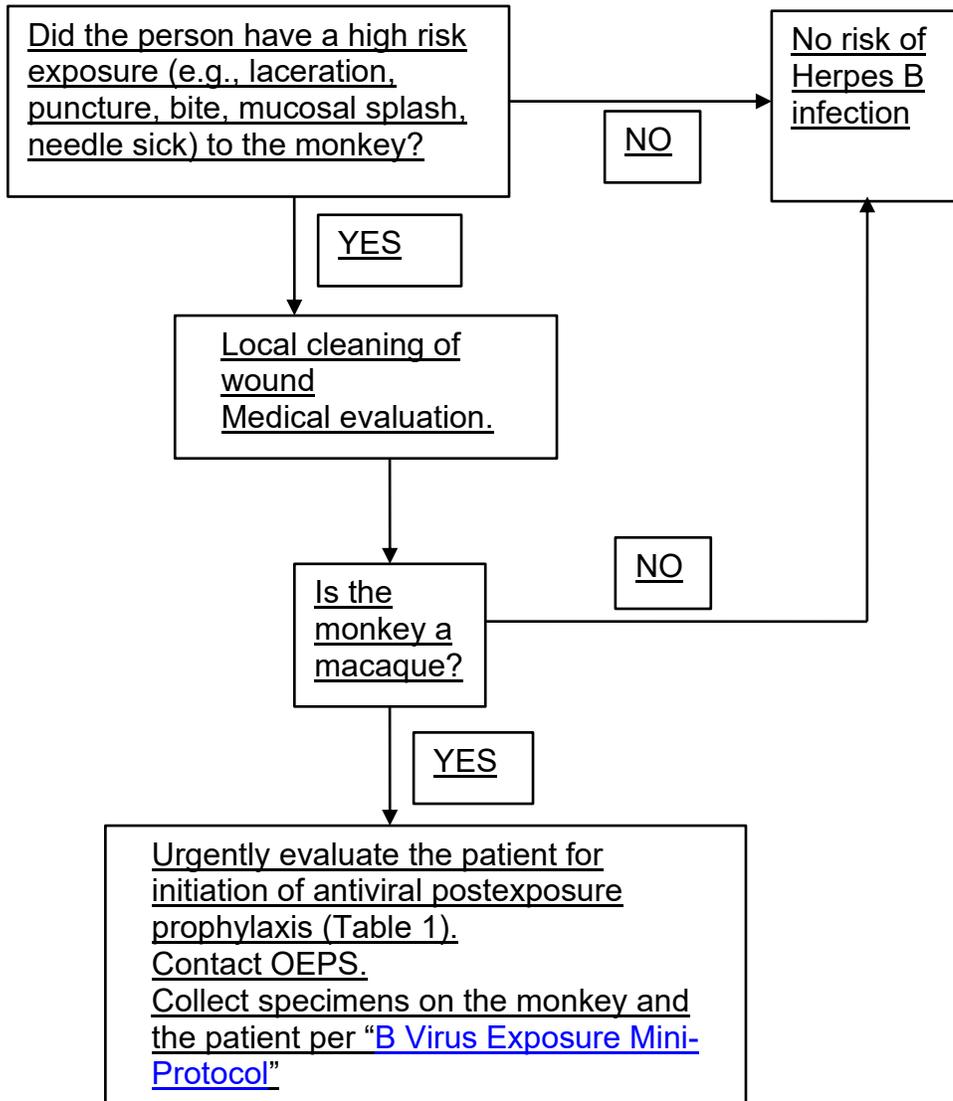
The WV DNR will notify One Health partners about any rabies detections in wildlife in a timely manner. In cases involving potential human, domestic animal, or livestock exposures, the agency may facilitate sample collection and testing by directing any involved persons to contact their county's Health Department, a licensed veterinarian, or the WV Department of Agriculture as appropriate for human or animal medical advice. The DNR should be notified about any cases of rabies in wildlife, and cases in which a domestic animal or livestock became infected by a wildlife source when this information is known or can be reasonably surmised.

## Appendix K

### Assessment of Herpes B Transmission Risk from a Monkey Bite

Why? Herpes B virus can cause rapidly lethal encephalitis in humans. Herpes B virus infection is common in Macaque Monkeys.

Evaluation and management steps:



Source: <https://biotech.gsu.edu/virology>

## Table 1

### Recommendations for post-exposure prophylaxis for people exposed to B virus

Source: Cohen JI, Davenport DS, Stewart JA, Deitchman S, Hilliard JK, Chapman LE, and the B Virus Working Group. Recommendations for prevention of and therapy for exposure to B virus. *CID*, 2002; 35:1191-1203.

**Table 5. Recommendations for postexposure prophylaxis for persons exposed to B virus.**

---

Prophylaxis recommended

Skin exposure<sup>a</sup> (with loss of skin integrity) or mucosal exposure (with or without injury) to a high-risk source (e.g., a macaque that is ill, immunocompromised, or known to be shedding virus or that has lesions compatible with B virus disease)

Inadequately cleaned skin exposure (with loss of skin integrity) or mucosal exposure (with or without injury)

Laceration of the head, neck, or torso

Deep puncture bite

Needlestick associated with tissue or fluid from the nervous system, lesions suspicious for B virus, eyelids, or mucosa

Puncture or laceration after exposure to objects (a) contaminated either with fluid from monkey oral or genital lesions or with nervous system tissues, or (b) known to contain B virus

A postcleansing culture is positive for B virus

Prophylaxis considered

Mucosal splash that has been adequately cleaned

Laceration (with loss of skin integrity) that has been adequately cleaned

Needlestick involving blood from an ill or immunocompromised macaque

Puncture or laceration occurring after exposure to (a) objects contaminated with body fluid (other than that from a lesion), or (b) potentially infected cell culture

Prophylaxis not recommended

Skin exposure in which the skin remains intact

Exposure associated with nonmacaque species of nonhuman primates

---

<sup>a</sup> Exposures include macaque bites; macaque scratches; or contact with ocular, oral, or genital secretions, nervous system tissue, or material contaminated by macaques (e.g., cages or equipment) (see the Postexposure Prophylaxis section of the text for details).

---



National B Virus Resource Center  
Viral Immunology Center  
Georgia State University  
50 Decatur Street  
Atlanta, Georgia 30303



## B VIRUS EXPOSURE MINI-PROTOCOL

The following is a checklist for recommended samples to be submitted for herpes B virus testing. Please familiarize yourself and your staff with this checklist and please refer to this when submitting specimens to our laboratory. Thank you.

### BASELINE/DAY OF INJURY SAMPLES

- 1. Human baseline serum (0.5 - 2.0 ml) collected as close as possible to the time of injury.
- 2. Primate baseline serum (0.5 - 2.0 ml) collected as close as possible to the time of injury.
- 3. Human virology swab samples of the wound site or exposed area as applicable. This specimen should be collected as soon as possible after the injury, after the site has been disinfected.
- 4. Primate virology swab samples of the buccal cavity, right eye, left eye, and genitalia. Please use one swab per site and send in separate media tubes. These specimens must be collected as close as possible to the time of injury, as specimens collected later may not accurately reflect the monkey's status at the time of injury.

### FOLLOW-UP/14 - 21 DAY POST INJURY SAMPLES

- 1. Human follow-up serum (0.5 - 2.0 ml).
- 2. Primate follow-up serum (0.5 - 2.0 ml).

### IMPORTANT COMMENTS

1. Please refer to the document *Recommendations on Sample Collection, Storage, & Shipment* for complete instructions for specimen collection, handling, and shipment.
2. Because we test paired specimens, the failure to submit a baseline or follow-up serum sample will result in insufficient specimens for complete testing, potentially resulting in unreliable diagnosis.
3. Fill out the submission form completely and correctly. Please verify that all information is identical to the specimen labels.
4. Label all specimens clearly with the permanent name or ID, date of collection, virology swab collection site, and/or tissue source. Failure to correctly label specimens may result in incomplete results. Mislabeled or unlabeled specimens may not be tested.
5. Do not label specimen tubes with extra information that is not indicated above. Cage #'s, study #'s, experiment #'s, investigator's name, etc. are unnecessary and confusing when trying to identify the sample.
6. Be sure all whole blood samples (if submitted for serum antibody testing) are spun and separated. Remove the serum and transfer to a properly labeled plastic tube for shipment to our laboratory.
7. On occasion, it will not be possible to provide our laboratory with the requested specimens because the associated monkey is unidentifiable, was euthanatized, the injury was reported late, etc. If for any reason you are unable to collect the appropriate specimens, please note that information on the submission form.

(OVER)

Address packages to:

National B Virus Resource Center  
Viral Immunology Center  
Georgia State University  
50 Decatur Street  
Atlanta, Georgia 30303

Address correspondence to:

National B Virus Resource Center  
Viral Immunology Center  
Georgia State University  
P.O. Box 4118  
Atlanta, Ga. 30302-4118

Emergency Phone Numbers:

National B Virus Resource Center:

Dr. Julia K. Hilliard, Ph.D.  
Laboratory Director

Emergency

Ph: 404-413-6550  
Fax: 404-413-6556  
email: bvirus@gsu.edu

Ph: 404-358-8168

Martin J. Wildes, MT (AAB)  
Laboratory Manager

Emergency

Ph: 404-413-6566  
Fax: 404-413-6556  
email: mwildes@gsu.edu  
Pager: 1-888-500-3504

World Wide Web site:

<http://www.gsu.edu/bvirus>

Primary Clinical Consultants

Dr. Norman Bernstein, M.D.  
Dr. David Davenport, M.D.

540-374-3277  
269-341-6400  
email: ddave@chartermi.net

PRE-SHIPMENT CHECK-LIST

**Before shipping your samples to our laboratory, please make sure you have:**

(reference instructions, *Recommendations on Sample Collection, Storage, & Shipment*)

- contacted our laboratory to alert us of your shipment.
- used appropriate primary and secondary shipping containers with adequate absorbent material and used the proper labels on the outside of the containers (reference *Federal Register* 42 CFR Part 72).
- packed with at least 5 pounds of appropriate coolant.
- used appropriate delivery address.
- not used glass specimen tubes.
- provided a contact name and phone number in case of emergency.
- marked the package and courier form for "SATURDAY DELIVERY" if shipping on a Friday.
- that the paperwork is properly filled out and that the specimen tubes are labeled to match the paperwork.