



**National Wildlife Health Center
Wildlife Health Bulletin 2020-04**

Rabbit Hemorrhagic Disease Virus 2 Confirmed in Wild Rabbits in the United States

To: Natural Resource/Conservation Managers

From: Dr. Jonathan Sleeman, Center Director, USGS National Wildlife Health Center

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Rabbit hemorrhagic disease virus 2 (RHDV2), a notifiable foreign animal disease, has been confirmed for the first time in wild rabbits in the United States. According to the U.S. Department of Agriculture (USDA) [notification](#) to the World Organisation for Animal Health (OIE) and [press release](#) by the New Mexico Department of Game and Fish, RHDV2 was confirmed in one black-tailed jackrabbit (*Lepus californicus*) and five desert cottontails (*Sylvilagus audubonii*) found dead in New Mexico. Subsequently, the USDA and the Arizona Game and Fish Department confirmed RHDV2 in black-tailed jackrabbits and desert cottontails in [Arizona](#). RHDV2 had been recently confirmed in domestic rabbits in 11 counties in New Mexico and RHDV (not serotyped) was confirmed in domestic rabbits in [Nuevo Casa Grandes, Chihuahua \(Mexico\)](#). Mortality of wild rabbits is also being concurrently reported in western Texas.

All rabbit and pika species (Order Lagomorpha) in North America may be susceptible to RHDV2, though the host range of this virus among United States species is currently unknown. Since 2018, RHDV2 has been detected in domestic and feral rabbits (*Oryctolagus cuniculus*) in British Columbia (Canada), Ohio, Washington, and New York. In addition, in an infection trial conducted by USDA, RHDV2 caused mortality in eastern cottontails (*Sylvilagus floridanus*), suggesting it could be highly lethal in naïve rabbit species.

RHDV2 was first detected in France in 2010 and has since spread across Europe and several other countries, where it has caused mortality in wild rabbits. In 2015, RHDV2 was detected in free-ranging rabbits in Australia and spread across that continent within 18 months. Some strains of RHDV2 have been attributed to population declines in European and Australian rabbits, but the population impacts of RHDV2 on wild rabbits in the United States is unknown. According to the USDA report, this virus poses no risk to humans or other animals. However, RHDV2 is highly infectious, stable in the environment for up to 15 weeks in dry conditions, and can survive freezing. The virus can be spread through contact with infected rabbits, their meat or fur, and materials having contact with those items. Additionally, insects and scavengers may spread RHDV2 via contact with infectious material.

The USGS National Wildlife Health Center is alerting partners to be vigilant for morbidity or mortality events involving wild rabbits and to contact us (NWHC-epi@usgs.gov) if you wish to discuss submission of carcasses from these events. The strain of RHDV2 recently confirmed in wild rabbits by the USDA appears to be highly contagious. To prevent the spread of RHDV2 between populations of wild rabbits, wildlife professionals investigating morbidity or mortality events involving these species, or who handle live rabbits, should wear personal protective equipment (PPE) and decontaminate all field gear, clothes, and vehicles. General PPE recommendations for investigating morbidity or mortality in rabbits should include boots, gloves, and outer clothing that can be bagged, cleaned, and disinfected; or bagged and thrown away. Specific PPE recommendations should be determined by individual agencies based upon

known and anticipated risks relevant to the disease event under investigation. In addition, to avoid inadvertent contributions to the spread of this virus, we discourage field necropsies and instead recommend whole carcasses be collected, at least double bagged, and transported to an appropriate Biological Safety Level 2 or higher containment laboratory for necropsy. Carcasses not submitted for necropsy should be incinerated or buried deep enough to prevent access by scavengers to avoid additional environmental contamination. Clean and disinfect equipment that is used at these locations prior to leaving work sites with 10% sodium hydroxide or 1 to 2% formalin to limit spread of RHVD2 or other potential pathogens. Household bleach mixed at a 1:10 dilution (10%) has also been suggested for decontamination. Wildlife professionals with domestic rabbits and who encounter live or dead rabbits should shower and change clothes before contact with domestic animals to prevent transmission.

Guidance for rabbit hunters:

- Do not harvest rabbits that appear sick.
- Wear rubber or disposable latex gloves while handling and cleaning game.
- When cleaning game, bag any remains and dispose of by placing in trash (however, check local ordinances concerning disposal of game carcasses).
- Do not dispose of remains where other rabbits or scavengers may have access to them.
- When done handling game, wash hands thoroughly with soap or disinfectant, and disinfect knives, equipment, and surfaces that were in contact with game.
- If contact with live rabbits is possible, hunters should shower and change clothing as soon as possible after cleaning game.
- Do not eat, drink, or smoke while handling animals.
- All game should be thoroughly cooked to an internal temperature of 165 degrees.

Resources:

USDA Animal and Plant Health Inspection Service, Fact Sheet: Rabbit Hemorrhagic Disease
https://www.aphis.usda.gov/publications/animal_health/fs-rhdv2.pdf

USDA Animal and Plant Health Inspection Service Bulletin: Rabbit Hemorrhagic Disease in British Columbia, Canada <https://content.govdelivery.com/accounts/USDAAPHIS/bulletins/1f9498f>

USDA Animal and Plant Health Inspection Service Bulletin: APHIS Detects Rabbit Hemorrhagic Disease Virus 2 (RHDV2) In a Domestic Ohio Rabbit
<https://content.govdelivery.com/accounts/USDAAPHIS/bulletins/2109b9f>

Center for Food Security and Public Health – Iowa State University: Rabbit Hemorrhagic Disease
http://www.cfsph.iastate.edu/Factsheets/pdfs/rabbit_hemorrhagic_disease.pdf

USDA Recommendations for Disinfectants for Rabbit Hemorrhagic Disease Calicivirus
https://www.aphis.usda.gov/animal_health/emergency_management/downloads/disinfection-options-for-rabbit-hemorrhagic-disease.pdf

Washington State Department of Agriculture Rabbit Hemorrhagic Disease Fact Sheet
<https://s3.wp.wsu.edu/uploads/sites/2082/2019/11/11.08.19USDARabbitHemorrhagicDiseaseFactSheet.pdf>

Disease Investigation Services

To request diagnostic services or report wildlife mortality, please contact the National Wildlife Health Center at **608-270-2480** or by email at NWHC-epi@usgs.gov, and a field epidemiologist will be available to discuss the case. To report wildlife mortality events in Hawaii or Pacific Island territories, please contact the Honolulu Field Station at 808-792-9520 or email Thierry Work at thierry_work@usgs.gov.

Further information about our services can be found at www.usgs.gov/nwhc/services. To learn more about submitting samples and reporting events, go to www.usgs.gov/nwhc/submit.

Summary information on wildlife morbidity/mortality events reported to NWHC can be viewed and searched on the [WHISPers website](#). If you have any questions or concerns regarding the scientific and technical services we provide, please do not hesitate to contact NWHC Director Jonathan Sleeman at 608-270-2401, jsleeman@usgs.gov.

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