



2020 Vesicular Stomatitis Virus (VSV) Situation Report – June 16, 2020

Information current as of 2:00 pm MDT, 06/16/2020

On June 16, 2020, the National Veterinary Services Laboratories in Ames, Iowa confirmed a finding of a vesicular stomatitis virus (VSV) infection (Indiana serotype) on an equine premises in Butler County, Kansas. Three horses on the premises have met the confirmed case definition of infection with compatible clinical signs and a complement fixation test (CFT) titer of 1:40 or greater. **This is the VSV index case for Kansas in 2020.**

Subsequently, two other equine premises in Butler County, Kansas have also met the case definition of VSV infection with compatible clinical signs and either reverse transcription polymerase chain reaction (RT-PCR)-positive or CFT-positive results at 1:5 or greater for VSV (Indiana serotype).

Index Premises (Kansas): The index premises is located in Butler County, Kansas, and has a total of 4 horses present with all showing clinical signs of VSV (muzzle and/or coronary band lesions) which were reported to have appeared around June 9th. There are no other susceptible livestock species on the premises and no recent animal movements have occurred.

Subsequent VSV-Affected Premises (Kansas): The two subsequently identified VSV-positive equine premises are also both located in Butler County, Kansas. One premises has 3 horses present with all showing clinical signs of VSV which were first noticed around June 4th. There are no other susceptible livestock on the premises and no recent history of animal movements. The other premises has 1 of 7 equids showing clinical signs of VSV which was first noticed around June 9th. There are also 3 goats on the premises that are currently unaffected and no recent history of animal movements have occurred.

Known competent vectors for transmission of VSV include black flies, sand flies, and biting midges (*Culicoides spp.*). The epidemiological investigations on these VSV-positive premises indicate that incursion of VSV-infected insect vectors is the likely source of infection on each premises. Biosecurity measures and vector mitigation have been instituted to reduce the within-herd spread of the virus. The animals are being monitored and the premises will remain under state quarantine until 14 days from the onset of lesions in the last affected animal on the premises.

Additionally, since the last situation report (6/11/2020), there has been 1 new VSV-affected premises identified (1 confirmed positive, 0 suspect) in 1 state. Updates are as follows:

Arizona (1 new confirmed positive premises)

- Maricopa County – 1 new confirmed positive equine premises
- Since the last situation report, 1 VSV-affected premises has been released from quarantine in Maricopa County.

Texas (no new cases)

- Since the last situation report, 2 VSV-affected premises have been released from quarantine in Kerr and McMullen Counties.

Classification of Cases

Premises that have laboratory diagnostic confirmation of VSV are categorized as confirmed positive premises. Once a county is confirmed as VSV-positive, new equine premises presenting with clinical signs of VSV in that county are not required to be tested for confirmation of the disease, but the premises will be quarantined and classified as a suspect premises.

Quarantines

Confirmed positive and suspect premises are quarantined for at least 14 days from the onset of lesions in the last affected animal on the premises.

Summary of the Outbreak (Updated information in blue)

The 2020 VSV outbreak began on April 13, 2020, when the National Veterinary Services Laboratories (NVSL) in Ames, Iowa confirmed the first VSV-positive premises in Dona Ana County, New Mexico. Arizona, Texas, and Kansas subsequently broke with VSV cases which were confirmed by NVSL on April 22, 2020 (Cochise County, Arizona), April 23, 2020 (Starr County, Texas), and June 16, 2020 (Butler County, Kansas).

Since the start of the outbreak, **47 VSV-affected premises have been identified (43 confirmed positive, 4 suspect)**. **Forty-three (43)** of these premises had only equine species clinically affected and 4 premises had clinically affected cattle (McMullen, Starr, and Zapata Counties, Texas).

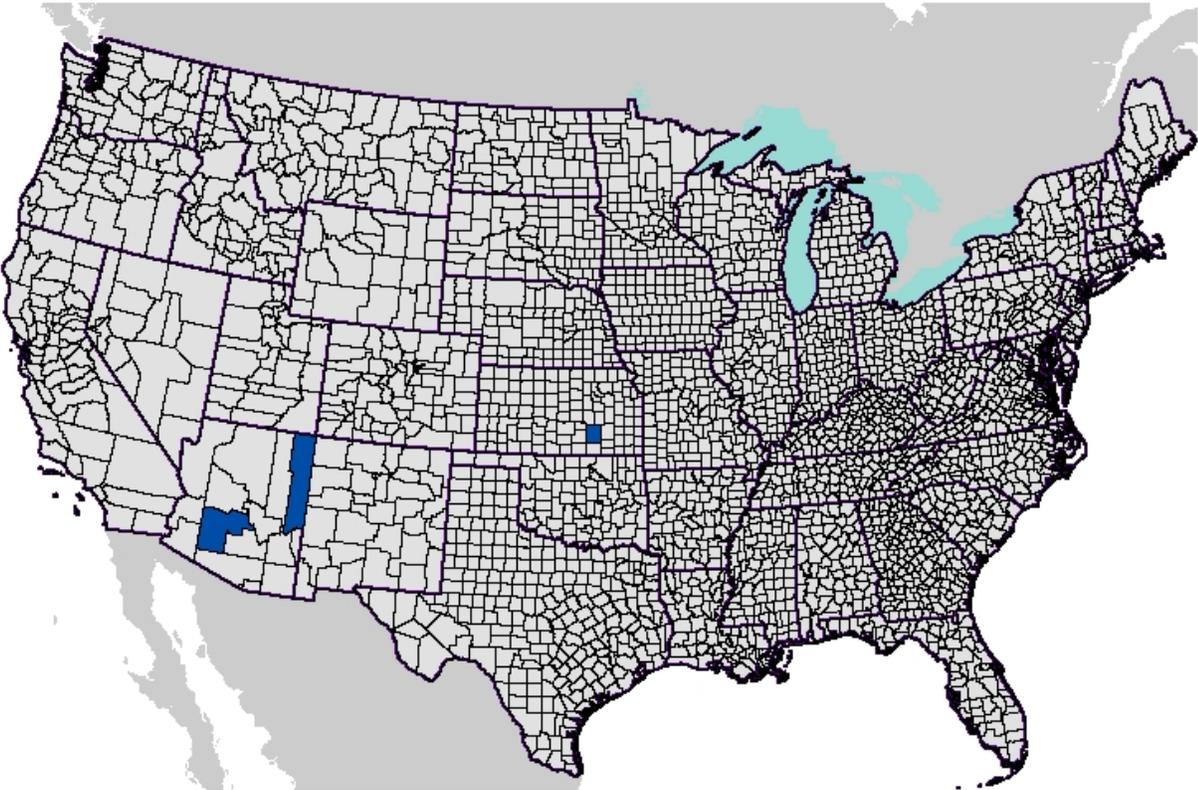
Arizona has identified **18** affected premises (**17** confirmed positive, 1 suspect) in 7 counties (Apache, Cochise, Gila, Maricopa, Pima, Pinal, and Santa Cruz Counties). **Kansas has identified 3 affected premises (3 confirmed positive) in 1 county (Butler County)**. New Mexico has identified 16 affected premises (13 confirmed positive, 3 suspect) in 6 counties (Bernalillo, De Baca, Dona Ana, Eddy, Grant and Sierra Counties). Texas has identified 10 affected premises (10 confirmed positive, 0 suspect) in 6 counties (El Paso, Hudspeth, Kerr, McMullen, Starr, and Zapata Counties). There have been a total of **39** previously VSV-infected or suspect premises that have completed the quarantine period and been released. **Eight (8)** premises remain under VSV quarantine.

Summary of VSV-Affected Premises

Table 1. Location, number, and status of VSV-affected premises. **New information in blue.**

	Confirmed Positive Premises	Suspect Premises	Premises Released from Quarantine	Current Premises Quarantined
ARIZONA				
Apache County	2	0	1	1
Cochise County	4	0	4	0
Gila County	1	0	1	0
Maricopa County	6	1	3	4
Pima County	1	0	1	0
Pinal County	2	0	2	0
Santa Cruz County	1	0	1	0
TOTAL: 7 COUNTIES	17	1	13	5
KANSAS				
Butler County	3	0	0	3
TOTAL: 1 COUNTY	3	0	0	3
NEW MEXICO				
Bernalillo County	1	0	1	0
De Baca County	2	0	2	0
Dona Ana County	6	1	7	0
Eddy County	1	0	1	0
Grant County	1	0	1	0
Sierra County	2	2	4	0
TOTAL: 6 COUNTIES	13	3	16	0
TEXAS				
El Paso County	1	0	1	0
Hudspeth County	1	0	1	0
Kerr County	1	0	1	0
McMullen County	1	0	1	0
Starr County	4	0	4	0
Zapata County	2	0	2	0
TOTAL: 6 COUNTIES	10	0	10	0
TOTAL PREMISES ALL STATES	43	4	39	8

Map 1 (Current). Counties with Current VSV-Quarantined Premises (shaded in blue)



Map 2 (Cumulative). Counties with Premises Quarantined for VSV in 2020 (shaded in blue)

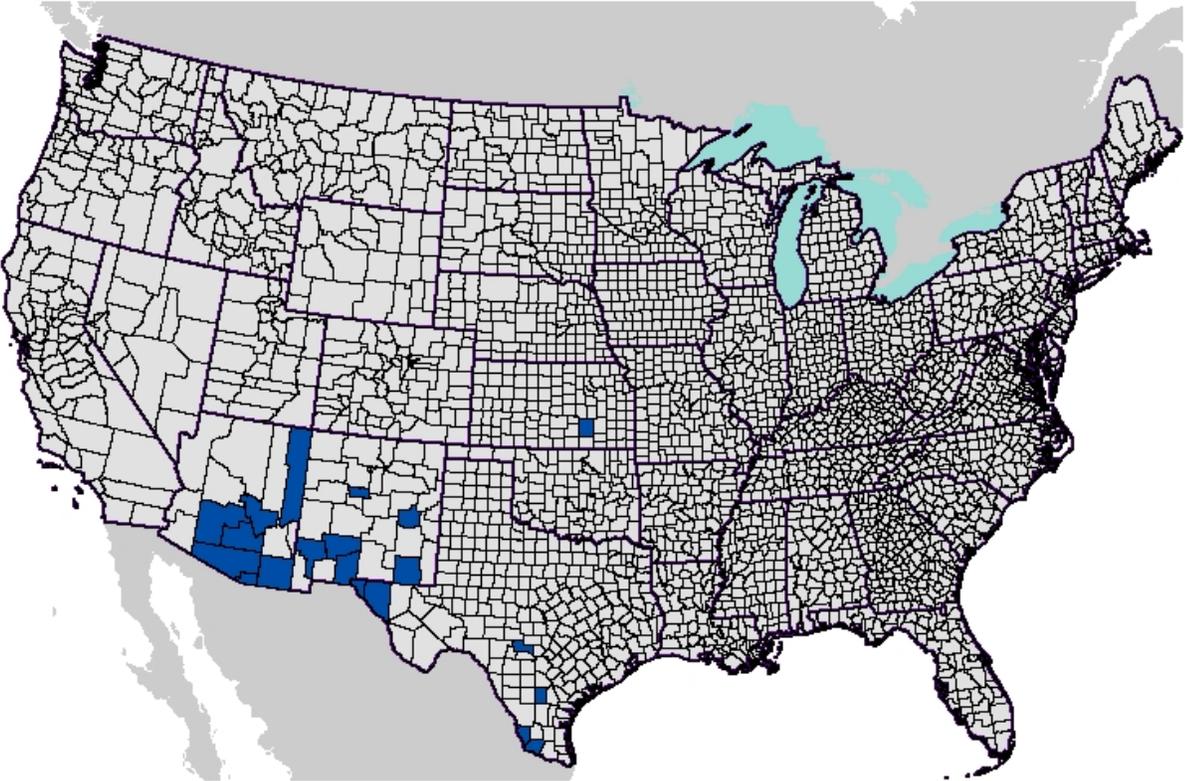


Table 2. Cumulative count of species clinically affected on VSV-positive premises.

State	Premises with clinically affected equine species	Premises with clinically affected bovine species	Premises with clinical signs in both equine and bovine species	Premises with clinical signs in other susceptible species	Total affected premises
ARIZONA	18	0	0	0	18
KANSAS	3	0	0	0	3
NEW MEXICO	16	0	0	0	16
TEXAS	6	4	0	0	10
TOTAL	43	4	0	0	47

Table 3. VSV Serotypes Identified During the 2020 Outbreak

Both VSV-Indiana (VSV-IN) and VSV-New Jersey (VSV-NJ) serotypes have been identified during the 2020 outbreak. VSV-IN occurred in the U.S. in 2019, while VSV-NJ was last isolated in the U.S. in the 2014-2015 outbreak. Both serotypes are known to circulate in endemic cycles in southern Mexico. The last U.S. outbreak involving both serotypes occurred in 1997-1998.

State	Premises with VSV-IN serotype confirmed	Premises with VSV-NJ serotype confirmed	Premises with VSV serotype unconfirmed*	Total VSV affected premises
ARIZONA	16	0	2	18
KANSAS	3	0	0	3
NEW MEXICO	13	0	3	16
TEXAS	3	7	0	10
TOTAL	35	7	5	47

*Livestock in the southwestern and Rocky Mountain regions of the U.S. have been exposed to both VSV-NJ and VSV-IN in recent outbreak years. New infection with either serotype in 2020 can cause elevated antibody titers to both serotypes if previously encountered. The current infection serotype on a premises may not be able to be confirmed if elevated antibodies to both serotypes are present in the animals and antigen detection tests (RT-PCR and virus isolation) are negative. Additionally, VSV serotype will not be known in suspect cases in which diagnostic testing does not occur.

Table 4. Timeline of Events

Date	Event
April 13, 2020	VSV index case for the U.S. confirmed at NVSL – Dona Ana County, New Mexico. New affected county confirmed – Sierra County, New Mexico
April 20, 2020	New affected county confirmed – Eddy County, New Mexico
April 22, 2020	VSV index case for Arizona confirmed – Cochise County, Arizona
April 23, 2020	VSV index case for Texas confirmed – Starr County, Texas
April 27, 2020	New affected county confirmed – Pinal County, Arizona
April 29, 2020	New affected county confirmed – El Paso County, Texas
May 4, 2020	New affected county confirmed – Grant County, New Mexico
May 6, 2020	New affected counties confirmed – Gila County, Arizona; Zapata County, Texas
May 7, 2020	New affected counties confirmed – Pima, County, Arizona; Bernalillo and De Baca Counties, New Mexico
May 19, 2020	New affected county confirmed – McMullen County, Texas
May 20, 2020	New affected county confirmed – Hudspeth County, Texas
May 21, 2020	New affected counties confirmed – Santa Cruz County, Arizona; Kerr County, Texas
May 22, 2020	New affected county confirmed – Maricopa County, Arizona
May 29, 2020	New affected county confirmed – Apache County, Arizona
June 16, 2020	VSV index case for Kansas confirmed – Butler County, Kansas