## Equine Herpesvirus-1 Regulatory Response

Equine herpesvirus-1(EHV-1) is a monitored reportable disease for which no regulatory action is taken. Laboratory detections of EHV-1 in horses with non-neurologic signs of disease are monitored for epidemiologic surveillance. Equine Herpesvirus Myeloencephalopathy (EHM), the neurological disease associated with EHV-1 infection, was added in January 2011 to the reportable disease list as a regulatory condition for which regulatory action is taken. Any time EHM is detected in a horse, a quarantine is applied at time of confirmation of the disease. Each situation is individually evaluated to determine the most appropriate quarantine parameters by Animal Health Branch (AHB) veterinarians who will work closely with private practitioners to assess the premises biosecurity practices, the horse health monitoring system and feasibility of isolation of suspect and confirmed cases before determining the extent of the quarantine.

## **California EHM Incidents**

## December 2020 — Ventura County

A 13-year-old Quarter horse mare in Ventura County displayed fever and neurological signs and was confirmed positive for the non-neuropathogenic strain of EHV-1. The mare was quarantined and isolated at a veterinary hospital and the home premises of thirty-two (32) potentially exposed horses were quarantined. The home premises' quarantine was released after fourteen (14) days with no additional cases and the quarantine on the index case at the veterinary hospital was released after twenty (20) days.

## November 2020 — Los Angeles County

A 14-year-old Saddlebred gelding in Los Angeles county displayed neurologic signs and was confirmed positive for the non-neuropathogenic strain of EHV-1. A quarantine was issued for sixtysix (66) additional horses on the home premise and one additional horse on the premise became febrile and tested positive for EHV-1. No additional cases were confirmed, and the quarantine was released after twenty-eight (28) days.

## October 2020 — Sonoma County

A 30-year-old Warmblood gelding in Sonoma County displayed fever and neurologic signs and was confirmed positive for the non-neuropathogenic strain of EHV-1. The gelding was quarantined in the isolation barn on the premise where it was temporarily residing after evacuating from a nearby fire in the weeks prior. One additional case, a 30-year-old Warmblood mare, displayed mild respiratory signs and possible mild neurological signs was also confirmed positive for EHV-1. No other cases were confirmed, and the quarantine was released after fourteen (14) days.

## August 2020 — El Dorado County

A 17-year-old Thoroughbred gelding in El Dorado County with fever and neurologic signs was euthanized and confirmed positive for the neuropathogenic strain of EHV-1. The home premise had ten (10) additional horses put under quarantine and there were no additional cases, so quarantine was released after fourteen (14) days.

## August 2020 — Imperial County

A one-year-old Quarter Horse filly in Imperial County was euthanized due to severe neurologic signs and was confirmed positive for Equine herpesvirus-4 (EHV-4). Three (3) horses on the home premise were quarantined and one additional horse became febrile and tested positive for EHV-4. The quarantine was released after twenty-five (25) days.

## April 2020 — Sonoma County

A 10-year-old Warmblood mare in Sonoma County displayed neurologic signs, was sent to an outside veterinary hospital for treatment and confirmed positive for the non-neuropathogenic strain of EHV-1. The home premise of forty-eight (48) exposed horses were quarantined, there were no additional cases and quarantine was released after fourteen (14) days.

## March 2020 — Alameda County

A 14-year-old pony mare in Alameda County displaying neurologic signs was confirmed positive for the non-neuropathogenic strain of EHV-1. Fortyfour (44) exposed horses on the home premise were placed under quarantine. Ten (10) additional horses on the premises became febrile and confirmed positive for EHV-1. Quarantine was released after fifty-eight (58) days.

## January 2020 — Santa Barbara County

A 21-year-old Quarter Horse gelding displaying severe neurologic signs was euthanized and confirmed for the neuropathogenic strain of EHV-1. Two (2) exposed horses were placed under quarantine. A 6-year-old Quarter Horse mare displayed mild neurologic signs and an aged miniature horse gelding displayed a fever and both were confirmed positive for EHV-1. Quarantine was released after twenty-eight (28) days.

## November 2019 — San Bernardino County

A 12-year-old Quarter Horse mare displaying severe neurologic signs was euthanized and confirmed for the neuropathogenic strain of EHV-1 on necropsy. Twenty-one (21) exposed horses were placed under quarantine. An additional three (3) horses became neurologic and tested positive for EHV-1. Two (2) of those horses were subsequently euthanized due to severity of neurologic signs. Six (6) additional horses became febrile and tested positive for EHV-1. Quarantine was released after seventy-one (71) days due to extended shedding of virus from one horse.

## October 2019 — Alameda County

A 12-year-old Arabian mare with severe neurologic signs was confirmed positive for the neuropathogenic strain of EHV-1 and was later euthanized due to severity of neurologic signs. Sixty-four (64) exposed horses were placed under quarantine. A 9-year-old Paint gelding from the premise also showed neurologic signs and confirmed positive for EHV-1. An additional two (2) horses on the premise became febrile and tested positive for EHV-1. Quarantine was released after nineteen (19) days.

### October 2019 — Shasta County

A 20-year-old Quarter horse gelding displayed neurologic signs and was confirmed positive for the non-neuropathogenic strain of EHV-1. Four (4) additional horses on the premise were put under quarantine and one (1) horse became neurologic and was confirmed positive for EHV-1. All horses recovered and quarantine was released after twenty-seven (27) days. Two (2) additional horses on two (2) additional premises, who attended the same team roping event as the index horse, displaying fevers were confirmed positive for nonneuropathogenic strain of EHV-1. As no neurologic horses were associated with these febrile cases, no quarantines were applied and private practitioners monitored the situation.

## March 2019 — Alameda County

A 3-year-old Thoroughbred filly was euthanized due to acute severe neurologic signs and was confirmed positive for the neuropathogenic strain of EHV-1 on necropsy. Fifty-six (56) exposed horses were placed under quarantine and no additional cases were confirmed. Quarantine was released after fourteen (14) days.

## November 2018 — San Mateo County

A 24-year-old Arabian mare displaying neurologic signs was confirmed positive for the nonneuropathogenic strain of EHV-1. The mare was isolated and quarantined off site, exposed horses were placed under quarantine and enhanced biosecurity measures were implemented. The mare recovered, there were no additional cases, and quarantine was released after fourteen (14) days.

### June 2018 — San Mateo County

A 15-year-old pony mare displaying neurologic signs was confirmed positive for the nonneuropathogenic strain of EHV-1. An additional horse originating from the same property, a 24year-old Tennessee Walker mare, displaying a fever, tested positive for EHV-1. The Tennessee Walker mare subsequently displayed neurologic signs and was euthanized due to the severity of



January 2021

her clinical signs. The pony mare did recover. No additional cases were identified and quarantine was released after fourteen (14) days.

## April 2018 – Orange County

A 17-year-old Thoroughbred gelding, displaying neurologic signs was confirmed positive for the non-neuropathogenic strain of EHV-1. A total of fifty-six (56) exposed horses were quarantined. Two (2) additional horses from the home premise displayed neurologic signs and were confirmed positive for Equine Herpesvirus Myeloencephalopathy. An additional seven (7) horses from the same premise were febrile and tested positive for EHV-1. All horses recovered and quarantine was released after thirty-three (33) days.

### April 2017 – Sacramento County

A 15-year-old Warmblood mare was euthanized in April 2017 due to acute neurologic signs. Testing performed post-mortem confirmed the nonneuropathogenic strain of EHV-1. Thirty-one (31) exposed horses were monitored and no additional cases were confirmed.

## February 2017 – San Diego County

An 8-year-old Warmblood gelding displaying neurologic signs was confirmed positive for the non-neuropathogenic strain of EHV-1. One (1) exposed horses on the property was quarantined and monitored. The gelding recovered and no additional cases were confirmed on the premises. The EHM horse was likely exposed while attending the HITS Thermal show in January 2017. Five (5) additional horses on three (3) additional premises attend the HITS show displaying fevers were confirmed positive for nonneuropathogenic strain of EHV-1. As no neurologic horses were associated with these febrile cases, no quarantines were applied and private practitioners monitored the situation.

### January 2017 – Los Angeles County

Three (3) horses on a single premise were confirmed for the non-neuropathogenic strain of EHV-1. One (1) Quarter Horse mare displaying neurologic signs was euthanized due to the severity of signs, while two (2) other horses on the premise were febrile only and recovered. Fifty-six (56) exposed horses were quarantined and monitored. No additional cases were confirmed.

### December 2016 – Inyo County

A 20-year-old Quarter Horse displaying neurologic signs was confirmed for the non-neuropathogenic strain of EHV-1. Two (2) additional horses on the premise were confirmed positive for EHV-1, one (1) displaying neurologic signs and one (1) which was febrile only. All horses recovered. Twentyeight (28) horses and four (4) mules were exposed and placed under quarantine.

## November 2016 – Los Angeles County

Three hundred and thirty (330) horses were exposed to the non-neuropathogenic strain of EHV-1 at the Los Angeles Equestrian Center. During the eighty-six (86) day quarantine period, fifteen (15) cases of EHV-1 were confirmed. Eight (8) cases displayed neurologic signs and seven (7) cases had a fever only. One (1) neurologic horse was euthanized due to the severity of clinical signs and all other cases successfully recovered.

## February 2016 – Riverside County

A 14-year-old polo mare displaying acute onset neurologic signs was euthanized. The necropsy results from the California Animal Health and Food Safety Laboratory confirmed the nonneuropathogenic strain of EHV-1. Seventy (70) exposed horses on the index premises were quarantined and monitored. Due to prompt removal of the index horse and implementation of enhanced biosecurity measures including twice daily temperature monitoring, the quarantine was released after fourteen (14) days as there were no additional cases confirmed.

# California Incident Summary Codfa Equine Herpes Virus

# January 2016 – Los Angeles County

A draft cross gelding displaying neurologic signs was confirmed positive for the non-neuropathogenic strain of EHV-1. The gelding recovered. No additional cases were confirmed on this premises.

### June 2015 – Riverside County

A 12-year-old Quarter Horse gelding displaying neurologic signs and a 12-year-old mule displaying a cough were confirmed positive for the nonneuropathogenic strain of EHV-1. Both animals attended Mule Days in Bishop, CA from May 17-26, 2015. Both animals recovered. An exposed 8-yearold Quarter Horse gelding on the premise exhibiting a high fever and severe hind limb incoordination was confirmed positive for the neuropathogenic strain of EHV-1. His condition deteriorated and he was euthanized. No additional cases were confirmed.

### June 2015 – San Joaquin County

A 13-year-old Quarter Horse mare displaying severe neurologic signs was confirmed positive for the non-neuropathogenic strain of EHV-1. This mare was exposed to two (2) cohort mules after they arrived home from Mule Days in Bishop, CA from May 17-26, 2015. Due to the severity of clinical signs, the mare was euthanized. No additional cases were confirmed.

## February 2015 – Monterey County

A 14-year-old Quarter Horse gelding displaying hind limb ataxia and an inability to urinate and defecate was confirmed positive for the non-neuropathogenic strain of EHV-1. The horse recovered. Ten (10) exposed horses were quarantined and monitored. No additional cases were confirmed.

## April 2014 – Santa Barbara County

A 7-year-old Quarter Horse mare displaying mild neurologic signs uncharacteristic of EHM, was confirmed positive for the non-neuropathogenic strain of EHV-1. Based on the low viral load and atypical clinical signs, it is possible that EHV-1 is not the cause of disease in this horse. Out of an abundance of caution, the horse was classified as case of EHM by CDFA and was isolated under quarantine. The horse successfully recovered.

#### February 2014 – San Diego County & Los Angeles County

A 3-year-old Thoroughbred racehorse filly displaying ataxia and a 3-year-old Thoroughbred racehorse colt at Santa Anita Park displaying a fever were confirmed for the non-neuropathogenic strain of EHV-1. Both horses recovered and no additional cases were confirmed.

## July 2013 – Contra Costa County

A 4-year-old Quarter Horse displaying severe neurologic signs was euthanized. Laboratory results confirmed the neuropathogenic strain of EHV-1. No other horses were exposed.

## March 2013 – Los Angeles County

A neurologic horse at Santa Anita Park was euthanized due to severity of clinical signs. Necropsy results confirmed EHM based on finding the neuropathogenic strain of EHV-1.

## March 2013 – San Diego County

A Warmblood stallion displaying mild neurologic signs was confirmed positive for the nonneuropathogenic strain of EHV-1. The horse recovered and no additional cases were identified.

## March 2013 – Santa Barbara County

A Welsh cross gelding displaying neurologic symptoms tested positive for the neuropathogenic strain of EHV-1. The horse recovered. No exposed horses were identified.

## April 2012 – Santa Barbara County

An 11-year- old neurologic horse was euthanized due to severity of clinical signs. Necropsy results confirmed EHM based on finding the nonneuropathogenic strain of EHV-1. No exposed horses were identified. California Incident Summary

**Equine Herpes Virus** 

### March 2012 – Monterey (2), San Diego (1) & Los Angeles Counties (1)

Four horses displaying neurologic signs were confirmed positive for the non-neuropathogenic strain of EHV-1. All four horses participated in the HITS Thermal Horse show March 5-11, 2012. One horse was euthanized and the other three recovered.

### January 2012 – Riverside County

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On a large multi-discipline facility in Riverside County, one positive polo horse was confirmed for the neuropathogenic strain of EHV-1. The positive horse was euthanized due to severity of signs. Biosecurity measures were implemented and several hundred exposed horses were monitored. No additional cases were confirmed.

### January 2012 – Orange County

On a large multi-discipline facility in Orange County, 16 cases were confirmed positive for the neuropathogenic strain of EHV-1. One confirmed case displayed neurologic signs and all others displayed compatible clinical signs such as fever, nasal discharge, and limb edema. All horses recovered. The 365 exposed horses were monitored while under quarantine.

# September 2011 – Tuolumne and San Joaquin County

Eight horses were confirmed positive for the neuropathogenic strain of EHV-1 on a Tuolumne premises. Six displaying neurologic signs and two were febrile only. One of the eight confirmed positive cases was euthanized due to severity of disease. Two additional confirmed positive horses on a San Joaquin secondary exposed premises. Both horses were determined to be exposed to the virus while visiting the Tuolumne county index premises.

## September 2011 – Sonoma County

Three horses were confirmed positive for neuropathogenic strain of EHV-1. One horse was displaying neurologic signs while two were febrile only. The neurologic horse died and the other two recovered. The 15 exposed horses under quarantine were monitored and no additional cases were identified.

### May 2011 – Multiple Counties

Four hundred horses exposed to neuropathogenic strain of EHV-1 at the National Cutting Horse Association (NCHA) Western National Championship held in Ogden, Utah April 30-May 8, 2011. Twenty-two (22) California horses were confirmed positive for the neuropathogenic strain of EHV-1. Positive horses resided on fourteen (14) premises in twelve (12) counties. Eight (8) displayed neurologic signs, thirteen (13) with fevers only and one (1) with respiratory signs only. Two (2) of the twentytwo (22) horses were euthanized and the others recovered.

### **Reportable Disease Alert**

Equine Herpes Myeloencephalopathy is a reportable disease (pursuant to §9101 of the California FAC, Title 3 California CR §797 and Title 9 CFR §161.4(f)) and must be reported within two days of discovery. If your horse is exhibiting clinical signs consistent with EMH or may have been exposed please contact your private practitioner or CDFA officials.

Reportable Disease List

Animal Health and Food Safety Services Animal Health Branch Headquarters - (916) 900-5002 Redding District - (530) 225-2140 Modesto District - (209) 491-9350 Tulare District - (559) 685-3500 Ontario District - (909) 947-4462 USDA-APHIS-VS - (916) 854-3950 or (877) 741-3690

For more information visit: www.cdfa.ca.gov/ahfss/Animal\_Health/ equine\_herpes\_virus.html