



UNIVERSITY OF CALIFORNIA

James B. Milliken
President

March 26, 2026

Office of the President
1111 Franklin Street
Oakland, CA 94607

The Honorable John Laird
Chair, Joint Legislative Budget Committee
1020 N Street, Room 502
Sacramento, California 95814

universityofcalifornia.edu

Dear Senator Laird:

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Pursuant to AB132, Chapter 144, Statutes of 2021, enclosed is the University of California’s report to the Legislature on the California Veterinary Emergency Team Program, UC Davis.

If you have any questions regarding this report, Associate Vice President Cain Diaz would be pleased to speak with you. Cain can be reached by telephone at (510) 987-9350, or by e-mail at Cain.Diaz@ucop.edu.

Sincerely,

James B. Milliken
President

MEDICAL CENTERS

- Davis
- Irvine
- UCLA
- San Diego
- San Francisco

Enclosure

NATIONAL LABORATORIES

- Lawrence Berkeley
- Lawrence Livermore
- Los Alamos

- cc: Senate Budget and Fiscal Review
- The Honorable Lena Gonzalez, Chair
- Senate Budget and Fiscal Review Subcommittee #1
- (Attn: Mr. Diego Lopez)
- (Attn: Mr. Kirk Feely)
- The Honorable David A. Alvarez, Chair
- Assembly Budget Subcommittee #3
- (Attn: Mr. Christian Griffith)
- (Attn: Mr. Tobias Wolken)
- Mr. Hans Hemann, Joint Legislative Budget Committee
- Ms. Jessica Holmes, Department of Finance
- Ms. Jessica Deitchman, Department of Finance
- Ms. Gabriela Chavez, Department of Finance
- Mr. Gabriel Petek, Legislative Analyst Office
- Ms. Jennifer Pacella, Legislative Analyst Office
- Ms. Florence Bouvet, Legislative Analyst’s Office
- Executive Vice President and Chief Financial Officer Nathan Brostrom
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- Associate Vice President Deena McRae
- Associate Vice President Cain Diaz
- Executive Director Kathleen Erwin

DIVISION OF AGRICULTURE AND NATURAL RESOURCES

UNIVERSITY OF CALIFORNIA
Progress Report on the UC Davis School of Veterinary Medicine's
California Veterinary Emergency Team (CVET)

This progress report is submitted by the University of California (UC) in response to language contained in AB132, Chapter 144, Statutes of 2021, (32101), which states, in part:

(a) The University of California, Davis, School of Veterinary Medicine shall develop a program called the California Veterinary Emergency Team. The program shall assist in the support and training of a network of government agencies, nongovernmental organizations, and individuals to assist in the evacuation and care of household and domestic animals and livestock in emergencies statewide, including disaster preparedness, response, recovery, and mitigation. The program shall also conduct or support research on best practices for the evacuation and care of the animals in disasters.

(b) The program shall ensure that the training and the care provided by or coordinated by the program are at levels that are consistent with those standards generally accepted within the veterinary profession. The program shall deploy responders to oversee the network volunteers and ensure accepted practices are implemented in the field during emergencies.

(c) The University of California, Davis, School of Veterinary Medicine, the secretary, and the Director of Emergency Services shall develop a memorandum of understanding for the university to consult with the secretary and the director regarding the coordination of the program's activities with the state government's disaster response practices and the deployment of the program's participants during disasters. The memorandum of understanding shall outline program metrics.

(d) The program shall provide a progress report every three years on the activities outlined in the memorandum of understanding to the secretary and the Director of Emergency Services.

I. Executive Summary

From an identified need of a coordinated approach to veterinary care during disasters, dedicated lawmakers, concerned disaster responders, and a passionate, caring public advocated for the development of CVET in 2021 to provide veterinary care to animals in disasters wherever they strike in the state of California. The program, administered by the UC Davis One Health Institute within the School of Veterinary Medicine, supports and trains a network of government agencies, individuals, and organizations to aid household and domestic animals and livestock during emergencies. The One Health Institute has been the administrative home of the immensely successful Oiled Wildlife Care Network, created in 1994 through a partnership with the California Department of Fish and Wildlife, to mobilize volunteers and professionals to rescue and treat wildlife that are injured during oil spills. By adopting this successful template, CVET has similarly become a model for response to natural disasters

whenever and wherever they may occur. CVET has a memorandum of understanding in place with the California Department of Food and Agriculture and the California Governor's Office of Emergency Services to oversee veterinary care throughout the state during disasters. In addition, CVET also has memoranda of agreement with the California Veterinary Medical Reserve Corps, the Northern Association of Equine Practitioners, and multiple other animal care and veterinary programs to provide a collaborative response effort of veterinary professionals during disasters.

With the establishment of CVET, the program continues to improve the state's animal disaster response capacity by standardizing trainings and protocols across California's 58 counties and coordinating with animal response organizations to provide a unified response. CVET has full-time management staff based in Davis, California to oversee day-to-day operations and manages a state-wide roster of veterinary professional volunteers to respond during disasters. CVET membership is continuously growing as the team conducts additional outreach and educational events for the veterinary community. Members of the CVET roster have access to a growing library of training courses inclusive of the basics of CVET operations, mission specific operations, and training requirements for the American Veterinary Medical Association (or AVMA) Veterinary First Responder Certificate Program. Between disasters, the team actively recruits, trains, and exercises affiliated veterinary professionals and veterinary facilities, students, animal health professionals, and collaborating organizations; conducts necessary research to promote "best practices" during disaster response; and proactively establishes preparedness plans, response resources, and mutual aid agreements for shelter and emergency medicine. CVET has also facilitated an ongoing effort to evaluate the current animal response capabilities within each county to better understand both the animal and veterinary needs.

II. Introduction and Background

Wildfires are a natural part of California's landscape, with much of the state's forests historically adapted to periodic burning. However, this natural pattern has been disrupted by anthropogenic drivers of environmental change: land use changes, fire management alterations, and the impact of climate change leading to drought and drought-related tree deaths. Changes in aridity, seasonality, and incidence of severe weather conditions have also contributed to large wildfires, and vegetation is now more likely to be dry in the fall when strong winds occur. Due to these environmental alterations, the size and intensity of wildfires in California have notably increased since the 1980s; Nineteen of the 20 largest wildfires in California history have occurred since 2000 (with ten occurring since 2020), and fifteen of the 20 most costly and destructive fires to life and property in the state have occurred since 2015.

Concurrent with this increased incidence and severity of wildfires in California is the need for communities to evacuate to remain safe. While it is difficult to quantify the numbers of people who have had to leave their homes during such incidents, one study showed that, between 2017 and 2019, approximately 1.1 million California residents were required to leave their home in the eleven large incidents over that period and in 2025, the Eaton and Palisades fires in Los Angeles required more than 200,000 people to evacuate. With this increasing need to

evacuate comes challenges when residents have domestic pets or livestock. One national survey conducted in 2021 revealed that more than one in five pet owners have had to evacuate their homes due to disasters in the past, 40% reported that they did not return to their homes for more than four days, and 30% of those that were forced to leave an animal behind cited lack of time as the critical factor. Approximately 90% of those surveyed said that, in future disasters, they would bring their pets with them when they evacuate; however, many human shelters/evacuation centers do not allow pets to enter their facilities, thereby requiring animals to be left behind or dropped off at animal-specific shelters to be cared for by community animal care organizations. Such situations become extremely challenging not only from an animal welfare viewpoint, but also from a medical perspective – as many animals require treatment for injuries sustained from the fire, exposure to smoke, and wounds associated with fleeing a fire zone, but also infectious disease from close quarters, increased stress, and temporary facilities.

This fact came into stark reality during the Camp Fire, located in Butte County, in November 2018 – the deadliest and most destructive fire in California history. The fire, destroying the city of Paradise, caused 85 deaths, displaced more than 50,000 people, and destroyed more than 18,000 buildings. The North Valley Animal Disaster Group (NVADG) responded immediately, working with regional and national partners to eventually service more than 10 different locations where animals were held. As the local Community Animal Response Team, NVADG and their partners sheltered more than 4,000 animals (reuniting more than 3,700 of them) and provided care for more than 6,000 additional animals that had “sheltered in place” behind fire lines. The UC Davis School of Veterinary Medicine Veterinary Emergency Response Team and the California Veterinary Medical Reserve Corps provided veterinarians and veterinary students in an ad hoc manner to assist in the effort, but due to the scope of the effort, the Texas A&M Veterinary Emergency Team were also mission tasked via an emergency management assistance compact request to Butte County for 29 days to provide “oversight on sheltering, inventory and data management, veterinary medical support for injured and ill animals, and efforts to reunite animals with their owners.” This situation eerily repeated itself in September 2020, when the North Complex fire tore through Plumas National Forest in Plumas and Butte counties, ultimately burning over 318,000 acres, requiring the sheltering of over 1,500 animals, and necessitating the re-deployment of the UC Davis Veterinary Emergency Response Team to support animal care and the Texas program to manage veterinary efforts.

Because of the increasing severity of wildfires and an unmet need for statewide veterinary coordination, a program similar to the Texas program was conceived by Senator Glazer and others, to be managed on behalf of the state by UC Davis. Existing law requires the Office of Emergency Services, in coordination with all interested state and local agencies with roles in the state emergency plan to jointly establish (by regulation) a standardized emergency management system. Existing law requires the office to approve, adopt, and incorporate the California Animal Response Emergency System (or CARES) program developed under the oversight of the Department of Food and Agriculture into the standardized emergency management system (or SEMS). Senate Bill 547 (2021) established the CVET program that would assist in the support and training of a network of government agencies, nongovernmental organizations, and individuals to assist in the veterinary care of household

and domestic animals and livestock in emergencies, including disaster preparedness, response, recovery, and mitigation. The bill also required the program to conduct or support research on best practices for the evacuation and care of the animals in disasters. The bill would require the university, the Secretary of Food and Agriculture, and the Director of Emergency Services to develop a memorandum of understanding for the university to consult with the secretary and the director regarding the coordination of the program's activities with the-state government's disaster response practices and the deployment of the program's participants during disasters. The bill required that these provisions apply to the university only to the extent that the Regents of the University of California, by resolution, make any of these provisions applicable to the university. Lastly, the bill established the CVET Fund in the State Treasury to be used solely to support the program, with moneys in the fund not to be considered offsets to any other state funds appropriated to the university. This bill was passed in both the Senate and Assembly (AB 132 – 2021), Division 14.8 (section 32000) of the Food and Agricultural Code was amended to create the CVET, and funding/programmatic implementation began in the Fall of 2021.

III. Administration

Initial Program Development

Because of the devastating wildfires in 2018 and 2020 that necessitated the need to mobilize a veterinary Management Team from Texas, key legislators began discussions with the UC Davis SVM – specifically Dean Michael Lairmore and Dr. John Madigan (Director of UC Davis' Veterinary Emergency Response Team) – to satisfy this emerging requirement through California resources. The concept was to expand the existing program to act as a Statewide resource, mobilized by the California Governor's Office of Emergency Services and the California Department of Food and Agriculture, and base the structure on a proven template used by the School's Oiled Wildlife Care Network. The Network, a first-of-its-kind public-private partnership, was founded in 1994 in partners with the California Department of Fish and Wildlife. Initially developed to provide best achievable care to oil-affected wildlife in the marine environment, this program has expanded in its 30 years to now also provide capture, hazing/deterrence, and field stabilization anywhere in the state. Through partnering with 45 universities, aquaria, and not-for-profit rehabilitation/environmental organizations, the UC Davis One Health Institute helps administer and manage the program on behalf of the California Department of Fish and Wildlife, making California a leader in emergency response for wild animals in crisis. Through the leadership of Dr. Michael Ziccardi, Director of the Oiled Wildlife Care Network, CVET was designed to create a system that could lead veterinary response to natural disasters whenever and wherever they may occur when the need arose.

With this as a template, SB 547 and AB 132 (both 2021) created the CVET program, with \$3 million per year from General Funds (provided through the UC Budget, in a similar manner that the Oiled Wildlife Care Network's funds come from the California Department of Fish and Wildlife's Oil Spill Prevention Administration Fund to UC). This legislation amended Division 14.8 (section 32000) of the Food and Agricultural Code, adding CVET as an official program with specific mandates to support, train, and deploy a network of veterinary professionals to assist

in the evacuation and care of household and domestic animals and livestock and to conduct/ support research on best practices.

Programmatic Leadership

To best implement the mission of CVET, a management structure and the hiring of new employees were immediately required. A structure mirroring that of an Incident Command System (ICS) was deemed most efficient, with staff dedicated to Operations, Planning, and Logistics while collaborating closely to support the overall mission. Finance and Administration functions were led by the Director, with assistance from shared service staff for the One Health Institute. As such, Associate Directors for each “section” of activities were recruited and hired in Q3/Q4 of FY 2022, and subsequent support staff identified based on need and hired in the coming years – equating to seven full-time and three shared (Director, Marketing, and Administrative) staff.

Memorandum of Understanding

Initiating legislation required UC Davis to work with the Secretary of Food and Agriculture and the Director of Emergency Services to develop a memorandum of understanding (MOU) regarding the coordination of the program’s activities, in line with the state government’s disaster response practices and the deployment of the program’s participants during disasters. Dr. Ziccardi initiated discussions between UC Davis, the California Department of Food and Agriculture, and the California Governor’s Office of Emergency Services to outline the structure and elements of an MOU in August 2021, with the completion and signing of the final version of this agreement in December 2022.

Key responsibilities outlined in this document include the following:

- Mitigation
 - UC Davis will, with the assistance of the California Department of Food and Agriculture and support of the California Governor’s Office of Emergency Services, be responsible for developing CVET policies, protocols, procedures, and/or written agreements to process and facilitate access to CVET resources in an emergency or disaster.
 - UC Davis and the California Department of Food and Agriculture will develop a uniform resource management system for the coordination, training, ordering, and deployment of CVET-related animal care and evacuation resources in disaster response; and the California Governor’s Office of Emergency Services will maintain the resource request process under the SEMS.
- Preparedness
 - UC Davis and the California Department of Food and Agriculture, in coordination with the California Governor’s Office of Emergency Services, will develop training standards for deployable animal care and evacuation resources based on research.

- UC Davis will, with the assistance of the California Department of Food and Agriculture, develop a program, generally accepted by the veterinary profession, to train and certify appropriate veterinary professionals from government agencies, non-governmental organizations, and universities as deployable CVET animal care and evacuation resources.
- UC Davis will develop and maintain a database for vetted and appropriately trained animal care and evacuation veterinary response personnel. the California Governor's Office of Emergency Services and the California Department of Food and Agriculture will assist UC Davis with resource planning and preparedness, and resource requests and management.
- UC Davis, in coordination with the California Department of Food and Agriculture, will develop a program to conduct or support research on best practices for the evacuation and care of animals in disasters.
- UC Davis and the California Department of Food and Agriculture will ensure the Disaster Service Worker oath is administered to CVET-registered volunteers.
- The California Governor's Office of Emergency Services, per statute, will review and evaluate county large animal evacuation plans, including animal annexes, as part of county Emergency Operations Plans (or EOPs). UC Davis will provide veterinary review of county EOP animal-related annexes, as requested.
- The California Governor's Office of Emergency Services and the California Department of Food and Agriculture will lead and maintain an Animals in Disaster Workgroup with identified stakeholders to address past, current, and future animal (including wildlife) evacuation, shelter, care, and reunification issues of operational area or state significance. UC Davis will be an active participant.
- Response
 - UC Davis will maintain CVET as a state field response asset with evacuation and animal care capabilities primarily provided by trained volunteers. CVET will be activated via the SEMS and will not directly enter into agreements with local governments during emergencies.
 - The California Governor's Office of Emergency Services will request UC Davis and the California Department of Food and Agriculture to activate the CVET program, in support of CA-Emergency Support Function 8 (Public Health and Medical), CA-Emergency Support Function 11 (Food and Agriculture), or other applicable CA-Emergency Support Functions as appropriate, to provide a veterinary emergency team. CVET will deploy and track trained and certified personnel and other resources according to regional and State priorities and resource availability.
 - CVET mission tasks may include but are not limited to triage and treatment consisting of veterinary medical support of search and rescue efforts, veterinary medical care of sick and injured animals, and veterinary medical care of animals in animal emergency shelters and shelter-in-place situations. CVET will ensure the training and care provided by, or coordinated by the program, are at levels that are consistent with standards generally accepted within the veterinary profession.
 - To support situational awareness, the California Governor's Office of Emergency Services, the California Department of Food and Agriculture, and/or UC Davis

- personnel will, if available and approved, deploy to the field to directly gather information on animal resource needs.
- UC Davis will, if available and not in conflict with California readiness, provide out-of-state CVET resource support in lieu of federal assistance, or in conjunction with federal assistance, through an Emergency Management Assistance Compact (or EMAC) request. the California Governor’s Office of Emergency Services and the California Department of Food and Agriculture will assist UC Davis with these requests as needed.
 - Recovery
 - When requested, the California Department of Food and Agriculture, the California Governor’s Office of Emergency Services, and UC Davis will provide technical assistance to animal-related local recovery task forces and/or recovery operations. CVET’s role, when available, will be limited to veterinary assistance in such activities, and may be limited in scope and time if such activities impact readiness for other disasters.
 - The California Department of Food and Agriculture and UC Davis will comply, participate in, and complete the After- Action/Corrective Action Reporting coordinated by the California Governor’s Office of Emergency Services, as requested.
 - The California Governor’s Office of Emergency Services will seek financial reimbursement as the eligible applicant for UC Davis and the California Department of Food and Agriculture via the CA-ESF 11 Coordinator. UC Davis and the California Department of Food and Agriculture will maintain required documentation as requested by the California Governor’s Office of Emergency Services.

Financial Management

Since the inception of CVET on July 1, 2021, the University of California has received \$3 million per year as a special appropriation within the state budget, to be distributed to UC Davis and, in turn, the SVM and to the One Health Institute. Initial expenditures in FY 21-22 were related to establishing core personnel, acquiring key equipment necessary for immediate deployment, and the establishment of a “Response Reserve” fund that could be immediately accessed should a team need to be mobilized. Additionally, it was determined that establishing a more permanent and secure base of operations on the Davis campus (see information below on current Base of Operations) would be needed once full equipment purchases occurred – hence setting aside a portion of the CVET budget each year to invest in this facility. It is hoped that, by FY 2025-2026, \$4 million will be reserved to proceed with construction. More recent fiscal years have equilibrated budgetary line items more completely, with full staffing and a complete training program in place.

	FY 21-22	FY 22-23	FY 23-24	Total
Salaries	\$ 20,609.07	\$ 472,517.29	\$ 711,784.35	\$ 1,204,910.71
Benefits	\$ 10,880.77	\$ 220,726.25	\$ 361,300.27	\$ 592,907.29
Supplies	\$ 2,734.76	\$ 128,226.31	\$ 152,728.53	\$ 283,689.60
Equipment	\$ 40,218.75	\$ 102,914.49	\$ 266,623.98	\$ 409,757.22
Travel	\$ 5,605.49	\$ 20,241.23	\$ 29,174.58	\$ 55,021.30
Facility Development	\$ 1,000,000.00	\$ 1,000,000.00	\$ 1,000,000.00	\$ 3,000,000.00
Response Reserve	\$ 1,641,251.16	\$ 731,674.43	\$ 109,688.29	\$ 2,482,613.88
Overhead	\$ 278,700.00	\$ 323,700.00	\$ 368,700.00	\$ 971,100.00
Total	\$ 3,000,000.00	\$ 3,000,000.00	\$ 3,000,000.00	\$ 9,000,000.00

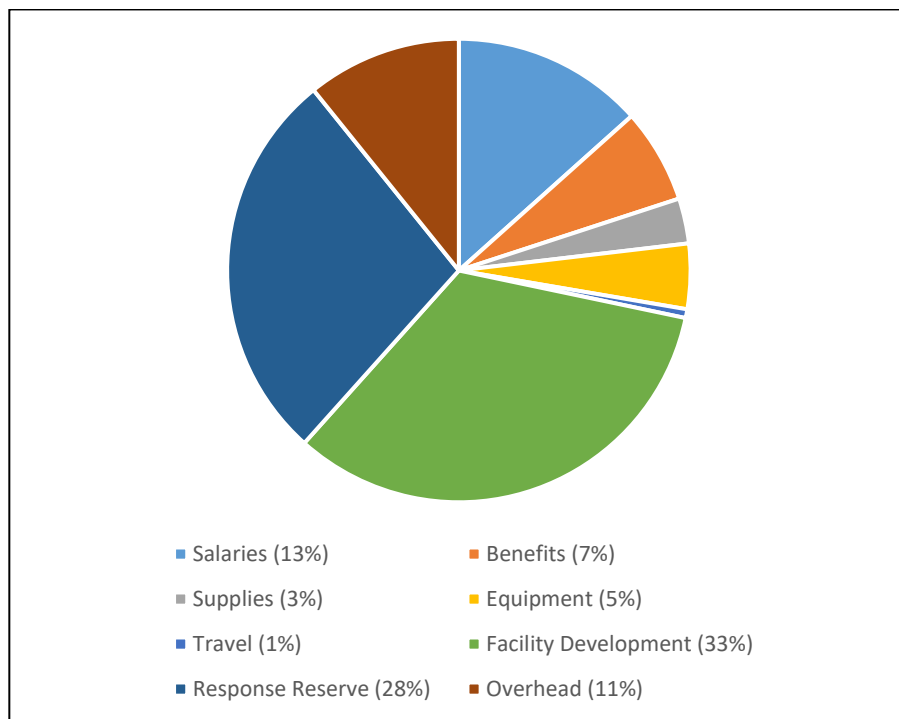


Figure 1: Distribution of CVET Expenses FYs 21 - 24

Communication and Information Sharing

To have a comprehensive and complete animal disaster preparedness and response program, CVET has needed to not only conduct outreach to veterinary professionals, but also to local, regional, and state emergency managers, other emergency service/first responders, animal disaster responders, and to the general public. These communications have occurred in different modalities, depending on the intended audience:

- **Website:** CVET has created a robust, centralized website (<https://cvet.vetmed.ucdavis.edu>) which houses key program information as well as numerous animal disaster response resources.
- **Social media:** CVET actively engages the general public through most commercial social media platforms (LinkedIn, Instagram, Facebook, X) to share current events as well as to amplify key disaster preparedness activities of its partners.
- **Printed materials:** CVET has created numerous Fact Sheets aimed at vet and response personnel related to becoming an active member of the CVET program, methods to notify or consult with our team, as well as public information on general pet preparedness. These include a Standard Request protocol for deployment operations, aligned with SEMS, as well as a collaborative the California Governor's Office of Emergency Services, the California Department of Food and Agriculture, and the UC Davis Veterinary Resource Request Fact Sheet for local jurisdictions.
- **Response communications:** Communications channels have also been formally established to ensure efficient notification occurs at the time of a potential deployment. A toll-free CVET Reporting Hotline (844-UCD-CVET, or 844-823-2838) has been created, enabling 24/7 response for incident support requests, questions, or consults through a rolling on-call roster of CVET staff. Additionally, a shared email account (CVET@ucdavis.edu) has been created to act as a central point of inquiry, but also to allow for effective communications with emergency response personnel.

IV. Key Responsibilities of CVET under the California Governor's Office of Emergency Services - California Department of Food and Agriculture - UC Davis MOU

As stated in the MOU between the California Governor's Office of Emergency Services, the California Department of Food and Agriculture, and UC Davis, UC Davis has the "primary responsibility to develop...CVET to assist in the support and training of a network of government agencies, NGOs, and individuals to assist in the veterinary-related aspects of evacuation and care of animals in emergencies, including disaster preparedness, response, recovery, and mitigation at levels that are consistent with those standards generally accepted within the veterinary profession; and conduct or support research on best practices for the evacuation and care of animals in disasters." As such, the MOU defined specific responsibilities of CVET within each of the phases of disaster response (Mitigation, Preparedness, Response, and Recovery) that must be addressed.

The following is an accounting of progress made to date towards these goals:

A. Mitigation

To better standardize and systematize veterinary response statewide, CVET was charged with developing policies, protocols, procedures, and/or written agreements to process and facilitate access to CVET resources, as well as to develop methods to better assist in the coordination, training, ordering, and deployment of CVET-related animal care and evacuation resources in disaster response. Since its creation, CVET has spent substantial effort working with

stakeholders to create methods, materials, and agreements to better streamline animal disaster response overall – not just those focused on veterinary efforts.

Policies, Protocols, Procedures, & Documentation

Ensuring that all CVET-related activities are conducted in a standardized manner in line with veterinary best practices is at the core of the CVET mission. CVET management staff have spent a great deal of time and effort developing policies that are in line with this task, vetting them to UC Davis subject matter experts and other response professionals to ensure they not only reflect the best information possible, but are in line with practices that can be realistically undertaken during an emergency response.

- Development, completion, and implementation of the CVET Operational Standard Operating Guidelines (SOG): This 60-page document (available at <https://ucdavis.box.com/s/xfz9ac3v8aszhx57tbsqlna6cmk5v3st>) serves as the overarching standard operating guideline for CVET. Within it, CVET membership, overall management, organizational structure, training requirements, coordination with local emergency management officials, animal response personnel, and first responders are all covered.
- Development, completion, and implementation of CVET Treatment SOG: This 132-page document (available at <https://ucdavis.box.com/s/4ay5qqsr3lwnm4npgggv434ferea8pf>) outlines the veterinary standards that will be utilized by all members of CVET during response operations (in alignment with veterinary best practices). Within it, procedures are included as guides to standardize training for, and medical approaches to, commonly encountered disaster scenarios and health issues. Specific areas include triage/initial assessment, intake/exam, shelter care, disease outbreak management, euthanasia protocols, and specific species/taxa protocols (small animal, large animal – equine, camelids, cattle/small ruminant, swine, and avian/exotics).
- Development of resources and tools for veterinary professionals and animal responders: Experience has shown that veterinary record keeping is essential for ensuring appropriate care of affected animals as well as maintaining communication with owners about their animals. Additionally, these records serve to provide continuity of care of affected animals as there are often multiple volunteer veterinarians across the duration of the incident. In recognizing the importance of documentation of veterinary care in disasters, CVET has developed and made freely available (via the CVET website) unbranded forms and documents that can assist in both veterinary and animal care efforts during disasters. CVET-branded versions of these forms also make up much of the training materials to which CVET-led training efforts rely, thereby helping to standardize an approach to data collection. These resources include:

- *Veterinary Documentation*
 - Medical Records: Species-specific exam forms to assist in the documentation of veterinary exams, treatments, recommendations, owner communications, etc. to provide a template of consistent documentation practices during disaster operations. Specific forms include Avian, Large Animal, and Small Animal.
 - Daily Veterinary Request Form: A means to document all requests by staff or volunteers to perform an assessment and/or to provide treatment. Documenting this throughout a response helps quantify the need for additional veterinary support, as well as to report in an After-Action report.
- *Shelter-Specific Documents*
 - Animal Monitoring Sheets: Documentation of an animal's appetite, amount of drinking, eliminations, etc., while not specifically veterinary related, is extremely helpful in understanding the impact being in a shelter has on that animal and what supportive care might be needed. Specific forms include both Large and Small Animal.
 - Animal Intake Forms: Documentation of animals coming into the shelter is vital, no matter who drops it off. Information on where that animal came from and who it belongs to is crucial to ensure it is reunited with its owner.
 - Animal Master List: Having the ability to track all animals coming into a shelter can be extremely difficult. This form helps do so, plus allows key data to be reported to an Emergency Operations Center on a regular basis.
 - Shelter/Veterinary Consent Forms: While many animals are found by field teams during a disaster, all are typically owned, and a level of consent for treatment and care is legally required. This document provides a basis for legal coverage.
- *Species Resources*: CVET has developed Care and Feeding Guides to provide basic care information to support sheltering efforts and hopefully prevent additional medical problems. In addition, the Vital Signs Guide provides normal physiologic information (heart rate, respiratory rate, etc.) for multiple species, providing references for what is normal to determine if veterinary care is needed. Specific guides include:
 - Avian/small mammal/exotics
 - Large animal
 - Vital signs guide (all species)
 - Shelter biosecurity checklists: For both large and small animal shelters
- *Triage Procedures*: CVET has worked extensively on a means to assist non-veterinary field personnel in a relatively simple way to determine medical prioritization (or triage) of animal cases they may come across. Specific documentation and trainings have been developed to assist in this process and have been successfully taught in many forums.
- Support for an online sheltering database system: While the establishment of standardized printable forms for veterinary and sheltering operations can help to

establish efficient and effective animal responses, the need to collect and act on data in a near real-time manner is essential for optimizing disaster efforts. Shelterly, a disaster response operating system that helps streamline tracking and management efforts, was developed following the Camp fire to increase efficiency while allowing responders to focus on ensuring the safety and well-being of every animal. While the core of Shelterly has been designed around the receipt of field data to then deploy field search and recovery personnel, CVET has partnered with the lead of Shelterly to develop a Veterinary Care module that will allow medical information to be effectively captured during a deployment, as well as track medical histories, provide reminders/instructions to care staff of necessary medical requirements, and ensure documentation is thorough and in line with best practices.

Written Agreements & Partnerships

In addition to the formal agreement established with the California Governor’s Office of Emergency Services and the California Department of Food and Agriculture (see above), CVET has endeavored to develop formal, informal, or working agreements with many other organizations that either specifically operate to prepare for or respond during a disaster or can provide necessary resources to CVET during a response. These relationships include:

- California Veterinary Medical Reserve Corps (CAVMRC): CAVMRC, one of the few veterinary-specific veterinary medical reserve corps in the nation, is led by the California Veterinary Medical Association (Dr. Grant Miller), and includes close to 3,000 veterinarians, registered veterinary technicians, and veterinary assistants in its volunteer database. Since its inception, CVET has worked closely with CAVMRC to ensure that the two organizations worked cooperatively, not competitively, with one another, conduct joint trainings and exercises, and have signed a Memorandum of Agreement to “...to memorialize roles, responsibilities, and a general concept of operations, among other provisions, relative to veterinary disaster response efforts.” In short, CAVMRC and CVET will make reasonable efforts to work with one another to effectuate their respective deployment-related responsibilities, including the following:
 - By informing each other as soon as reasonably possible of deployment requests for either organization to provide veterinary medical care and assistance.
 - By working together to determine equipment and personnel needs and deploying available resources accordingly.
 - By sharing equipment, deployment supplies, medical supplies, and other items in accordance with availability and with additional consideration of any pertinent legal restrictions.
- Northern California Association of Equine Practitioners (NCAEP): NCAEP, a not-for-profit organization whose mission is to help protect the health and welfare of California equine population, manages an Emergency Response Team - a volunteer group of equine veterinary professionals who assist in providing veterinary care for sheltering equids and can be activated through a Direct Aid Request or Mutual Aid Request via

Yolo County. Like the agreement with the California Veterinary Medical Reserve Corps, CVET and NCAEP have signed a formal MOA detailing the following:

- *Communications*: NCAEP and CVET will notify the other of a deployment for overall situational awareness and to work with one another to effectuate shared awareness and potential assistance about disaster response.
 - *Training Standards*: NCAEP and CVET will work jointly to develop large animal (equine and livestock) specific veterinary disaster response training.
 - *Concept of Operations*: A coordinated effort will take place between CVET and NCAEP during deployments, with CVET providing management oversight of the operation and facilitating jurisdictional coordination.
 - *Resource Sharing*: CVET, as able, can provide additional storage space for NCAEP resources such as the NCAEP trailer, large animal stalls and pens, etc. (See “Equipment” section below) with the understanding that CVET and NCAEP will coordinate the use of these resources to support their respective missions as needed.
- Private Veterinary Hospitals: While the assets and resources that CVET is establishing are state-of-the-art, ultimately the capabilities will be limited due to need to be field deployable and established to temporarily support shelter and field activities. Additionally, helping to support local veterinary resources in a time of need improves regional response capabilities and integrates local assets into disasters. Advanced primary care support through established emergency practices that can support sustained critical care actions may be necessary for animals with extensive and severe injuries. As such, CVET has undertaken an outreach campaign to larger emergency clinics throughout the state to partner with CVET to provide any or all of the following during a disaster:
 - Assistance with acquisition of medical supplies;
 - Transfer of patient care from the field;
 - Potentially provide discounted veterinary services to those affected during a disaster; and/or
 - Working together for a collaborative veterinary response for incidents within the community.

To date, CVET has established formal Letters of Agreement (LOAs) with 16 practices throughout California that defines agreements around case transfer operations and coordination of resources to be utilized in disasters that will avoid delays in care. These agreements define the hospital’s points of contact, species capabilities, requirements around transfer of care, inherent capabilities (e.g., personnel and equipment), financial support, and CVET-provided training and supplies. LOA holding organizations include:

- UC Davis SVM Veterinary Medical Teaching Hospital (Yolo County)
- ACCESS Pasadena (Los Angeles County)
- Three Peaks Veterinary Services (Tuolumne County)
- Humphrey Giacopuzzi Veterinary Group (Ventura/Los Angeles Counties)
- VCA Valley Oak Veterinary Center (Butte County)

- Solano Napa Pet Emergency Clinic (Solano County)
- Central Coast Pet Emergency Hospital (San Luis Obispo County)
- Veterinary Emergency Group - Encinitas (San Diego County)
- Pacific Crest Equine & Companion Animal (Tulare County)
- Napa Valley Equine (Napa County)
- Animal Care Services, Inc. (Riverside County)
- LAASER (Los Angeles County)
- Petaluma Equine (Sonoma/Marin/Napa County)
- Loomis Basin Equine Medical Center (Placer County)
- PETS Hospital (Santa Barbara County)
- Veterinary Emergency Group - San Ramon (Contra Costa County)

Animal Disaster Leadership

While the mandate and mission of CVET is to focus on statewide veterinary leadership, preparedness, and response, it can be difficult to separate out veterinary care from search and rescue (SAR) and shelter-based support activities. Health-related issues that require veterinary intervention can be mitigated effectively through advanced planning and readiness conducted by non-veterinary programs, such as Community Animal Response Teams (or CARTs), local and national humane societies and SPCAs, county-based animal control officers (ACOs) and their law-enforcement teams, and other state and federal agencies. As such, CVET has actively supported and assisted many local, state, and national programs to move broader animal disaster-related efforts forward: These have included, but not been limited to:

- Animals in Disasters Working Group (AIDWG): The California Governor’s Office of Emergency Services and the California Department of Food and Agriculture co-lead a workgroup of identified stakeholders to address ongoing issues regarding animal evacuation, care, and shelter in disasters. The working group is made up of state and county agency representatives, NGO partners, and university affiliates (including CVET leadership). While this group had previously been somewhat dormant, the development of CVET has reinvigorated this program to meet regularly to develop new or enhance existing resources related to large animals and livestock (such as policies, guidance, people, and equipment). Current Goals of the AIDWG include to:
 - Identify, resolve, and provide statewide guidance on animal disaster issues for local governments;
 - Develop a template version of MOUs so that agencies and affiliated organizations might establish mutual aid relationships; and to
 - Continually reassess and identify critical issues that are animal-related for resolution.
- Cal CARTs: Throughout California, many excellent Community Animal Response Teams (or CARTs) exist to provide regional animal care support to owners in need during disasters; however, assisting across county borders was difficult due to the response regulatory systems that were in place. In 2020, CARTs began collaboration

- efforts to facilitate mutual aid during times of crisis, and with the creation of CVET (and its active involvement in these discussions), this collaborative body, previously known as the California CART Collective (CCC) but now renamed "Cal CARTs", formed a 501(c)3 non-profit organization in 2023 to further expand the mission of helping animals in disasters. CVET staff (Dr. Ziccardi, Dr. Patterson, and Scott Buhl) participate on the Cal CARTs Board of Directors to develop standard position definitions and training requirements for animal care and evacuation in coordination with the California Governor's Office of Emergency Services and the California Department of Food and Agriculture and have provided direct support via hosting and providing training opportunities at its annual Summit.
- NASAAEP: The National Alliance of State Animal and Agricultural Emergency Programs (NASAAEP) is a national, private, 501(c)3 non-profit organization dedicated to helping those at risk understand how to prepare and respond for disasters on behalf of their animals. It works to provide communication and networking to facilitate information sharing and effective planning at the local, state and federal levels, working with subject matter experts in a variety of fields across the spectrum of emergency planning, preparedness, and operations. Several CVET staff have been actively involved in NASAAEP's Best Practice Working Group to ensure the best veterinary information possible is reflected in the ten NASAAEP Current Best Practices in Animal Emergency Management documents produced in 2023, and Dr. Patterson serves on their Board of Directors.

B. Preparedness

A key function of the CVET program is the ability to deploy responders to oversee a network of volunteers and activities, and ensure accepted practices are implemented in the field during emergencies. Several critical factors in this effort are: 1) support and training of veterinary professionals to assist in the evacuation and care of household and domestic animals and livestock in emergencies statewide; 2) creation of equipment and supply caches that can support statewide veterinary disaster response; 3) conduct and support research efforts that advance the veterinary care provided during disasters that involve animals; and 4) providing critical reviews of county Emergency Operation Plans (EOPs) to determine animal response capabilities and, if necessary, assist in the veterinary elements of these plans. The following information details the success of CVET towards these preparedness goals.

Personnel Recruitment & Tracking

Having a cadre of veterinarians, registered veterinary technicians, and veterinary assistants spread throughout the state and available immediately is a crucial factor in being able to provide the best achievable response for domestic animals and livestock affected during larger disaster events. CVET has actively pursued the recruitment of veterinarians, technicians, and assistants that are interested in volunteering for a "CVET Response Team" and worked diligently with our partners to differentiate roles and responsibilities when co-deployment occurs. While much of the informational materials generated are described above in the

“Communications” section, targeted recruitment has also been actively pursued. Similarly, developing systems to actively track and communicate with those choosing to sign up are critical for a volunteer workforce that is only utilized for significant disaster events.

- **Volunteer Tracking:** Based on the experience and systems developed by the Oiled Wildlife Care Network, CVET has established an online interactive database of veterinary professional responders, based on the Better Impact platform. This system allows for responders to maintain contact/personal information via an online portal as well as note specific skill sets/species expertise that they possess or gain over time – a feature that the State’s volunteer database system cannot replicate. CVET management has the ability to track completed trainings and engagements, active licenses/authorizations, deployment to responses, and other key details needed for mobilizing volunteers. Additionally, Better Impact acts as a central hub for the distribution of information to responders, including requesting availability for responses, and is used to track volunteer hours during response through a “time clock” function, available via desktop or mobile app.
- **Response Authorization:** During the development of the MOU between the California Governor’s Office of Emergency Services, the California Department of Food and Agriculture , and UC Davis, it was determined that UC Davis [following guidance based in the Emergency Services Act stating that the University of California is a State Agency (§8680.8)] had the authority to administer the Disaster Service Worker (DSW) oath to volunteers, thereby providing state-provided workers compensation coverage for volunteers officially mobilized when CVET was mission tasked to an event. On further review, it was determined that UC Davis (namely the Chancellor) was required to officially request Authorized Designee (AD) status from the California Governor’s Office of Emergency Services to allow CVET staff to possess DSW oath administration authority. That request was made July 2025, and a decision is pending.
- **Recruitment:** As mentioned, CVET has undertaken an active recruitment program for veterinary professionals. Targeted methods (in addition to general communications listed above) include:
 - ***Tabling:*** CVET staff have staffed vendor tables at numerous events, including national/state veterinary and emergency management professional conferences, the California Governor’s Office of Emergency Services/the California Department of Food and Agriculture events, and regional veterinary meetings. In 2025 alone, CVET staff attended more than 20 conferences or events where CVET recruited new responders or provided information to pet owners.
 - ***Presentations:*** CVET has been extremely active in providing both informational as well as general disaster response in-person and virtual presentations to a variety of stakeholder groups, including Veterinary Medical Associations, large clinics/hospitals, and California based veterinary technician and veterinary schools. In 2025 alone (through September), more than 30 presentations have been delivered by CVET staff.
- **Volunteer Engagement:** Once volunteers are enrolled, continued engagement to ensure their continued involvement when disasters hit is paramount. CVET conducts monthly

informational webinars and/or trainings to share new information and response topics, regular newsletters delivered via email, invitations to local trainings and events from partners, and hosts regular volunteer appreciation activities.

- **Success:** Through this active recruitment process, the CVET Response Team is currently comprised of over 450 volunteer responders, growing by more than 125 responders each year.

Training

Having veterinarians, registered veterinary technicians, and veterinary assistants trained to the same protocols and procedures, based on best practices, is another critical element in being able to provide effective response for disasters no matter where they occur. CVET has created a multifaceted training strategy that provides different key targeted information to different stakeholder groups (e.g., vet professionals, vet students, non-vet animal responders, animal services representatives, emergency managers) to develop a comprehensive understanding of CVET capabilities. Specific training elements include:

- **Training Platform:** To provide training opportunities statewide in a manner that allows for self-scheduling, CVET has developed a robust online learning management system, based around the Canvas platform. This online portal allows access not only to the CVET-generated content but also ensures CVET responders can access partner training content and reoccurring engagement with the addition of custom CE training content on a regular basis. Lastly, this platform aligns seamlessly with the Better Impact platform, allowing accurate tracking of training progress.
- **Online Veterinary Didactic Training Program:** CVET has established a progressive training program including three levels of responder tiers with respective training requirements for each tier.
 - *Core Responder:* The core responder tier includes all CVET responders that have successfully completed the CVET application process as well as an online course. Completing the core responder training will allow volunteers to more effectively integrate into CVET operations and unlock the ability to take specialized courses in the task force responder tier.
 - Training Requirements
 - Complete Disaster Service Worker (DSW) form
 - Complete CVET Core Responder Canvas Course
 - Required Content
 - CVET Basics
 - CVET Shelter Operations
 - IS-100.C (introduction to the Incident Command System); IS-200.C (Basic Incident Command System for Initial Response); IS-700.B (An Introduction to the National Incident Management System)
 - ResQFast All-Hazards/Wildland Fireline Safety
 - Recommended Content: Mental Health Crisis Awareness Training

- *Task Force Responder*: The task force responder tier includes CVET core responders who have completed task-specific training that would qualify them for specialized field requests such as search and rescue, evacuation, shelter in place, technical animal rescue, working animal care, and/or would qualify to fill a supervisory role of the CVET Shelter Lead and Field Lead.
 - Training requirements
 - Core responder training.
 - Participate in 1 in-person program (once yearly) or a CVET deployment (once per two years).
 - Required Content
 - Task Force Foundations (approx. 1 hr., containing Situational Awareness; Communications - Radio Basics; and Euthanasia & Depopulation modules)
 - Specialty Content (required to complete at least one specialty area):
 - Field Response (approx. 45 min. containing Field Operations and Field Communications modules)
 - Shelter Lead, Working Dog Support and Animal Technical Rescue specialty areas are currently in development.
- *Response Leadership* - The response leadership tier includes CVET personnel that have advanced training in ICS and disaster response and may fill up to Section Chief positions during response operations. Due to the advanced training and experience required for these positions, in most cases this tier consists of CVET full-time Management Team members, with other CVET responders included on an invitation only basis. This training is currently in development.
- In-Person Training Opportunities: In combination with online training offerings, CVET has partnered with other organizations to provide critical hands-on educational experiences to increase knowledge of key veterinary elements. These have included:
 - *CVMA*: CVET management staff have given multiple lectures and hands-on labs at both the California Veterinary Medical Association (CVMA's) continuing education symposia as well as the California Veterinary Medical Reserve Corps' disaster training workshops.
 - *Cal CARTs*: CVET staff have organized and conducted workshops for Cal CARTs Summit attendees, as well as for specific CARTs, on triage and basic first aid procedures.
 - *First Responder*: CVET has partnered with several first responder organizations (such as UC Davis Fire) to develop basic animal handling/triage skills trainings.
 - *Veterinary student trainings*: CVET has developed and facilitated veterinary disaster response trainings for both UC Davis as well as Western University students.
- Other Training Elements
 - *ADE triage training*: Based on the success of the CVET Triage protocols (see above), the Animal Disaster Education (ADE) Foundation, a Dutch organization established to train and educate first responders providing first aid to animals in crisis, reached out to CVET following a public presentation to collaborate on the development of a "Animal Triage Training Game". This game, developed for ADE and CVET by the company Mindgame, allows for an interactive online scenario-based training

- opportunity that is more engaging than a traditional didactic lecture or workshop. CVET has provided subject matter expertise for additional species cases and medical conditions and is working with ADE to provide this training to animal responders in California.
- *Mental Health Crisis Awareness training:* While providing technical training in disaster response to veterinary professionals is crucial, providing training on how responders can best support their mental health during these events is becoming increasingly important. To support this effort, CVET partnered with Growing Resiliency for Aquarium and Zoo Employees, LLC (GRAZE) to develop an online Mental Health Crisis Awareness Training program. This program, consisting of three modules and a workbook available via YouTube to CVET national partners and the Canvas platform to CVET responders, addresses three key areas in ensuring mental health during and after disasters: self-care, trauma resiliency, and mental recovery.
 - *Alignment with national programs:* CVET training materials have been created to align with the American Veterinary Medical Association's (AVMA) Veterinary First Responder Certificate Program requirements, national best practices for veterinary disaster response training. Veterinarians who complete the Core and Task Force Responder courses should be able to qualify for receipt of the certificate. Approval from the AVMA is pending.
 - Exercises: Didactic and in-person lecture/lab instruction on animal disaster response topics can provide excellent information that is captured in those documents and protocols that have been developed by CVET. However, the most effective means to truly test the efficacy of these procedures, as well as to determine the effectiveness of training to these procedures and to provide more realistic scenario-based training opportunities, is via exercises and drills. CVET has developed a multi-tiered system to provide different levels of testing to the CVET program - from tabletop exercises to functional drills to full scale deployments.
 - *Internal staff exercises:* On a regular basis, the CVET Management Team self-assesses different elements of the program via announced and unannounced exercises. These include: 1) initial notification/information-gathering scenarios; 2) collecting and packing field equipment; and 3) assembling necessary trailers and mobile structures to create a veterinary triage center.
 - *CVET responder exercises:* As part of the scheduled CVET training program, several virtual responder exercises and full-scale exercises in different parts of the state have been created to test the different elements of a CVET deployment (scheduling, management, field triage, small animal shelter operations, large animal shelter operations, medical records, and logistical support). The most recent exercise, conducted in an equine facility in Templeton, CA on July 12, 2025, involved 48 responders from 20 different counties (with observers/evaluators from the California Governor's Office of Emergency Services, the California Department of Food and Agriculture, CVMA, County of San Luis Obispo, USDA, Central Coast Pet Emergency Hospital, and PETS Hospital) rotating through four stations and working through animal-related scenarios at each.

- *Partner organization exercises:* In addition to internally led and organized drills and exercises, CVET Management staff have led and participated in numerous external drills to reinforce the value of CVET as a source for veterinary support should local resources be exhausted. Drills where CVET has assisted or led in exercise development include those with the California Veterinary Medical Reserve Corps, Cal CARTs, and Inyo, Mono, and Contra Costa counties. Drills where CVET has been an active participant include those initiated by FEMA; the California Governor's Office of Emergency Services/California Department of Food and Agriculture; USDA; Sonoma and Napa CARTs; Northern Sonoma County CERT; Amador, Contra Costa, Placer, and San Luis Obispo counties; and others. Requests for CVET involvement in local exercises have significantly increased over time.

Resource Acquisition & Maintenance

One substantial need that has been identified statewide through initial conversations with the California Governor's Office of Emergency Services, the California Department of Food and Agriculture, the California Veterinary Medical Association (or CVMA), and other partners is having equipment and supplies immediately available for large-scale veterinary disasters. The California Department of Food and Agriculture (through its California Animal Response Emergency Support, or CARES, program) previously partnered with the CVMA to create caches of shelter-related materials in each county throughout the state; however, those caches contained little in the way of veterinary supplies. CVET has put a great deal of effort into acquiring and organizing both mobile veterinary equipment and supplies that can be rapidly deployed anywhere in the state where needed, but also working with CARES, CVMA, Cal CARTs, and other animal care programs to both better understand local capabilities to logistically support veterinary operations and to financially support expansion of regional caches.

- Establishment of CVET-assigned space: Upon CVET's creation, CVET Management Team members were assigned office space, and a secure and temperature-controlled storage space was acquired to establish a "Base of Operations" for equipment and supplies.
 - *Offices:* CVET has been assigned five offices (solo or shared) and five shared cubicles in the One Health Institute on the main UC Davis Campus (Vet Med 3B building in the SVM region of Campus).
 - *Base of Operations:* Space for the CVET response fleet (approx. 0.75 acres) has been established adjacent to the Oiled Wildlife Care Network equipment yard on South Campus, and one older research building has been retrofitted as temperature-controlled storage. This space is a temporary solution due to the area being scheduled for a Superfund mitigation. Additional permanent space containing temperature-controlled supply storage, enclosed space for critical response vehicles, and a partially enclosed carport will be constructed near the UC Davis Veterinary Hospital, with an anticipated completion date of December 2026.
- CVET Response Equipment: To address the identified need for mobile support capabilities, CVET has invested heavily in acquiring vehicles, trailers, temporary facilities, and associated accessories to quickly establish veterinary care centers either immediately adjacent to large/small animal shelters, to act as "Lily pads" to support field

deployments of animal search and rescue personnel, or to provide direct veterinary support behind firelines. The following details the larger equipment acquired by CVET since its inception:

- *Response vehicles*: CVET has established and maintains four vehicles including 4WD SUVs and heavy-duty trucks capable of towing all CVET mobile resources. In addition, one vehicle has been specifically designed to meet field triage and stabilization needs through the addition of a fully stocked vet box. A complete list of CVET response vehicles includes:
 - Chevy Tahoe (4WD)
 - Ford Excursion (4WD)
 - Ford F-250 (4WD)
 - Ford F-550 (4WD)
- *Response trailers*: CVET has established and maintains six trailers ranging in length from a 16' horse trailer to a 44' command trailer, allowing flexibility to customize the response plan, mobilizing resources to best meet any incidents needs. Three trailers have been further enhanced to serve as species-specific, mobile veterinary care platforms including a surgical suite, HVAC systems, hot and cold water, solar power, lithium battery storage, refrigerators, exam tables, portable anesthesia, patient housing, supply storage and ample workspace. A complete list of CVET response trailers includes:
 - 44' triple axle
 - 25' double axle
 - 24' double axle
 - 22' double axle
 - 16' double axle horse
 - Five Portable Generators (to complement each resource)
- *Rapid deployment structures*: CVET has established and maintains several rapid deployment structures for quick set-up of additional space for veterinary care or responder rest areas. The structures include simple pop-ups as well as more comprehensive structures complete with HVAC for temperature-controlled space in the field. A complete list of CVET rapid deployment structures includes:
 - Western Shelter 20' octagon
 - Western Shelter 19' x 35' rectangle
 - Two Zumro 400 Tents
- **CVET Supply Inventory**: CVET has established a robust supply cache at the UC Davis Base of Operations that allows for organized inventory, efficient restocking/replacement of expired items, and, for those items that cannot be kept in vehicles or trailers, rapid placement at the time of a deployment.
 - *Inventory System*: CVET has established and maintains a cloud-based inventory system utilizing two separate online platforms (MaintainX for larger equipment, AirTable for consumables), ensuring accurate status and ample stock of key operational and veterinary supplies in order to maintain constant response readiness.

- **Partner Assistance:** CVET has actively engaged with its partners to support the understanding of the current available infrastructure possessed by others, but also to support its improvement. Examples of this engagement include:
 - *California Veterinary Medical Reserve Corps (CAVMRC):* In working directly with CAVMRC, we have been able to acquire donated medical supplies through the California Emergency Medical Services Authority (Cal EMSA) that can be shared by CAVMRC and CVET, and have assisted CAVMRC in their acquisition and outfitting of an emergency support vehicle (based on a 40' R/V platform) that can act as a logistics/planning support during an incident.
 - *California Animal Response Emergency Support (CARES):* In the CVET County Outreach campaign (see below), CVET was able to review supply caches developed by CARES/CVMA more than 10 years ago to ensure they exist and in what condition.
 - *Northern California Association of Equine Practitioners (NCAEP):* Through our active Memorandum of Agreement with NCAEP, we maintain and store two large animal response trailers at the CVET base of operations for shared use during disasters and training events.

Local CART Assistance Grant Program

In support of the various CARTs throughout California, CVET solicited grant proposals for project and team development for the 2024-2025 fiscal year (July 1, 2024 – June 30, 2025) that directly correlated to the enhancement of disaster animal preparedness and response efforts, particularly those that related to increased veterinary/animal health service activities, in the State of California.

- **Guiding Principles:** Grant application and review focused on the following principles:
 - *Capacity Building:* Supporting individual animal response operations, these funds aim to increase the animal response capacity within the State of California.
 - *Standardization:* These funds will support the continued establishment and progress towards standardization of animal responder definitions, categorization, and training requirements to better support mutual aid efforts throughout the State of California.
 - *Partnership:* These funds will support the ongoing development of partnerships between CARTs and animal services entities to collectively support the enhancement of animal response operations and preparedness.
 - *Collaboration:* These funds will support the collaborative efforts between CARTs, animal services entities, emergency management professionals, and first responders that result in a coordinated response effort within the California Standardized Emergency Management System (SEMS).
- **Grant Categories:** Grant funding was provided within one of the following categories:
 - *Start-up (up to \$20,000):* Start-up funds were only applicable to new or newly developing CARTs that cannot meet all application requirements for existing CARTs. These funds were intended to assist with program development, personnel compensation, acquisition of start-up equipment, etc.

- *Support (up to \$25,000)*: Support funds were intended to support the continued development and enhancement of existing CARTs. This could apply to training and exercises, protocol development, personnel compensation, collaboration events with other CARTs, etc.
- *Equipment (up to \$25,000)*: Equipment funds were intended for the acquisition of additional response equipment for existing CARTs such as trailers, kennels, portable stalls, safety equipment, radios, computers, etc. Equipment funding did not include the purchasing of perishable supplies (food, medications, etc.).
- Success: In total, approx. \$270k was distributed across 10 animal disaster response organizations throughout the state.

Start-Up Grant Title	CART/Team Name	Amount
Cal CARTs Startup Support	Cal CARTs (via Napa CART)	\$10,000
2024 HumCART Start-up Grant	HumCART (Humboldt County)	\$20,000

Existing CART Grant Title	CART/Team Name	Amount
Building Bridges: A Grant Proposal to Strengthen Volunteer Readiness and Community Impact	North Valley Animal Disaster Group	\$25,000
Personnel & Shelter Site Support	Napa CART	\$25,000
SMC LAEG Support	San Mateo County Large Animal Evacuation Group	\$16,000
SMC LAEG Equipment	San Mateo County Large Animal Evacuation Group	\$25,000
Assistance with collaborative efforts, standardized training and retention of members	Amador County Animal Response Team	\$25,000
Training Sustainability	Nevada County Sheriff's Humane Emergency Animal Rescue Team (H.E.A.R.T.)	\$12,500
Technology & Development Support for Napa CART	Napa CART	\$3,600
Solano CART Response and Outreach Trailers	Solano CART	\$20,000
Equipment for Offsite Large Animal Sheltering	SCLAR Large Animal Emergency Evacuation	\$25,000
Shelterly Start up, Training and Supplies	SCLAR Large Animal Emergency Evacuation	\$5,610
Constructing Large Animal Emergency Shelter In Yokuts Valley	Central California Animal Disaster Team	\$23,000
Increasing Disaster Preparedness & Response Capability in the Central Valley	Central California Animal Disaster Team	\$19,500

Research

One of the areas specifically identified in the established legislation (and associated MOU) was the support for research to improve domestic animal and livestock response in the future. CVET has taken a multi-pronged approach to this effort, to both push the science forward but also support and encourage others to explore new and innovative methods to respond to, and care for, animals in crisis.

- CVET-Led Research: CVET has hired excellent professional staff, which includes several PhD-level researchers. As such, participating in and conducting research has been added to most senior-level position descriptions to ensure the most advanced information possible is added to guidelines and procedures. To date, two internal projects have been conceived and implemented:
 - *Survey of serum biochemistry, complete blood count, and serum amyloid A of horses evacuated to emergency shelters due to wildland fires.*
 - Investigators: Bobby Cowles, Briana Hamamoto, Ashley Patterson, Claudia Sonder, Kim Carlson, Heather Knych, Mike Ziccardi
 - Issue: Anecdotal evidence from veterinarians in the field state that animals in emergency shelters are often under extreme stress due to the change in environment and often abrupt diet changes, along with multiple other factors including potential exposure to infectious disease.
 - Specific Aims: To determine if there is a trend between changes in bloodwork due to evacuating for a wildfire; and to set a baseline for future studies exploring the effects of evacuation due to wildfire on horse health and shelter operation best practices.
 - *Serum amyloid A concentrations in horses exposed to poor air quality indices due to wildland fires.*
 - Collaborators: Napa Valley Equine, UC Davis, LBEMC, NCAEP, UC Davis California Veterinary Emergency Team, other
 - Issue: Historically, public health recommendations have suggested limited physical activity and outdoor exposure to unhealthy air when the air quality index (AQI) exceeds 150 for humans. This study aims to evaluate the respiratory parameters and SAA of horses when entering the shelter and along with AQI, especially when it exceeds 150.
 - Hypothesis: SAA concentrations will increase with AQI in horses exposed to wildland fire smoke or those breathing air rendered unhealthy by smoke.
- Competitive Grants: In order to support extramural investigator-led research, CVET will be implementing a Competitive Grants program in the Fall of 2025 modeled after the successful Oiled Wildlife Care Network program. Since 1996, the Oiled Wildlife Care Network has funded more than 200 projects and allocated more than \$4 million to meritorious proposals examining the effects of oil on wildlife and methods to better respond to such incidents. By replicating many of the specific elements of this program (e.g., international solicitation of proposals via InfoReady, a cloud-based application system; recruiting a Scientific Advisory Committee for peer review of proposals;

considering a tiered award system that encourages smaller, less expensive pilot studies as well as larger, multi-year awards), it is hoped that the science of animal response as it relates to veterinary care can be substantially improved.

Review & Evaluate County EOPs

One charge given to CVET through the MOU with the California Governor’s Office of Emergency Services and the California Department of Food and Agriculture was to “provide veterinary review of county [Emergency Operations Plan] animal-related annexes” to support the California Governor’s Office of Emergency Services’ review and evaluation of county large animal evacuation plans. To pursue this, CVET established a two-phased approach to this effort:

- **County Outreach Campaign and Plan Development:** To better understand the landscape of animal disaster response in California, CVET launched the County Outreach Campaign to gather information on the various animal response capabilities for all 58 counties. This endeavor involved meeting with representatives from emergency management, animal services, CARTs or other non-governmental organizations active in animal disaster response in the county, and agricultural representatives to discuss current plans, animal services organization, structure, training and capabilities, relationships with additional partners, integration and coordination efforts with local emergency management, veterinary capabilities in the county, with a summary of findings and recommendations to enhance local preparedness. Through these conversations and review of existing plans, CVET developed a standardized list of questions and data to be collected/ reported, based on the following categories:
 - County Disaster Risk Identification and Recent Incidents
 - Emergency Plans
 - County Animal Services and Capabilities
 - Response Organizations and Capabilities
 - Equipment and Supply Caches
 - Current Operational Area Coordination Efforts
 - Shelter Facilities and Fairgrounds
 - Veterinary Capabilities
 - Areas of Potential Improvement
 - CVET Support and Integration

Compiling these data, CVET provided a subjective assessment of veterinary need within the county during disaster operations, defined as high, medium, or low. To date, CVET has met with 55 counties (3 counties in the state were unresponsive to requests) and have developed 1–2-page summary reports for each county. Sixteen final reports are available on the CVET website (<https://cvet.vetmed.ucdavis.edu/county-outreach/reports>). All reports will be finalized in the coming months and finalized reports will be posted on the CVET website. Summary of findings for each the California Governor’s Office of Emergency Services Administrative Region are as follows:

Category	Coastal Region	Inland Region	Southern Region
Low veterinary need during disasters	19%	14%	37%
Moderate veterinary need during disasters	38%	43%	46%
High veterinary need during disasters	44%	43%	18%
Animal plan in development	13%	7%	9%
Animal plan not written	31%	36%	46%
Animal plan needs updating	50%	4%	0%
Animal plans are current	6%	11%	46%
Counties having a CART for animal response	69%	50%	73%
Counties that do not have a CART for animal response	31%	50%	27%

- Animal Plan Review and Development:** As outlined in the California Governor’s Office of Emergency Services, the California Department of Food and Agriculture, and UC Davis MOU, CVET has established a planning support resource for counties to request the review and update, or development of an animal specific plan for their jurisdiction with a focus on veterinary integration. As noted in the County Outreach Campaign summary findings above, a large percentage of counties have not written a specific plan to address the animal disaster response operations within their county. This lack of plan development can result in a disorganized response. Furthermore, jurisdictional knowledge is not documented to test, review, improve, and pass onto successors within the emergency management and animal services positions. Through these outreach efforts, CVET has been requested to review several animal plans to provide recommendations and guidance and has participated in local county plan development efforts. CVET continues to be an available resource to assist counties in enhancing their overall level of preparedness.

C. Response

The cornerstone of the CVET program, when requested by the California Governor’s Office of Emergency Services and activated by the California Department of Food and Agriculture (in support of California’s Emergency Support Function (CA-ESF) 8, CA-ESF 11, or other applicable CA-ESFs), is to deploy and track trained and certified personnel and other resources via a mission task, supporting disaster response where local/regional veterinary services are exhausted or overwhelmed. CVET activities during such deployments can include

triage/veterinary support of animal search and rescue efforts, veterinary care of animals in animal emergency shelters and shelter-in-place situations, or other tasks as necessary. The protocols and procedures developed since CVETs inception (SOGs detailed above) fully encapsulate these efforts, developing a concept of operations that can range from physical deployments for small to large incidents, to deploying a team for incident advice/assessment, to providing virtual guidance.

- Disaster Consults/Remote Assistance

- *2022 Mosquito Fire*: The Mosquito fire, occurring in Placer and El Dorado counties beginning September 6, was the largest wildfire in California in 2022. The UC Davis Veterinary Emergency Response Team (or VERT), which was still operational at that time (and was dissolved once the MOU with the California Governor’s Office of Emergency Services and the California Department of Food and Agriculture was completed), deployed UC Davis personnel to assist. CVET veterinary staff deployed under VERT leadership.
- *2023 Atmospheric Rivers*: Flooding throughout California occurred between January – March 2023 due to a series of atmospheric rivers supplying torrential rainfall in parts of the state. CVET was contacted by the North Valley Animal Disaster Group (NVADG) to assess capabilities to assist should additional veterinary support be needed. CVET attended regular briefings via video conferences to ensure readiness.
- *2024 Thompson Fire*: The Thompson Fire, starting on July 2, 2024, in Butte County, required the residents of Oroville to evacuate quickly. NVADG contacted CVET to determine availability. CVET staff made a visit, at their request, to learn more about NVADG operations.
- *2025 Los Angeles Fires*: On January 7, 2025, two massive wildfires began in the greater Los Angeles region – the Palisades Fire in the Santa Monica Mountains (spreading to Pacific Palisades, Topanga, and Malibu) and the Eaton Fire in the San Gabriel Mountains (spreading to Altadena). By the time they were extinguished on January 31, they became the third and second most destructive wildfires in California history, respectively. More than 200,000 people were forced to evacuate, many of which fled with their pets (necessitating animal shelters to be stood up) or were forced to leave their animals behind. CVET was in close communication with the County of Los Angeles Department of Animal Care and Control, Los Angeles City Animal Services, and Pasadena Humane Society, leads for the animal response efforts, kept in direct contact with several city and county veterinary hospitals and the Southern California Veterinary Medical Association, and attended daily briefings with those organizations, as well as sessions led by national organizations and statewide programs (CalAnimals). Due to the strong veterinary support in the Los Angeles area, CVET was not requested to deploy, but provided substantial advice to shelters and local practitioners, and spent January in a ready state should deployment be necessary.

- Disaster Deployment: 2024 Park Fire
 - On July 24, 2024, at 1506 hours in Butte County, a vegetation fire sparked in upper Bidwell Park within the City of Chico. The fire was quickly identified on fire cameras and fire suppression efforts were immediately dispatched. At 1701 hours, Butte County decided to activate the County Emergency Operations Center (EOC) as the fire continued to expand north with a rapid rate of spread, and evacuation warnings and orders were quickly put in place due to the aggressive nature of the fire behavior.
 - Following standard operating procedures for the county, NVADG was quickly activated to open the Del Oro and Camelot animal shelters, small and large animal facilities, respectively. These shelters were staffed by NVADG volunteers, Butte County Animal Control, as well as many mutual aid partners throughout the response. Due to the potential for high impact to the county with evacuation orders in place for multiple neighborhoods, Butte County requested additional veterinary support via a standard resource request through the EOC. CVET was contacted by the ESF 11 representative on July 25, 2024, and a California Governor's Office of Emergency Services mission task order was finalized within a matter of hours. CVET prepared an assessment team, notified all CVET volunteers of the team's activation, and was on site the following day.
 - Upon arriving, CVET management staff met with Butte County Animal Control representatives at the EOC to report in and receive a briefing on the current animal operations. CVET staff then visited both shelter locations to determine the number of animals present, number of current veterinary requests, and to determine what facilities and resources were available on site. With the initial assessment information, the CVET Management Team met virtually to plan additional logistics and personnel needs for the following week. Based on the species sheltered and known veterinary needs, CVET volunteers were staffed for response shifts to meet the specific species needs of the animal population. CVET members were provided updated incident information, as well as reporting time and location for the following day.
 - During the first day of full team activation, CVET staff and volunteers worked to establish a base of operations at the Camelot Shelter. In addition, response trailers were set up at both shelter locations for small and large animal veterinary care. In addition to setting up CVET's mobile medical platforms, team members performed initial patient assessments based upon medical concerns noted by the shelter staff and volunteers. Two teams were established for the two shelter locations, operating as independent units throughout the day. The teams worked in their respective locations with CVET management staff overseeing communication and coordination efforts between both locations. The CVET team assembled for a debriefing that evening, establishing an operational cadence that would be used throughout the response.
 - Throughout the following weeks, CVET continued to provide veterinary care daily, working hand in hand with the location jurisdiction and animal volunteers. CVET established a response cadence inclusive of morning briefings, management of a

- large animal shelter team, small animal shelter team, and a field team. In addition, CVET staff participated in the daily shelter briefings to provide updates on patients being treated, requests for alterations to animal care based on their conditions, and reviewed protocols on how to request veterinary support throughout the day. Participation in these briefings was essential with the constant rotation of shelter staff and volunteers, maintaining standardization and consistency throughout the response. CVET management staff also participated in daily briefings with both the EOC and Animal Branch Operations Center (ABOC) and provided pertinent incident updates to the team.
- Based on incident updates and current animal conditions, the team completed a daily veterinary needs assessment to determine needed volunteers with responder numbers ranging from 7 to 17 based on the daily needs of the incident. Additionally, CVET was able to utilize their previously established MOU with the California Veterinary Medical Reserve Corps for additional veterinary volunteers, resulting in a seamless working relationship that has only strengthened since the response. CVET provided the overall management for the veterinary aspects of the response, working within the established ICS structure, and maintaining command control of veterinary operations under the direction of Butte County.
 - CVET remained deployed until August 6, 2024, when it was jointly determined with Butte County that there was not a high enough need for veterinary care to necessitate the team on site. On August 7, 2024, CVET demobilized all resources and coordinated with local veterinary hospitals for the transfer of remaining patient care to ensure that the animals would still receive necessary treatments following the team's departure.
 - In total, CVET answered 86 calls for veterinary assistance and treated 49 total animals (33 small animals, 15 large animals, and 1 avian in the field). During the CVET after action discussions, Butte County noted that having CVET on site "raised the bar" for animal disaster response, was "a great asset in the field", and was an overall "amazing resource" for the county.

D. Recovery

While the bulk of CVET's activities are necessarily focused on preparedness and response actions, CVET has also been charged with ensuring protocols and policies reflect the best available information and science. One key element to this is fully evaluating disaster deployments and making substantive recommendations on how better to respond in the future. For the Park Fire deployment, CVET undertook multiple "hotwashes" with various stakeholders (agency personnel, CVET responders, internal CVET Management staff) and produced a comprehensive After-Action Report/Improvement Plan. This report can be found in full on the CVET Response section of the website (<https://cvet.vetmed.ucdavis.edu/response>).

V. Conclusions

In this millennium, wildfires - once a normal, natural occurrence in California - have become more damaging, more deadly, and more impactful than ever before, particularly in the past ten years. Excellent animal response programs have emerged to assist in such disasters throughout the state. Yet, even as these efforts have grown, agencies have faced challenges to coordinate such efforts, and non-governmental organizations have lacked the capacity to standardize an approach. With the creation of the California Veterinary Emergency Team, the state of California has both recognized the public's need for coordinated assistance in the evacuation and care of household animals, livestock, and other domestic species in emergencies statewide, as well as supported a global model for animal disaster preparedness, response, recovery, and mitigation. Placement of this program within the UC Davis School of Veterinary Medicine's One Health Institute also recognizes the fact that natural disasters are true One Health issues: environmental emergencies causing significant risks to animal and human health, and people previously choosing not to evacuate to safer areas if their companion animals could not also be provided safe sheltering options. The ancillary benefits in the creation of the CVET program have also gone beyond the development of a veterinary disaster response team. Its formation has directly led to: 1) a reinvigorated California Governor's Office of Emergency Services/California Department of Food and Agriculture's California Animal Response Emergency Support Steering Group (now entitled the Animals in Disasters Working Group) which brings together governmental and non-governmental animal response organizations, 2) the significant expansion and reconfiguration of the California Community Animal Response Team Collective (now entitled Cal CARTs) which allows all California-based CARTs to share information, knowledge, and to help standardize approaches, 3) the California Veterinary Medical Association's Medical Response Corps (CAVMRC) possessing a partnership that provides their more than 3,000 volunteers a coordinated, logistically-supported, and efficient response program under which to operate, and 4) an increase in the level of local jurisdictional, emergency management, and animal services preparedness and response capabilities to better provide for California animals and their owners. CVET's inaugural deployment to the Park Fire in Butte County raised the bar for the level of animal care provided during a response. And while the CVET program has only officially responded to a single wildfire since its inception, the program's impact has been felt in every major incident over the past two years through coordination, consultation, and vital support. Improving the space of veterinary disaster response not only safeguards animal welfare through the care of injured and ill animals, but it also enhances the wellbeing, safety, and comfort of the people who love them. Looking ahead, CVET remains steadfast in its mission. With a focus on expanding on the successes of its first three years, coupled with additional focus on deepening research, recruiting and training new responders, and providing local assistance to counties and organizations to help refine and develop animal plans, trainings, and exercises, expanding both in scope and impact to build a more resilient California. The state has long recognized the magnitude and power of the human-animal bond, and by addressing the need for veterinary care during disasters, the state demonstrates its commitment to protecting the whole family, ultimately saving both human and animal lives.