



**Tuesday, April 20, 2021**

**CDC One Health Response to the SARS-CoV-2 Global Pandemic**

Dr. Casey Barton Behravesh  
Captain, U.S. Public Health Service  
Director, One Health Office  
National Center for Emerging and Zoonotic Infectious Diseases  
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TBA

**Intersection of SARS-CoV-2 and Wildlife Rehabilitation**

Dr. Michelle Willette  
The Raptor Center  
University of Minnesota College of Veterinary Medicine

With the emergence of SARS-CoV-2, rapid in-vitro and in-vivo research was undertaken to determine the animal origins and intermediate hosts for COVID-19. Concurrently, US wildlife professionals recognized the potential for a disease outbreak in naive US wildlife populations and for reverse zoonosis resulting in the possible establishment of wildlife reservoirs. With an abundance of caution, several organizations and agencies proposed guidelines to cover their respective wildlife related activities to decrease the probability of these events.

Wildlife rehabilitation is the care and treatment of sick, injured and displaced wildlife so ultimately they can be returned to their natural habitat. In the US there are thousands of rehabilitators that re-release thousands of animals annually, including many presumed SARS-CoV-2 species of concern. Wildlife rehabilitation is largely regulated on a state level, usually by a department of fish and game. This has resulted in a patchwork of guidelines ranging from no precautions required to an inability

for some rehabilitators to accept and/or release one or more species of wildlife. These guidelines impact human and animal health and welfare. Ideally these guidelines and policies should be made in concert with stakeholders including public health, state wildlife veterinarians, and rehabilitators, be based on scientific evidence, and be revisited regularly and frequently as the situation changes.

### **AVMA's Veterinarian Disaster Responder Certificate Program - An Update**

Dr. Warren Hess

AVMA Disaster Coordinator

AVMA is moving forward with the Veterinarian Disaster Responder Certificate program. This presentation will give participants an update on the process and timing of the "roll out" of the certificate program. Programs that teach veterinarian disaster courses may want to evaluate their program offering in light of the Core Competencies of the certificate program.

### **Assessing Veterinary Practice and Practitioner Readiness for Natural and Man-made Disaster Events**

Dr. Larry Garcia

Clinical Assistant Professor in Shelter Medicine and Surgery

University of Florida College of Veterinary Medicine

Natural and man-made disasters cause hundreds of millions of dollars in economic losses worldwide annually (Schiermeier, 2012). This year, 2020 has been one of the most active years for weather events in recent history, in addition to the COVID-19 global pandemic. Veterinarians are most qualified to support local, state, national and international development of disaster preparedness, response and recovery planning. Many veterinarians feel they lack the knowledge and training to effectively prepare and respond, including those in heavily impacted areas (Huston & Ebers 2019). Veterinary colleges offer or connect students to training opportunities by way of core curriculum, electives, or state and/or federally funded exercises and training courses. This study surveyed veterinarians to understand the state of veterinary practice and practitioner preparedness for pandemic, natural, and man-made disasters in the United States and Canada. Preliminary results indicate areas of relative preparedness as well as areas where training and on-going continuing support are needed. This information should help to identify areas that veterinary curricula, state and federally funded training and continuing education opportunities can target to develop disaster-prepared, credentialed veterinary practitioners who can respond appropriately and assist in recovery efforts. Results pending.

**Wednesday, April 21, 2021**

**NARSC Question and Answer Session**

Kelly Johnston, NARSC Chair  
International Fund for Animal Welfare (IFAW)

TBA

**MDARD - 2019 Sample Team Exercise & 2020 Responses**

Elizabeth Weier  
Emergency Training and Exercise and Planning Coordinator, Michigan Department of Agriculture and Rural Development

The Michigan Department of Agriculture and Rural Development (MDARD) has a history of testing its surge capacity for response to large scale events, conducting Sampling Team Exercises around every three years since 2008. The Sampling Team Exercises bring together MDARD field staff to practice response on an all-hazards basis, delivery of just-in-time training, sampling techniques and use of the Incident Command System. In 2019, MDARD executed the most complicated and complex Sampling Team Exercise series to date that consisted of eight sessions around the state. Each session had a safety training module, a unique scenario and Incident Management Team made up of participants from around the Department and partner agencies. Join Elizabeth as she shows how the MDARD team uses these exercises to build capacity in surge response, ICS expertise, and leadership, as well as learning about the results of testing products that included bulk spices, luster dust, pesticides, pig ears, fish species, and gas pumps. She will also cover the planning guide that helps to run a successful surge exercise or response. The 2019 exercise series prepared MDARD for a busy 2020, which included activations of internal Incident Management Teams and deployments to COVID field hospitals.

**Above Ground Burial as a Carcass Management Tool during Disease Outbreaks and Natural Disasters**

Gary Flory  
Agriculture and Stormwater Program Manager, Virginia Department of Environmental Quality  
Bob Peer  
Virginia Department of Environmental Quality

Animal mortality management continues to pose significant biosecurity, environmental, and economic challenges following natural disasters and animal disease outbreaks. Recent advances in our knowledge and acceptance of composting have resulted in the method becoming widely used during mass poultry mortality events. Composting catastrophic losses of large animals poses additional challenges.

In an effort to provide an additional carcass management tool for livestock, researchers are working to evaluate the effectiveness of Above Ground Burial (AGB). To date, approximately ten research projects of various sizes have been conducted. These projects have evaluated a number of factors

including the migration of nutrients, inactivation of pathogens, decomposition of carcasses, potential for insects to spread disease, ideal depth for AGB, effect of various carbon sources, and the value of opening carcasses. These projects are all at various stages from completion to data analysis, to data collection. Based on the data collected to date, within a 1-year period the method appears to decompose the carcasses, inactivate pathogens (more work is needed on additional pathogens), minimize the migration of nutrients, and permits the disposal site to be returned to its previous land use. The presentation will discuss the work conducted to date and the remaining data needs.

### **Middle Earth: Lessons and Observations in Animal Disaster Management**

Steve Glassey

Director of Emergency Response Innovation Centre, Associate Professor at Central Queensland University (CQU)

Home to Mount Doom, Middle-Earth (also known as New Zealand) is fittingly prone to a wide range of natural and man-made hazards. In this presentation, Animal Evac New Zealand co-founder Steve Glassey presents on some of the lessons and observations with animal disaster management to date in this far off land. Innovations around hybrid local/cloud incident management platforms through to observations during responses to the Australian Bushfires (2020) and discussing the delegitimization of animal disaster rescue capability and the interfacing of such with human rescue systems.

### **Animal Rescue and Sheltering Management during Multi-Week Wildfire Responses in California**

John Maretti

Executive Director, North Valley Animal Disaster Group

Norm Rosene

Vice President North Valley Animal Disaster Group

The duration of fire seasons, and the intensity of fire events seem to be increasing worldwide. Over four million acres (1,618,743 hectares) of land was consumed by wildfires in California during the 2020 fire season, the highest total in history. Thirty-two people died in the fires, along with countless wild and domestic animals. The North Valley Animal Disaster Group (NVADG), a regional volunteer NGO, responded to multiple fires in 2020, including the North Complex West Fire in Butte County. NVADG also responded to the horrific Camp Fire in 2018, which claimed 86 lives and destroyed the town of Paradise, California. Working within the disaster Incident Command System, and in cooperation with the local government animal control agency, NVADG managed the animal rescue and evacuation component for the fires which included setting up emergency animal shelters, and providing and managing field rescue teams. This presentation reviews the organizational aspects of large scale, multi-week disaster management, as well as the constantly evolving training regimen necessary to prepare animal disaster workers for safe and timely deployment.

**Thursday, April 22, 2021**

**Identifying, understanding and preventing injuries and illness for responders to technical animal rescues and disasters**

Dr. Christopher B. Riley

Professor of Equine Clinical Studies and Director of Research Commercialization

Massey University School of Veterinary Science

Dr. Steve J. DeGrey

For animal rescue and welfare management responders during disasters, the environment and animals combined to create an increased risk to physical wellbeing. These risks were evaluated through the delivery of an international survey of volunteer and professional responders. Of 260/315 (83%) respondents indicating if they had been physically compromised in association with a response, 19% (49/260) confirmed an impact on their physical well-being. Most (80%) indicated that there were mildly affected by injury or illness, whereas the remainder were moderately or markedly affected. Of the injuries reported, most (52%) were to the hand, followed by the arm (36%), leg (24%), back (24%) and head or face (15%). Of these, 45% reported multiple body regions were affected. Injury types ranged from bruises or lacerations to concussion. The most reported illnesses were associated with infectious disease. The most common factors contributing to injury or illness were the animals being rescued, fatigue and the actions or inactions of others. An existing illness or health concern, failure to wear personal protective equipment, training deficiencies, stress, equipment failure and miscommunication were other factors. These findings provide estimates for the risk to physical well-being and suggest a need for focused training and personnel management for these deployments.

**Management of Radiologically Contaminated Livestock and Agricultural Products**

Dr. Kevin Dennison

USDA, Advisory Team on Environment Food and Health

Current US and international limits of radionuclides allowable in food are based on cancer risks extrapolated in a linear manner from high-dose radiation exposures. Recent research in low-dose radiation impacts, however, is not supportive of this linear, no-threshold risk relationship and indicates that the current standards are already extremely conservative. In radiological incidents, however, food-safety decision-makers may be under great pressure to reduce these limits, such as in Japan after the Fukushima nuclear accident. Japan adopted a limit for Cesium-137 which was 1/10 the international recommended standard. Reduction of these standards had a dramatic negative impact on agriculture in the country. This presentation will review current standards, discuss the recent advances in understanding low-dose radiation effects and provide information that will be critical to science-based emergency-response decisions about food and agriculture.

## **Hazmat Considerations for the Animal Responder**

Brett Huff

ASAR Training and Code 3 Associates

Hazmat consideration for the animal first responder

Contamination can occur in many different emergency situations. Natural disasters, such as hurricanes, flood, earthquakes, tornadoes, or fires can cause an exposure to a wide variety of household or agricultural chemicals, petroleum products, heavy metals or harmful pathogens from disrupted sewers, animal waste holding pits or septic tanks. Agricultural or industrial accidents may result in exposures to chemical spills or gas leaks. Terrorism or criminal events may involve chemical toxins, biological warfare agents or microbial pathogens that can cause substantial harm.

Exposure to contaminants may have immediate or acute damage to the skin, respiratory tract, eyes or the entire body. Effects will depend on length of exposure and contamination levels, animals may have skin irritation and redness, chemical burns and hair loss, or respiratory distress. Systemic shock or even death are also possible. Some contaminants may cause long term or delayed damage. Some contaminants can also have a carcinogenic effect.

Decontamination should occur as soon as possible to reduce the effects of the exposure. We must use the current best practices to ensure the safety of the animals we are working with and all who will come in contact with them.

## **Planning for Decontamination of Companion Animals and Working Canines in the Disaster Environment**

Dr. Deb Zoran

Texas A&M Veterinary Emergency Team (VET)

Decontamination of companion animals and working canines not attached to FEMA system (which have their own hazmat personnel and decon plans) is a complex problem and complicated by the difficulties associated with management of the animals, the personnel required, the safety issues and the logistical challenges that are unique to an animal decontamination event. This talk will introduce these challenges we have confronted in the 10 year deployment history of the Texas A&M VET, discuss the logistical and safety challenges to be addressed, and provide working plans to assist emergency managers and animal groups with planning for mass decontamination of animals in a disaster setting.