

# Technical Large Animal Emergency Rescue Course

Hope Mills North Carolina, United States

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Animals in Emergency Working Group

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This large animal technical rescue course is lead by two of the premier North American authorities on the topic of large animal emergency rescue. Drs. Rebecca and Tomas Gimenez have been leaders in the large animal rescue field for almost 15 years. They have expertise in animal handling, mechanical rope advantage, vehicle extrication, trench and water rescue as well as veterinary medicine. They work in conjunction with various organizations throughout the world including the HSUS and emergency service providers in England and Australia. This course was coordinated by the members of SMART (Specialized Mobile Animal Rescue Team – Tori Miller and Justin McLeod) of Hope Mills, North Carolina.

The strengths of the course included:

- Depth and scope of topics covered
- Technical instruction was practical and relevant to first responders faced with large animal emergencies
- Many opportunities for participation – in the classroom and practical sessions
- Importance of scene management and rescuer safety
  
- The weakness of the course included:
- Field Euthanasia (see notes below)

Currently, there are three levels of training offered through this large animal technical rescue group. Awareness training is based upon 15 hours of classroom instruction with the purpose of providing a basic understanding of large animal behavior in normal and emergency environments and various types of emergency incidents and rescue techniques available to first responders for large animal species. The Operational level has been designed to include 15 hours of classroom instruction with an additional 17 hours of practical-hands-on learning. The remainder of the report will focus upon the Operational level course. Finally, the Technical level course has been designed for individuals whom already possess advance search and rescue skills such as members of urban search and rescue teams.

## **Course Audience**

The Awareness and Operations level courses are intended for individuals in the first responder community with an interest or requirement for large animal rescue training. There was a heavy emphasis placed upon knowledge of the incident command structure and the various roles required to successfully manage an incident. The participants of this particular session included numerous fire departments, members of urban search and rescue teams, animal control officers and equine veterinarians. Many of the participating departments sent their specialized equine fire and rescue teams to the training. Interestingly, there were people in attendance that had taken the course previously (some multiple times). Many of the participants had some knowledge of horses or ruminants; however, this was not a pre-requisite for participation in the course. Those participants lacking a large animal background would find the material informative and presented in a manner that was not overwhelming to the novice. The successful completion of four on line emergency management courses administered through the Federal Emergency Management Agency are pre-requisites for the Awareness and Operation level courses.

## **Course Manual**

The manual for this course was a textbook recently published by the course instructors entitled: *Technical Large Animal Rescue*. {Wiley-Blackwell, 2121 State Avenue, Ames,

Iowa. First Edition, 2008. ISBN-13: 978-0-8138-1998-3}. This is a well written and comprehensive textbook on the subject of large animal rescue. I have reviewed this textbook for the Canadian Veterinary Journal and it will be published in a forth-coming issue.

## **The Operational Level Course**

The Operational level course was an intensive 3-day seminar with practical sessions. The lecture periods began at 8 am sharp and wrapped up at 1pm with instruction continuing through a lunch period. The practical sessions started at 1:30pm and ran until 5:30pm each day with a 3 hour nighttime rescue scenario included. The course was limited to 30 participants which ensured each person was able to partake in the practical sessions. The group was divided into teams which were assigned specific tasks in each of the rescue scenarios.

The objectives of the Operations level course were numerous. The summarized objectives were to provide participants with an understanding of rescuer safety in large animal incidents, large animal handling and behavior in various settings, understanding large animals as a prey species, employment of various assist maneuvers, response to trailer wrecks, trailer configurations, rope rescue, sling application and use, fire incidents involving large animals, mud and water rescues, field euthanasia and basic first aid measures. Rescuer and scene safety was a re-occurring theme which was discussed at every opportunity available.

## **Course Material**

The first classroom session was dedicated to basic concepts of large animal rescue with emphasis on large animal behavior and their senses. This was addressed in both natural non-stressful situations as well as animals under duress. Containment and various large animal restraint procedures were discussed. The use of chemical restraint (sedation and occasional general short acting anesthesia) was recommended in certain situations upon

the advice, administration and monitoring by the veterinarian on scene. The instructors discussed the importance of having a veterinarian as part of the rescue team to be able to assess the medical condition of the animal during and post incident. The afternoon session began with a demonstration of the basic equipment used during large animal rescue incidents along with live animal demonstrations. Nylon webbing was used to demonstrate the proper placement of straps for simple manipulations, including a forward assist, backward assist and the sideways drag. The instructors used their own horses to demonstrate proper positioning and manipulation of webbing. Participants performed the various techniques using these horses that had been trained to lie down upon command and were well versed in the procedures being performed. The afternoon concluded with the performance of a vertical lift using a live horse and bipod equipment provided by PARATECH Inc.

The second classroom session focused upon trailer incident response and unstable ground incidents. The instructors provided many pictorial and video examples of horse and livestock trailer incidents along with the manner in which the incident was resolved. These case studies were done in an informative and constructive manner with suggestions provided from the class for possible rescue alternatives. The importance of rescuer safety was re-enforced time and time again. Interestingly, during a majority of the incidents described, the trailer did not become unhooked from the towing vehicle, highlighting the importance of driver error trailer accidents. The remainder of the morning session was committed to unstable ground rescues with examples of large animals in sinkholes, wells, trenches and mud. The afternoon session was devoted to trailer incident response, a mud rescue and a vertical lift from a ravine. A life size dummy horse, buried up to its withers in mud was used for the unstable ground rescue. Proper unstable ground rescue techniques were used for this procedure, including a large pad placed up against the horse for the rescuer to work from, a tie off with a safety person and two support people on stable ground to assist. High-pressure water directed down beside each limb was used to loosen the mud from the body. A Nikopoulos needle (a 2 meter of 4cm diameter electrical conduit bent into a C shape with a metal loop at the far end and a hose attachment at the opposite end) was fed using high-pressure water around the girth and

haunches of the horse so that a Becker sling could be properly placed for extraction from the mud. It was amazing to see how much suction pressure the mud placed upon the dummy and the importance of relieving the suction using water or air was prior to attempting to lift the horse. An evening practical session was devoted to a nighttime search and rescue exercise. After successfully locating the horse and rider, the horse was sedated and placed on a rescue glide. Each participant played a role in this exercise including the placement of webbing for a sideways drag onto the glide, head and eye protection placement, strapping the horse to the glide and placement of a Robert Jones bandage with a Kimsey splint. This scenario was quite challenging as it was performed in complete darkness but was an important experience as many rescue operations are performed in less than ideal locations and circumstances.

The final morning session was devoted to large animals in fire incidents with special attention to barn fires. This was followed by a brief discussion of helicopter sling load rescues and decontamination procedures. The practical portion of the day began with participants learning how to place an Anderson Sling for a vertical lift. For the first time in the history of this course, the coordinators simulated a barn fire with the course participants playing various roles. I was selected to be the horse owner. I was given 3 minutes to remove as many horses as I could from the stable.... I was able to rescue one. This exercise gave me an appreciation of just how challenging it would be to evacuate horses from a burning building considering lack of visibility, heat, poor air quality and the level of fear of the horses. It also gave the first responders attending the course an appreciation for equine behavior in a barn fire and the immediate health concerns following removal from a fire.

## **Course Delivery**

The instructors were both dynamic speakers who easily kept your attention. The use of power point presentations was extremely valuable as they utilized numerous photos and video footage to highlight various rescue scenarios. At times, I found some of the slides difficult to visualize, as there was a lot of detailed information presented at once. The instructors used models and props to explain concepts which would have been difficult to

visualize otherwise. The course material was laid out in a logical manner moving from general information to highly specific techniques. The technical discussions were easy to follow even for individuals without fire and rescue training. The instructors used many personal experiences and the experiences of others in large animal rescue to demonstrate and explain the management of incidents. A team approach to large animal rescue incidents where members of fire, police and the veterinary community work together was encouraged. Course participants were encouraged to participate in all discussions and to ask questions when they arose.

## **Course Weaknesses**

One of the areas that I would have liked to had a more detailed discussion and perhaps cadaver demonstration was the topic of field euthanasia. As first responders, it is important to have a general understanding of the process of euthanasia and anatomical landmarks. Regulations governing euthanasia and carcass disposal are also important aspects to consider. The instructors touched upon landmarks and humane methods of euthanasia, however, based upon the importance of a humane euthanasia and the strong likelihood of euthanasia at an incident scene, I would like to have seen a more in-depth coverage of this topic. The use of cadavers easily facilitates proper landmark localization for euthanasia using a fire arm or captive bolt. A demonstration of captive bolt euthanasia using a cadaver with the opportunity to fire the bolt would provide the course attendees with a better understanding of the euthanasia process. A video demonstration of an animal being euthanized using an injectable euthanasia solution would also be a valuable addition to the course. Knowledge of the physiological (i.e.: agonal breathing) and physical responses (paddling and vocalization) of the body during the process of euthanasia may help to alleviate the discomfort and fear often associated with this procedure.

## **Canadian Adaptation**

The participation in this course for individuals involved in large animal rescue, including first responders and veterinarians would provide a significant knowledge in large animal

rescue which would strongly enhance Canada's capability to respond to large animals in the face of civil emergencies, both on a small and large scale. Although designed and administered by Americans, the techniques utilized for large animal rescue are universally applicable. This is demonstrated by the participation of large animal rescue teams worldwide that have trained with the Gimenez's. In order to successfully adapt this course material to Canadian standards, a simple review of the regulations governing animal welfare, transport, euthanasia and carcass disposal would be required. This would be essential, particularly in the field euthanasia discussion, as the firearm laws differ significantly in Canada when compared to various jurisdictions in the United States. As well, a discussion on the transport of horses for slaughter would be an invaluable asset to add to the course as there are potentially many animal welfare, infectious disease and safety concerns which surround the transport of these horses. To address the aspects of the Canadian climate, it would be recommended that more of the examples reflect our weather patterns – in particular snow, ice and freezing temperatures.

This technical large animal emergency rescue course was an enlightening and invaluable educational opportunity. The classroom instruction was an excellent review of some material which I had covered in other animal rescue courses as well as through experiences in private veterinary practice. The case scenarios presented throughout the course were an incredible teaching tool and imparted the importance of scene management, team work and the variability in which the resolution of an incident can be attained. The practical sessions were outstanding learning opportunities and I consider them a valuable resource. The course coordinators did an exceptional job in preparing for the rescue scenarios which were very realistic and therefore gave the participants a glimpse into the challenges they may encounter in resolving a large animal incident. I would strongly recommend this course as a starting point for members of the first responder community and veterinarians involved with large animals for training in large animal handling and large animal emergency rescue techniques.